Fall 12-21-2018

Cyberbullying, Relational, and Social Aggression

Latitia Lattanzio

CYBERBULLYING, RELATIONAL, AND SOCIAL AGGRESSION

A Dissertation

Submitted to the School of Education

Duquesne University

In partial fulfillment of the requirements for

the degree of Doctor of Philosophy

By

Latitia S. Lattanzio

December 2018

DUQUESNE UNIVERSITY
SCHOOL OF EDUCATION

Department of Counseling, Psychology, and Special Education

Dissertation

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

School Psychology Doctoral Program

Presented by:

Latitia S. Lattanzio

B.A. English/English Literature, Secondary Education, Saint Francis University, 2012
M.Ed. Educational Psychology, Indiana University of Pennsylvania, 2013
Ed.S. School Psychology, Indiana University of Pennsylvania, 2015

August 6, 2018

Cyberbullying, Relational, and Social Aggression

Approved by:

_____, Chair
Laura M. Crothers, D.Ed.
Professor
Department of Counseling, Psychology, and Special Education
Duquesne University

_____, Member
Ara J. Schmitt, Ph.D.
Associate Professor
Department of Counseling, Psychology, and Special Education
Duquesne University

_____, Member
Launcelot I. Brown, Ph.D.
Professor
Department of Educational Foundations and Leadership
Duquesne University

_____, Member
Courtney L. McLaughlin, Ph.D.
Associate Professor
Educational and School Psychology Department
Indiana University of Pennsylvania

ABSTRACT

CYBERBULLYING, RELATIONAL, AND SOCIAL AGGRESSION

By

Latitia S. Lattanzio

December 2018

Dissertation supervised by Laura M. Crothers, D.Ed., NCSP

Cyberbullying is a relatively new phenomenon that has only begun to be significantly

investigated within the last decade. To date, researchers have failed to develop a uniform

definition or determine appropriate terminology. These deficits have inhibited a

comprehensive understanding of the phenomenon. Although a comprehensive

conceptualization of cyberbullying has yet to be established, the phenomenon has been

recognized as a significant problem affecting our youth. Many of the existing studies are

descriptive in nature and emphasize the need for more research. In an effort to drive

future studies, many have postulated on the possible similarities between cyberbullying

and traditional indirect bullying; however, few studies have quantitatively investigated

this hypothesis. The current study was conducted in an effort to address the lack of

literature surrounding this topic. The hypothesis of the current study was that measures

of cyberbullying behaviors would be intercorrelated with measures of indirect bullying

behaviors. Gender differences were also examined. A two-component model was

extracted and delineated as cyberbullying behaviors and indirect bullying behaviors. The

model was tested using CFA methodology and was found to be a good fit for the data,

thus providing support for cyberbullying and indirect bullying as independent constructs.

Self-reported cyberbullying and indirect bullying behaviors were similarly reported

across males and females. Implications and directions for future research are also

presented.

DEDICATION

To those who have offered me unwavering love while I chased my biggest dreams:

Mom, David, Nunnie, Pupup, and Jonathan.

TABLE OF CONTENTS

LIST OF TABLES

Chapter I: Introduction

The most common form of school violence, bullying among students, is a problem that has captured the attention of educators and parents alike due to its worrisome effects, ranging from school phobia and refusal to suicidal behavior. Although studied in European countries since the 1970's, research regarding the etiology, symptoms, and effects of bullying is relatively new to the United States (US), and indeed began only in the late 1980s and early 1990s (Olweus, 2003). Across studies, researchers have revealed that perpetrators and victims of bullying face several significant adverse outcomes, such as mental health challenges (Elinoff, Chafouleas, & Sassu, 2004; Hymel, Henderson, & Bonanno, 2005; Hymel et al., 2001; Nansel et al., 2001; Rigby, 2001), that have been found to persist over time (Archer & Coyne, 2005; Dake, Price, & Telljohann, 2003; Monks et al., 2009; Nansel et al., 2011; Olweus, 1993).

Bullying is defined as proactive aggression in which the aggressor intends to cause harm to the victim; there is a power imbalance between aggressor and victim, and the aggression is repeated across time (Olweus, 1993). Bullying is further conceptualized to take place in stable environments, such as classrooms or locker rooms, in which the victims are unable to escape the attacks (Salmivalli, Lagerspetz, Björkqvist, Osterman, & Kaukiainen, 1996). Although much of the earlier research focused primarily on direct, overt forms of this behavior, there is a mounting literature base supporting that various other forms of bullying exist (Hinduja & Patchin, 2015.; Owens, Slee, & Shute, 2000). These include indirect forms such as spreading rumors or social exclusion (Archer & Coyne, 2005; Björkqvist et al., 1992; Lagerspetz, Björkqvist, & Peltonen, 1988; Owens et al., 2000).

The research base regarding prevalence rates is inconclusive (Craig et al., 2009; Dake et al., 2003; Hinduja & Patchin, 2015; Nansel et al., 2001; Seals & Young, 2003; Solberg &

Olweus, 2003). One nationally representative study indicated that 11% of the participants were the victims of bullying (Nansel et al., 2001) while Hinduja and Patchin (2015) argue that much of the literature reveals estimates closer to 5% of primary and secondary students being victimized by bullies each day. Despite the uncertainty surrounding prevalence, the outcomes associated with bullying are clear and sufficient enough to warrant serious efforts to conduct comprehensive research (e.g., Archer & Coyne, 2005; Dake et al., 2003; Elinoff et al., 2004; Hymel, Henderson, & Bonanno, 2005; Monks et al., 2009; Nansel et al., 2001; Olweus, 1993; Rigby, 2001; Wang, Ianotti, & Nansel, 2009).

Relatedly, cyberbullying has made its way to the forefront of headlines within the past five years. The detrimental, and even tragic, effects associated with cyberbullying have continued to raise concerns in the professional fields of education and psychology. Concerns regarding the constant day-to-day social interactions, which have afforded young people permanent connections with others regardless of proximity (Kowalski & Limber, 2007; National Academies, 2016; Romera, Cano, García-Fernández, & Ortega-Ruiz, 2015; Smith et al., 2008), continue to grow as social networking sites (SNS) become more readily available. Furthermore, maintaining a presence in the online realm is critical for developing and maintaining social relationships among adolescents (Cassidy, Faucher, & Jackson, 2013).

The seamlessness of face-to-face and online communications among youth seems to parallel a stable environment in which bullying victims may be targeted. Given the relative newness of cyberbullying, however, the literature is lacking. Some researchers argue that the behaviors and outcomes associated with cyberbullying overlap with those associated with traditional forms of bullying (Beran & Li, 2007; Cassidy et al., 2013; Dooley Pyzalski, & Cross, 2009; Hinduja & Patchin, 2015; Law, Shapka, Hymel, Olson, & Waterhouse, 2012; Schneider,

O'Donnell, Stueve, & Coulter, 2012; Sticca & Perren, 2012; Smith et al., 2008; Tokunaga, 2010; Wolak, Mitchell, & Finkelhor, 2007); however, Hinduja and Patchin (2015) emphasize that important distinguishing characteristics exist which suggests that more research is needed.

Significance of the Problem

The inability of researchers to keep up with modern-day advances in technology and adolescent behavior has come to be recognized as a serious problem. The need for a comprehensive conceptualization of cyberbullying continues to be emphasized in the literature. If professionals in the field of education and psychology are to address these issues through intervention and assist schools in developing action plans regarding the problem behaviors, then professionals must first have the knowledge of motives and behaviors associated with the perpetration. Despite the mounting research that has attempted to comprehensively examine the cyberbullying phenomenon, more investigation is still needed.

Much of the current literature supports that victims of chronic traditional bullying attacks are at an increased risk of experiencing physical and mental health problems when compared to their non-bullied peers (Archer & Coyne, 2005; Monks et al., 2009; Nansel et al., 2001; Olweus, 1993). Likewise, those who engage in bullying behaviors are at increased risk of imprisonment for committing crimes and demonstrating poor psychosocial functioning, poorer school achievement, and weaker prosocial skills (Elinoff et al., 2004; Hymel, et al., 2001; Nansel et al., 2001; Wang et al., 2009).

If hypotheses regarding correlations among cyberbullying and traditional bullying are accurate, then the targets of cyberbullying are also likely to experience persistent psychological distress. Many argue, however, that because cyberbullying can occur at any time and in any place, extending beyond the school walls and potentially following the victim home (Erdur-

Baker, 2010; Hinduja & Patchin, 2015; Mesch, 2009; Patchin & Hinduja, 2006; Pornari & Wood, 2010; Tokunaga, 2010), the outcomes associated with cyberbullying may be stronger and more negative (Hinduja & Patchin, 2015; Schneider et al., 2012; Smith et al., 2008; Tokunaga, 2010).

What is more, social networking and online communications continue to serve an important role in the lives of adolescents. SNS and online communications extend day-to-day interactions and are largely inseparable from many individuals' offline worlds (Hinduja & Patchin, 2008; Kowalski & Limber, 2007; National Academies, 2016; Romera et al., 2015; Smith et al., 2008). Given the significance of online communications, and the potential to be victimized via online platforms, professionals must work efficiently in order to develop a meaningful literature base aimed at addressing the issues related to this growing phenomenon.

Theoretical Basis for the Study

Adolescence. Because bullying is considered a goal-directed behavior in which perpetrators are driven by their desires for social status and power (Boulton & Underwood, 1992; Salmivalli, 2010), researchers hypothesize that bullies possess a strong need for status (Sitsema, Veenstra, Lindenberg, & Salmivalli, 2009). Bullying behaviors, then, are likely to be most common during adolescence because social status and meaningfully fitting into social groups are paramount during this developmental period (Caravita & Cillessen, 2011; Salmivalli, 2010). As a result, much of the literature surrounding traditional bullying focuses on adolescents. This developmental period may also be most appropriate for the focus of cyberbullying research.

Indirect forms of aggression and cyberbullying. Indirect aggression is conceptualized as social manipulation in which the aggressor remains unidentifiable by using another to attack the victim or manipulate the social peer group to exclude a target person (Björkqvist, Lagerspetz,

& Kaukiainen, 1992; Garandeau & Cillessen, 2004). Indirect aggression is a unique form of aggression because the bullying is more covert and sophisticated. These attacks often go undetected by adults but yield exceedingly harmful emotional outcomes for the victim (Coyne, Archer, & Eslea, 2006; Garandeau & Cillessen, 2004).

Examinations of indirect aggression trend toward gender differences in the female direction (Archer & Coyne, 2005), due to the cliques that characterize female friendships (Björkqvist et al., 1992). The nature of female friendship groups is considered to encourage the use of indirect forms of bullying (Lagerspetz, Björkqvist, Peltonen, 1988) because their desire for connectedness can be used to leverage against one another (Crothers, Field, & Kolbert, 2005). Researchers argue, however, that other forms of indirect aggression can be delineated. In particular, relational aggression and social aggression are similar regarding the manipulative acts involved (Archer & Coyne, 2005). These forms of indirect aggression will be thoroughly discussed in the following chapter.

To better understand the increasingly problematic phenomenon of cyberbullying, some researchers have hypothesized that there is an overlap between traditional forms of bullying and cyberbullying. Specifically, some have proposed that cyberbullying may very well be indirect aggression expressed online (Beran & Li, 2007; Hinduja & Patchin, 2015). Despite the findings by Law et al. (2012), which provided support for traditional bullying and cyberbullying being separate and independent constructs, many more studies have been conducted based on likelihood of relatedness (Patchin & Hinduja, 2006; Schneider et al., 2012; Smith et al., 2008; Tokunaga, 2010; Wolak et al., 2007). In an extensive review of the literature, Cassidy et al. (2013) emphasized the findings that support parallels between cyberbullying and indirect

bullying. Nevertheless, there continues to be much disagreement in the field regarding the relatedness or independence of cyberbullying to or from other constructs, respectively.

Very Relevant Literature. In an effort to contribute to the existing literature about cyberbullying, researchers have attempted to answer questions regarding cyberbullying's relatedness to or independence from more traditional indirect forms of bullying. Law et al. (2012) conducted two studies in which exploratory and confirmatory factor analyses (EFAs and CFAs) were used to determine whether cyberbullying could be measured using items like more traditional forms of bullying. The findings revealed differences in the ways that individuals conceptualize bullying across domains. Regarding online attacks, researchers concluded that bullies and victims were not clearly differentiated by the participants; rather, individuals differentiated among the methods used to carry out an attack online. In particular, the role of the individual in online platforms (i.e., bully, victim, bystander) appeared to be less significant than the mode of cyberbullying attacks (i.e., aggressive messaging, posting damaging photos or videos).

To further investigate aggressive behaviors employed online, Palladino, Nocentini, and Menesini (2015) conducted a study that examined the utility of an instrument designed for measuring cyberbullying behaviors. The Florence Cyberbullying-Cybervictimization Scales (FCBVSs) was reported to be a revised version of a previous two-dimensional scale. With the revisions, the FCBVSs is considered to assess the four subtypes of online bullying behaviors proposed by previous research: written-verbal behaviors, visual behaviors, impersonation behaviors, and exclusion behaviors. The questions assessed behaviors that were specific to perpetration or victimization. The findings of the study revealed strong psychometric properties that supported the use of this instrument in measuring cyberbullying behaviors. Based on the

four factors that emerged as a result of a CFA, the findings seem to support the potential overlap between cyberbullying behaviors and indirect bullying behaviors. This scale will be discussed later in greater detail.

Problem Statement

In comparison to other forms of bullying, there is a relative lack of literature regarding cyberbullying. A certain degree of uncertainty surrounding cyberbullying's conceptualization as an independent construct or as an extension of more traditional forms of the behavior seems to exist (Del Rey, Elip, & Ortega-Ruiz, 2012; Dooley et al., 2009; Hinduja & Patchin, 2015). Not only is there disagreement regarding the basic conceptualization of the phenomenon, but researchers are also being tasked with investigating behaviors that cannot currently be examined using empirically-validated measures. Although some studies have attempted to estimate the frequencies and the potentially adverse outcomes associated with cyberbullying, more research must examine the behaviors employed in online environments.

Some studies that investigated parallels between constructs concluded that victims of traditional bullying were also victims of cyberbullying attacks (Patchin & Hinduja, 2006; Schneider et al., 2012; Tokunaga, 2010); and, similarly, traditional bullies also aggressed online (Smith et al., 2008; Wolak et al., 2007; Ybarra, Diener-West, & Leaf, 2007). Because of these findings, several studies have been conducted based on the assumption that cyberbullying behaviors are an extension of more traditional forms of bullying.

Some have hypothesized that cyberbullying may best be conceptualized as indirect bullying behaviors being expressed on online platforms (Beran & Li, 2007; Cassidy et al., 2013). Studies have shown that cyberbullying behaviors can be explained by four main categories, which largely parallel behaviors classified as social and relational bullying: written-verbal

behaviors (phone calls, text messages, instant messages), visual behaviors (posting, sending, or sharing compromising pictures), exclusion (purposefully excluding someone from online groups), and impersonation (stealing and revealing personal information; Menesini, Nocentini, & Calussi, 2011; Palladino, 2015). To further assess these behavior categories, Nocentini et al. (2010) conducted focus groups with adolescents in three different countries and concluded that adolescents described the aforementioned behaviors as being employed with the intent to damage or harm another. Employing these behaviors with the intent to harm on online platforms is further supported by Cassidy et al. (2013), who presented support for cyberbullies using SNS to rapidly disseminate rumors, gossip, or attacks on others. Although these findings seem to contribute to the growing support for social and relational bullying behaviors being carried out in online realms, researchers continue to call for more support.

Research Questions and Hypotheses

  Research Question 1. Is cyberbullying an extension of traditional indirect bullying behavior?

  Hypothesis 1. It was hypothesized that items from the YASB will load together with items from the FCBVSs on one of two factors previously-identified on the YASB: socially-aggressive behaviors or relationally-aggressive behaviors.

  Research Question 2. Do gender differences exist in a measure of self-reported cyberbullying perpetration?

  Hypothesis 2. It was hypothesized that there will be no gender differences in the self-reported use of cyberbullying perpetration.

  Research Question 3. Do gender differences exist in a measure of self-reported indirect bullying perpetration?

Hypothesis 3. It was hypothesized that there will be no gender differences in the self-reported use of indirect bullying perpetration.

Summary

In this chapter, the current study intended to investigate indirect aggression and cyberbullying behaviors was introduced. First, traditional bullying and cyberbullying behaviors were described to provide clarification of the primary constructs under investigation. The significance of the problem, namely researchers' inability to keep pace with emerging technological advances, was explained. The need for professionals in education and psychology to conduct high-quality, comprehensive, quantitative research to provide information regarding the impact of cyberbullying on adolescents is imperative. Additional research intended to assist educators in appropriate intervention development is also necessary. Cyberbullying is currently being considered a newer form of peer aggression, which has resulted in a lack of consensus regarding the relationship between indirect forms of bullying and cyberbullying. Consequently, this research investigation is proposed to help clarify the potential relationship between two forms of indirect bullying, relational and social aggression, and cyberbullying. Accordingly, the research questions and hypotheses for this study were posed. In the following chapter, the constructs and theories under investigation will be described in the form of a comprehensive literature review of bullying and cyberbullying behaviors.

Chapter II: Literature Review

Constructs

     Bullying. Although bullying in childhood and adolescence is a problem that has persisted through generations, the research base investigating its etiology, symptoms, and effects is relatively new. For many years, bullying was tolerated in the school environment. The behavior was perceived as a normative child experience and was left largely unresearched (Hinduja & Patchin, 2015; National Academies, 2016; Smith & Sharp, 1994). Olweus, a Norwegian psychologist, however, initiated early research on bullying behaviors. His interest in bullying as an aggressive behavior led to publications in the 1970s, which primarily documented occurrences that took place in Scandinavian schools (Beaty & Alexeyev, 2008; Dake et al., 2003). In the US, bullying in childhood and adolescence did not begin to attract the attention of parents, educators, and researchers until the 1980s and early 1990s (Olweus, 2003). The prevalence rates of in-school bullying are variable across studies, with some researchers finding that the number of individuals experiencing bullying at school remains largely unchanged over time (Hinduja & Patchin, 2015). Regardless of the variability, research consistently shows that bullying is a common and damaging experience of childhood. As a result, professionals must exhibit concern for the safety, wellbeing, and social functioning of all students by preventing and intervening in bullying behavior (Nansel et al., 2001; Seals & Young, 2003).

     Bullying is conceptualized as a set of behaviors that frequently occur in stable environments, such as classrooms and locker rooms, and other areas in which the victims have no possibility of escaping the perpetrator (Salmivalli et al., 1996). Furthermore, the victims are usually chosen because they are unlikely to fight back (Dake et al., 2003) and have low social status (Sitsema et al., 2009).

Definition of bullying. Although the definition of bullying is somewhat variable depending on the researcher's orientation, many investigators have come together to agree upon a singular and universal concept. As the catalyst for much of the current bullying research, Olweus (1993) has proposed a tripartite definition: 1) the aggressor intends to cause harm to the victim, 2) the aggressive behavior is repeated across time, and 3) the aggression involves an imbalance of power between aggressor and victim. Since the proposition of this definition, the Centers for Disease Control and Prevention (CDC), the Department of Education, and the Health Resources and Services Administration have brought together bullying experts across professional domains to generate a uniform definition (Hinduja & Patchin, 2015). And while this definition is seemingly denser, the three-part definition is embedded within it. Importantly, the tripartite definition is an attempt to describe bullying as a transactional behavior rather than a type of person or specific set of actions (Swearer & Doll, 2001).

Gottheil and Dubow (2001) further supported Olweus' definition in their research, which proposed a tripartite beliefs model as an explanatory model for bully behavior. In the model's applicability to bullies, the researchers hypothesized that bullies' beliefs would reflect approval for unprovoked aggression and a rejection of weakness, high self-efficacy beliefs regarding the use of aggression to gain rewards, and low expectations for negative outcomes like victim suffering. Researchers found support for the tripartite beliefs model (Gottheil & Dubow, 2001), with each of these beliefs contributing to the stability of bully behavior over time.

A distinguishing factor for bullies is their tendency to be aggressive in unprovoked situations with their behavior being planned and strategic (Gotthiel & Dubow, 2001). Bullying behavior is thus conceptualized as a form of proactive aggression (Olweus, 1993), which means that the behavior often occurs without apparent provocation by the victim. Aggression can

further be considered to serve an adaptive function (Hawley, 2003). Proactive aggression is thought to be reflective of behaviors that are motivated by the desire for personal gains or the domination of others. Bullies differ from other aggressors in that their aggressive behaviors are used as a means to demonstrate power or control over another (Gottheil & Dubow, 2001) while disregarding the potential harm caused to the victim (Perry, Perry, & Rasmussen, 1986). Researchers also identify the anticipation of positive outcomes for the self and control over victims as mediating factors for bullies (Boldizar, Perry, & Perry, 1989; Renouf et al., 2010). According to Hawley (2003), "The possible adaptive value of aggression can be envisioned in view of within-group competition," (p. 281) in which aggressors attempt to acquire social resources via aggressive behavior.

In their research regarding the tripartite beliefs model, Gottheil and Dubow (2001) also examined outcome-expectancy beliefs in aggressive youth. Their research supported that children who received high scores on aggression measures reported greater expectations of rewarding outcomes from the use of aggressive behaviors. Their reported beliefs in achieving rewarding outcomes outweighed the beliefs that punishing consequences would result from their behaviors. For bullies, common rewards include those classified as tangible, social, or symbolic (Boldizar et al., 1989; Gottheil & Dubow, 2001). These findings are further supported by Hawley (2003), who concluded that children classified as aggressive and coercive individuals were perceived by others as being effective, socially central, and reasonably well-liked. Bullies, then, have several reasons to engage in proactive aggression again in the future.

While early bullying research focused on overt forms of aggression, more recent literature supports that various other forms of bullying exist (Hinduja & Patchin, 2015; Owens et al., 2000). In its direct form, bullying involves physical interactions such as hitting, tripping,

stealing from, and taunting (Olweus, 2003). Boys are more often associated with facilitating

direct forms of aggression (Björkqvist et al., 1992) while indirect forms are primarily associated

with girls and include behaviors like spreading rumors or social exclusion (Archer & Coyne,

2005; Björkqvist et al., 1992; Lagerspetz et al., 1988; Owens et al., 2000). Differentiations and

more detailed definitions of these varying forms of bullying will be addressed later in this

chapter.

     Prevalence rates of bullying. Media reports regarding the adverse outcomes associated

with bullying victimization have called attention to the need for more comprehensive

examinations of bullying behaviors and prevalence rates (Dake et al., 2003; Rubin et al., 2009;

Seals & Young, 2003). Several studies have attempted to accurately determine the prevalence

rates in the US and in other countries but have resulted in great variation in their estimates (Craig

et al., 2009; Dake et al., 2003; Hinduja & Patchin, 2015; Nansel et al., 2001; Seals & Young,

2003; Solberg & Olweus, 2003). Some researchers have proposed that agreement on a universal

definition of bullying as well as asking the same question across studies would be most effective

in yielding accurate prevalence estimates (Hinduja & Patchin, 2015; Solberg & Olweus, 2003).

In one nationally-representative US study, investigators reported that approximately 11% of

participants had been victims of bullying, 13% were identified as bullies and 6% were both

victims and bullies (Nansel et al., 2001). An international cross-sectional survey across 28

countries found great international variation, however, with Due et al. (2005) reporting ranges

from 6.3% among girls in Sweden to 41.4% among boys in Lithuania. In a review of the

literature regarding prevalence rates, Hinduja and Patchin (2015) report "conservative

estimates," suggesting that at least 5% of primary and secondary school students are victims of

bullying each day (p. 9). They warn, however, "[T]he percentage may well be much higher" (p. 9).

While Hinduja and Patchin (2015) argue that there has been no great increase in the proportions of teens that report experiencing bullying in school, there is some degree of uncertainty about whether the bullying behavior itself appears to be increasing over time or simply being documented more accurately. According to Rubin, Bukowski, and Lausen (2009), a mere four studies with "bullying" identified as a key word were published in the 1970s, 18 during the 1980s, and 246 in the 1990s. The review estimated that 100 to 200 studies are currently being published each year (Rubin et al., 2009). Despite this uncertainty, the outcomes of bullying and being victimized are sufficiently negative to warrant investigation so that prevention and intervention efforts can be optimized.

Outcomes for victims. Historically, bullying research has shown that the general effects of bullying victimization are long-term and negative. Eagley and Steffen (1986) argued that despite the various forms of bullying, there was no great difference between the consequences for victims. Persistent victimization is associated with mental health challenges and a dislike for school along with subsequent school avoidance and potential dropout (Hymel, et al., 2005; Nansel et al., 2001). According to Rigby (2001), the chronic victims of bullying are at a greater risk to experience physical and mental health problems when compared to their non-bullied peers. They are significantly more likely to report insomnia, nocturnal enuresis, feeling sad, and prolonged headaches and stomachaches. These problems are highly correlated with anxiety, depression, low self-esteem, loneliness, and insecurity, and have been found to persist over time (Archer & Coyne, 2005; Dake et al., 2003; Monks et al., 2009; Nansel et al., 2011; Olweus, 1993).

In his book, *School Bullying: Insights and Perspectives,* Olweus (2003) references research that evidences the continuance of low self-esteem into adulthood, which ultimately adversely affects the development of intimate and trusting relationships. Persistent victimization is also associated with social maladjustment (Archer & Coyne, 2005) and, in some instances, victims of bullying completing suicide. The CDC (2014) reports that students who are frequently bullied are at increased risk for suicide-related behaviors, such as: suicide completion, suicide attempts, and suicidal ideations. Persistent victimization through being bullied, then, is related to seemingly severe and pervasive outcomes.

Outcomes for perpetrators. Those who bully are also vulnerable to negative consequences related to the victimization they perpetrate. Underachievement and consequential dropout often mark their school careers, while higher levels of misconduct, including delinquency and criminality, characterize their behavior. These individuals often report greater distaste for school overall. Over time, individuals who engage in bullying behavior are more likely to spend time in prison for committing crimes and to become abusive spouses and parents (Elinoff et al., 2004; Hymel et al., 2001; Nansel et al., 2011). Much like their victims, bullies have been found to demonstrate poor psychosocial functioning along with poor school achievement, weaker prosocial skills, and diminished psychological wellbeing (Wang et al., 2009).

When compared to non-involved peers, those involved in the perpetration of bullying were found to have poor relationships with others and an increased sense of loneliness (Nansel et al., 2001). Furthermore, Crothers and Levinson (2004) reported that bullies learn unhealthy skills that allow them to become empowered over others. Although these skills are perceived by the aggressor to give way to rewarding outcomes (Gottheil & Dubow, 2001), the behaviors are

unlikely to serve functionality beyond their childhood years. Over time, the perpetrators develop "maladaptive social skills that are predictive of poor adult adjustment and are likely to perpetuate the transmission of impaired social skills to the next generation" (Crothers & Levinson, 2004, p. 497).

    Age and bullying. Research points to bullying as goal-directed behavior in which bullies are driven by their desires for social status and power (Boulton & Underwood, 1992; Gottheil & Dubow, 2001; Salmivalli, 2010). The attainment of status within a group is a universal goal across bullies, and researchers hypothesize that bullies possess a stronger need for status as compared to their victims as well as their peers (Sitsema et al., 2009). If the primary goal of bullying is to achieve higher social status and dominance over peer groups, then the behavior is likely to be more common during periods when social groups and status are of the utmost importance (Caravita & Cillessen, 2011; Salmivalli, 2010). As such, much of the bullying research focuses on adolescence, a period in human development in which friendships and peer acceptance are of increased importance.

    As adolescents' needs shift, teens begin to focus more on friends and social groups for advice and support (Mesch, 2009) while also looking to peers as their primary source of fulfillment and emotional support. As a result, adolescents experience an increased reliance on peers along with increased pressure to meaningfully fit into social groups.

    To differing degrees, adolescents attach importance to social and agentic goals (Caravita & Cillessen, 2011; Salmivalli, 2010). One study concluded that the probability of adolescents being involved in bullying was strongly related to status goals, with both proactive and reactive aggression being positively associated with status goals and perceived popularity. Results also revealed that as children approach adolescence, status goals become increasingly important

(Sitsema et al., 2009). In a study conducted by Lafontana and Cillessen (2010), children and adolescents were presented with social dilemmas in which they were required to choose between attaining popularity as opposed to other priorities, including following rules. Researchers found a trend toward the priority of popularity that peaked among adolescents. Investigators concluded that adolescents were willing to engage in behaviors that actively defied rules to bond with their peers. Furthermore, they were found to prioritize popularity over romantic relationships, academic successes, and friendships (Lafontana & Cillessen, 2010).

In reviewing the literature on group involvement in bullying, Salmivalli (2010) concluded that peers perceive bullies to be cool, powerful, and popular. Bullies who already belong to networks of friends or peer groups are more likely to continue to engage in aggressive behaviors (Garandeau & Cillessen, 2004) because maintaining acceptance and status within such groups is thought to "dictate the abstinence of bullying" (Caravita & Cillessen, 2011, p. 4). In investigating the role of peers in bullying episodes, O'Connell, Pepler, and Craig (1999) found that bullies were likely to reoffend in the future if a greater number of bystanders were present when the bullying episode had occurred. Considering the positive association between agentic goals and aggression, bullies are likely to choose their targets and the time and place for the attacks based upon the occasion that affords them the best opportunity for demonstrating their power to a wide range of peers.

Indirect aggression. Although early research focused primarily on the overt forms of bullying, as these behaviors were more observable and thus more measurable, indirect aggression is becoming more widely recognized as a set of behaviors that is equally important for investigation, prevention, and intervention. The most universal definition of indirect aggression was offered by Björkqvist et al. (1992), who proposed that indirect aggression could be described

as social manipulation in which the aggressor uses another to attack the victim or manipulate the social peer group to exclude a target person without direct involvement in the attack. Indirect aggression is further described as a behavior in which the aggressor "attempts to inflict pain in such a manner that he or she makes it seem as though there has been no intention to hurt at all" (Björkqvist et al., 1992, p. 118). This form of aggression is also referred to as social aggression and relational aggression, which will be discussed later in this chapter (Archer & Coyne, 2005; Björkqvist et al., 1992; Crick & Grotpeter, 1995).

Indirect aggression is unique from other forms of aggressive behavior because the bullying tends to be more covert and sophisticated, often is undetected by adults, and yet still yields exceedingly harmful emotional outcomes for the victim (Coyne et al., 2006). However, the indirectly aggressive behaviors are theoretically used for reaching competitive goals, as are traditional forms of bullying (Archer & Coyne, 2005). In comparison to other forms of bullying, indirect aggression seems to be particularly mentally painful for the victims, and the effects, longstanding. Owens et al. (2000) reported that in an investigation of the outcomes of indirect bullying, females in the study reported vivid memories of the happenings years after they had occurred. Of note, indirect bullying may be a particularly manipulative form of bullying because the perpetrator intends to make it appear as though there was no intention to hurt at all. In many instances, the bully uses others as vehicles for inflicting pain in order to remain unidentifiable to the victims (Björkqvist et al., 1992; Garandeau & Cillessen, 2004). Indirect aggression, as compared to direct aggression, then, is distinguishable because of the use of specific strategies to attain certain competitive goals (Archer & Coyne, 2005).

In 1988, the first comprehensive research study on indirect aggression was conducted. Lagerspetz et al. (1988) hypothesized that female aggression differed from male aggression, with

female aggression potentially going unnoticed by investigators. Through interviews and peer and self-ratings about aggression, the researchers found that females preferred more indirect forms of aggression as compared to their male counterparts. The research team concluded that the social lives of adolescent females are much more "ruthless and aggressive" than was previously alluded to in earlier research (Lagerspetz et al., 1988, p. 412).

Indirect aggression conceptualized. There is research to support that with age, bullying is often observed to change from overtly aggressive forms to more passive and covert forms (Seals & Young, 2003). Indirect forms of aggression are thought to replace the more physical forms of bullying because social intelligence continues to develop as individuals grow older and gain more social experiences. Indirect aggression is possible only when an individual has adequate social skills that can be used for understanding social behaviors, intentions, and goals of others within the group (Garandeau & Cillessen, 2006). The conceptual understanding of such socially-related behaviors leads to the possible manipulation of relationships within the group. There is further evidence to support that social intelligence and the use of indirect aggression are positively correlated (Archer & Coyne, 2005).

Much of the earlier research on bullying lacked investigations into the gender differences relating to this aggressive behavior (Crick & Grotpeter, 1995). In the earlier studies conducted on bullying, boys were most often shown to demonstrate higher levels of aggression, resulting in conclusions that girls were less aggressive than their male counterparts (Björkqvist et al, 1992; Crick & Grotpeter, 1995; Olweus, 2003). Eagly and Steffan (1986), however, report that these conclusions may have been made because males' tendencies for aggression more often resulted in pain or physical injury that could be directly observed. Females, however, are likely to cause psychological or social harm to their victims. Thus, the more overt behaviors, typically used by

males, may have led to the underestimation of females' involvement in bullying. In their examination of gender differences in bullying, Crick and Grotpeter (1995) concluded that physical aggression was more commonly examined because it was more easily observable.

In response to gender differences in the perpetration of the different forms of bullying, Lagerspetz et al. (1988) hypothesized that if direct aggression is more discouraged for females than for males, then females will make use of alternative forms of aggression. After the expanding the definition of aggression, research aimed at investigating gender differences in perpetration has found that the behavior has been identified in both males and females with equal frequency (Crick & Grotpeter, 1995; Crothers et al., 2005). Females conforming to the traditional gender role construction are expected to restrict their anger, thereby exhibiting a more unique form of aggression. Bem (1981) argues that females are consequently forced to engage in more manipulative behaviors with more convert techniques for expressing anger, resolving conflicts, and establishing dominance in social situations.

Examinations of indirect aggression trend toward gender differences in the female direction (Archer & Coyne, 2005), mainly because female friendships differ from males in that they are more tightly knit and result in cliques (Björkqvist et al., 1992). According to Crothers et al. (2005), these social relationships are among the most important relationships females will form during their lifetime. Indeed, "women's morality and sense of self are based on connectedness and interdependence with others and that affiliation with and acceptance by other girls or women often become essential elements of identity" (p. 349). The nature of the female friend groups, then, may encourage the development and use of indirect forms of bullying (Lagerspetz et al., 1988), leading the group members to use the desire for connectedness "as leverage against each other" (Crothers et al., 2005, p. 349).

Because social peer groups are so important during adolescence, especially for females, Crick and Grotpeter (1995) argued that adolescents often choose forms of aggression that "best thwart or damage the goals that are valued by their respective gender groups" (p. 710). Furthermore, indirect aggression is only effective if used in "well-established social networks that are important to the people concerned" (Archer & Coyne, 2005, p. 221). Females, when compared to their male counterparts, are more likely to focus on relational issues during their social interactions. In addition, Owens et al. (2000) reported that self-esteem, for females, is closely tied to the interpersonal relationships they possess. As a result, exclusion from or negative social standing within the female peer group has far greater consequences for the victim; the greater need for belongingness further encourages aggressive behaviors such as rumor-spreading or exclusion (Archer & Coyne, 2005; Crick & Grotpeter, 1995; Owens et al., 2000).

In a study devoted to an examination of female subjects, focus groups were conducted with adolescent girls to discuss the topic of indirect aggression. During the study, participants indicated that those who initiated rumor-spreading and exclusion from the social groups were perceived as having social power. Furthermore, those who engaged in these behaviors thereby secured their social standing within their peer groups (Owens et al., 2000). A positive relationship between relationally-aggressive behaviors and popularity among adolescents is evidenced (Archer & Coyne, 2005), which further encourages the use of such behaviors as a means for attaining socially desirable goals.

These conceptualizations are further supported by Crick and Grotpeter (1995), who hypothesized that although overt and indirect aggression were both aimed at constituting harmful and aggressive acts toward a target, the two constructs are largely independent of one another. In

their study that examined gender differences in bullying, they found that most subjects who were classified as aggressive solely exhibited overt or indirect forms of the bullying behavior. There were relatively small numbers of adolescents who exhibited both types of bullying behaviors.

   Relational and social aggression separated. Relational aggression and social aggression are similar regarding the manipulative acts involved; however, each is conceptualized differently (Archer & Coyne, 2005). Indirect aggression simply refers to covert forms of aggression (Archer & Coyne, 2005; Lagerspetz et al., 1988). The term, relational aggression, differs from covert aggression in that the endpoint defines the behavior (Crick & Grotpeter, 1995) and is carried out in front of the victim to damage her social status or self-esteem (Crothers, Schreiber, Field, & Kolbert, 2009; Remillard & Lamb, 2005). These relationally-aggressive behaviors aim to manipulate or disrupt relationships and friendships (Crothers et al., 2009), and typically include overt and covert behaviors such as sarcastic verbal comments, speaking to another in a cold or hostile tone, ignoring, staring, gossiping, spreading rumors, mean facial expressions, and exclusion (Archer & Coyne, 2005; Remillard & Lamb, 2005).

   The definition of social aggression similarly considers the intended endpoints of the behavior, emphasizing the use of manipulation of group acceptance to damage another's social standing, but also includes harmful nonverbal behaviors (Archer & Coyne, 2005) such as eye-rolling and giving dirty looks (Crothers et al., 2009). Despite the distinctions among them, all of the terms are used to describe covert forms of aggression that are manipulative in nature and intended to harm another. In addition, bullies who use indirect forms of aggression are largely driven by the desire to gain social standing among a peer group.

   Although professionals in the field dispute whether relational and social aggression should be used interchangeably or as separate constructs, some researchers argue in favor of the

latter (Archer & Coyne, 2005; Björkqvist et al., 2001; Crothers et al., 2009; Remillard & Lamb, 2005). Archer and Coyne (2005) argue that different forms of aggression "either involve different competitive goals or they represent different means to the same ends" (p. 213). Crothers et al. (2009) reports that emerging evidence supports similar but separate groups of behaviors associated with each construct.

Measuring relational and social aggression. According to Crothers and Levinson (2004), effective assessment of bullying is the first step in developing a comprehensive anti-bullying effort. Importantly, there are few measures to reliably measure relational aggression (Crothers et al., 2009). Despite previous claims that relational aggression and social aggression are synonymous terms, there is research to suggest that the two are separate constructs, despite some overlapping behaviors (Crothers et al., 2009; Coyne et al., 2006). To address the need for measurement tools, and to support dissonance regarding the separation of constructs, Crothers et al. (2009) created the Young Adult Social Behavior Scale (YASB). The YASB is intended to assess relational aggression and social aggression, as well as behaviors reflecting interpersonal maturity, in adolescents and young adults.

The definitions delineated for use on the YASB differ regarding the intention of the perpetrator. Specifically, the goal of relational aggression was thought to be the influencing of someone "with whom they shared a dyadic relationship" (Crothers et al., 2009, p. 19), while social aggression was conceptualized as behaviors aimed at harming the victim's social status. The authors propose that the potential to differentiate between the two constructs may help to understand the true intentions of the perpetrators. Crothers et al. (2009) found that the constructs were, in fact, different, thereby supporting the usefulness of the YASB for measuring relational aggression and social aggression as separate constructs.

Although previous studies that measured social aggression and relational aggression have led to information regarding the differing behaviors associated with each construct, few researchers have examined the modality of such aggressions. As such, the proliferation of social networking sites (SNS), such as Facebook, Twitter, and Instagram, have led adolescents to use these platforms as extensions of their traditional social interactions (Hinduja & Patchin, 2015). Professionals must now consider how traditionally conceptualized aggressive behaviors may translate to online domains. The documented high-profile instances of cyberbullying (Cassidy et al., 2013; Hinduja & Patchin, 2015) indicate a need for the investigation of social aggression and relational aggression in such online domains.

Cyberbullying. Bullying is not a new social phenomenon; however, the changes in peer interactions among young people have spawned a breeding ground for extensions of the behaviors of peer victimization. Despite some advantages to quickened communication platforms and social interconnectedness mediated by SNS, adolescents' use of such sites increases their vulnerability to interpersonal violence, aggression, mistreatment, and harassment through cyberbullying (Hinduja & Patchin, 2008). As a relatively new social phenomenon, cyberbullying first began to be systematically researched in the early 2000s with research aimed at exploring the nature, extent, forms of, and consequences related to the behavior (Cassidy et al., 2013; Hinduja & Patchin, 2008).

Specifically, the increased popularity of online SNS and mobile communications has opened the floodgates for continuous and nearly permanent, day-to-day interactions among youth (Kowalski & Limber, 2007; National Academies, 2016; Romera et al., 2015; Smith et al., 2008). For many adolescents, the online culture is "largely inseparable and indistinct from their offline world," serving as extensions for teens' real-world behaviors (Hinduja & Patchin, 2015, p. 25)

and replacing traditional face-to-face communications and interactions (Hinduja & Patchin, 2008). In considering adolescents' need to be a part of social frameworks, the importance of the communities established through SNS is easily recognizable.

Hinduja and Patchin (2015) propose that technologies are no longer a part of adolescents' lives; rather, they are their lives. Accessibility to SNS has swelled due to the popularity of smartphone use and availability of Internet connections, both of which are considered critical for developing and maintaining social relationships with peers (Cassidy et al., 2013; Hinduja & Patchin, 2015; Sticca & Perren, 2012). Research reports reveal disparate approximations of teens in the US that use the Internet, though. Estimates range from 90% to 97% who actively use the Internet daily (Kowalski & Limber, 2007; Patchin & Hinduja, 2006; Schneider et al., 2012; Tokunaga, 2010; Ybarra & Mitchell, 2007) with about 74% accessing the Internet from a smartphone (Hinduja & Patchin, 2015). Some reports also indicate that teens are spending nearly three hours per day on online forums (Mishna, Saini, & Solomon, 2009; Tokunaga, 2010; Williams & Guerra, 2007). Although these numbers are high, the percentages may likely be even higher given the observed dependence on mobile devices.

The possibility of continued contact, in conjunction with the availability of these new communication platforms, has allowed bullying to become more convenient and divorced from actual personal interaction. While the prevalence of online harassment is seemingly gaining the attention of professionals in the fields of education and psychology, the literature on cyberbullying is somewhat sparse. Many researchers advocate for more attention to this emerging extension of bullying, but few high-quality studies have been produced (Ybarra & Mitchell, 2007). As a result, less is known about the true prevalence rates and how this type of bullying compares with the more traditional forms (Tokunaga, 2010; Williams & Guerra, 2007).

There is, however, agreement and pressures in the field to gain a more comprehensive understanding of this emerging construct.

   Definition of cyberbullying. As a relatively new phenomenon that is rapidly changing due to the emergence of new applications and online communication platforms, a universal definition for cyberbullying has yet to be established (Law et al., 2012; Mehari, Farrell, & Le, 2014; Schneider et al., 2012). In a comprehensive review of the literature, Mehari et al. (2014) argued that support for the inconsistency is "reflected in the terms used to label this phenomenon" (p. 400), which range from online harassment or aggression to cyberbullying (Mehari et al., 2014; Ybarra et al., 2007). As a result, definitions range from broad to specific.

   One major obstacle in the comprehensive conceptualization of cyberbullying is that the phenomenon was virtually nonexistent 10 years ago. Research on cyberbullying is relatively new, with much of the quality findings beginning to surface only 5 to 7 years ago (Cassidy et al., 2013; Patchin & Hinduja, 2011). Some researchers propose that the definition should parallel the tripartite bullying definition set forth by Olweus (Dooley et al., 2009; Law et al., 2012; Smith et al., 2008; Tokunaga, 2010), which includes the following elements: the intent to harm, the repetition of aggressive behaviors over time, and an imbalance of power between aggressor and victim. Hinduja and Patchin (2015) argue in favor of this definition, indicating that malicious intent, violence, and repetition are essential aspects of the cyberbullying definition and should be maintained. As such, Smith et al. (2008) proposed the following definition for the phenomenon, "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 himself" (p. 376). Although this definition seems plausible and applicable to what is thought to be a similar

behavior carried out in a different setting, researchers are now tasked with testing the applicability of such a definition, and its three parts, in the online realms.

Researchers seem to agree that cyberbullying does, in fact, involve aggression that is carried out through online platforms (Mehari et al. 2014). As such, there seems to be some support for using the tripartite definition as it applies to the cyber realm. After conducting research via telephone interview with youth Internet users, Wolak et al. (2007) proposed that aggression, repetition, and a power imbalance are also applicable to cyberbullying. The researchers found that more than half of the youth could be classified as 'harassers' and reported using online avenues for sending or posting messages with the intent to hurt their victims. They also concluded that close to 60% of harassment incidents were "part of a series," thus meeting the repetitive tenet of the definition (p. 57). Finally, the 'harassers' often worked in groups to target a single individual, thereby meeting the criteria of a power imbalance (Wolak et al., 2007).

Cyberbullying conceptualized. Although cyberbullying is a relatively new phenomenon, researchers have attempted to identify commonalities with more traditional forms to drive research. Hinduja and Patchin (2015) warn that although cyberbullying shares some common attributes to more traditional forms of bullying, there are some distinguishing characteristics. Unlike the traditional forms of bullying, cyberbullying can occur at any time and in any place, extending beyond the school walls and potentially following the victim home (Hinduja & Patchin, 2015; Patchin & Hinduja, 2006; Tokunaga, 2010). Cyberbullying is further considered to be an "opportunistic offense" in which the bully can harm another without physical interaction, little planning, and a diminished risk of being caught (Tokunaga, 2010).

As social networking and online communications are growing in popularity, so too is the convenience of online harassment. Wolak et al. (2007) published a study in which a panel of

youth cited the Internet as a tool to harass or embarrass others with whom they were angry. Researchers posit that cyberbullying is a more pervasive problem because the attacks transcend the school walls. Cyberbullying has the potential to afford perpetrators access to their victims throughout much of their day, going as far as targeting victims in their own home (Erdur-Baker, 2010; Mesch, 2009; Pornari & Wood, 2010; Tokunaga, 2010). Because the victims are more easily targeted by cyberbullies, researchers hypothesize that the "persistence of the bullying behaviors may result in even stronger negative outcomes than traditional bullying" (Tokunaga, 2010, p. 279).

Specifically, the intensity of bullying behaviors increases in the online world largely because physical separation does not necessarily signify an end to the contact (Mesch, 2009). Focus groups facilitated by Mishna et al. (2009) revealed that students referred to the new phenomenon as "non-stop bullying" in which the bullying that had occurred during the school day could also persist after the school day had ended. The convenience of smartphones and students' access to the Internet has allowed bullies to use SNS and other applications during the school day even if the school had placed a ban on technology use (Mishna et al., 2009).

Researchers argue that cyberbullying attacks may seem more significant than traditional bullying attacks primarily because these online platforms can be used for quick and efficient dissemination of damaging rumors, gossip, or attacks on others (Cassidy et al., 2013). The victims may also be re-exposed to the harassment because a one-time upload of a picture or post can be incessantly viewed thereby resulting in endless humiliation and shame for the target (Hinduja & Patchin, 2015; Law et al., 2012). Despite the total number of actual viewers of the post, the target perceives that it has gone viral. What is more, technology allows for its users to share information easily and quickly (Sticca & Perren, 2012).

Anonymity. Online venues for communication differ from face-to-face communication primarily because users may be unaware of who might be on the other side of the screen. When considering the role of anonymity as it applies to cyberbullying, some studies have found that perpetrators were better able to successfully exert power and dominance over their victims because of their ability to keep their identities unknown (Kowalski & Limber, 2007; Ybarra & Mitchell, 2008). In focus groups, adolescents reported that they were more fearful about the anonymity of the message senders rather than the message content itself (Dooley et al., 2009; Vandebosch & Van Cleemput, 2008). Moreover, anonymity creates physical distance between the perpetrators and victims, freeing the perpetrators from pressures of society, conscience, morality, and ethics to behave respectfully (Hinduja & Patchin, 2015; Ybarra & Mitchell, 2007).

Online anonymity, in turn, is hypothesized to increase the likelihood that some individuals will engage in bullying behaviors when they may have not otherwise done so in more traditional settings (Barlett, 2014; Tokunaga, 2010). In one study that examined the effects of anonymity on the frequency of cyberbullying behaviors, Barlett (2014) found strong support for the effects of anonymity on cyberbullying frequency. Participants were asked to complete a cyberbullying frequency scale as well as an attitude toward anonymity questionnaire, which measured their agreeability to behaviors like sending messages to individuals whom they did and did not know. Findings supported that when individuals learned about the anonymity associated with cyberbullying, and that the negative consequences associated with anonymous communications were rare, cyberbullying was more likely to occur. What is more, the study found that anonymity was a greater mediating factor for cyberbullying as compared to traditional bullying (Barlett, 2014). Other studies have found support that aggressor-perceived anonymity was related to increased cyberbullying behavior (Barlett, Gentile, & Chew, 2016).

Not only is the quality literature regarding cyberbullying lacking, but researchers are also tasked with keeping pace with the changing landscape of technological communications. Even since meaningful research has been produced in the early 2000s, much has changed regarding online communications and SNS. Most recently, applications like YikYak, Secret, Ask.fm, and Whisper have grown in popularity and allow users to post anonymously without even creating a username. In some of these applications, the more a post is 'liked' or shared, the more it will be spread to other users. When using some applications, personal information is not gathered from the user's phone, no username or identifying information is required, and anonymous posts from users all over the world are accessible (Mahler, 2015). These anonymous applications allow for users to post comments that can be viewed by anyone, leaving all users highly vulnerable to attack (Hinduja & Patchin, 2015). The invisibility of the perpetrator can heighten a victim's sense of vulnerability that may be translated to attacks feeling inescapable (Cassidy et al., 2013; Sticca & Perren, 2012). Sticca and Perren (2012) found support for these claims in their examination of anonymity in cyberbullying and traditional bullying. Participants reported anonymous cyberbullying as the most detrimental of the two forms, leaving victims feeling frustrated, insecure, and fearful.

Online disinhibition effect. Although related to anonymity, online disinhibition differs and was first described by Joinson (qtd. in Udris, 2014) as reduced concern for self-representation or being "freed from restraints on your behavior" (Hinduja & Patchin, 2015, p. 48). Suler (2004) further developed the phenomenon, identifying benign disinhibition, which promotes openness and kindness, and toxic disinhibition, which promotes rude language, hatred, and threats. Toxic disinhibition is thought to influence an individual's desire to insult or ridicule others online (Udris, 2014), explaining why people say and do things in cyberspace that they

ordinarily would avoid saying or doing during face-to-face communications (Suler, 2004). Suler

(2004) further argued that norms from real world social interactions were irrelevant online, thus

leading to disinhibited behavior. Additional research has found support for the effect,

concluding that individuals tend to be franker or blunter during their online communications

(Udris, 2014).

The factors identified as leading to online disinhibition are: anonymity, an exaggerated

sense of self through isolation, delayed responding between sending messages, lack of rules or

norms, and a non-existent authority figure (Udris, 2014). Asynchronicity is a particularly

relevant term used to explain how real-time interactions among individuals fail to take place

online. This means that when one directs harsh or offensive language to another, the receiver's

immediate reaction is not readily observed. When people interact in person, however, behaviors

are often shaped by others' reactions to what we say or do (Suler, 2004). Atkinson (2008)

references research on neuroscience, which suggests that during typical face-to-face interactions

with others, the brain relies on innumerable social and emotional cues to guide our interactions.

Online, this important aspect of communication development is nonexistent and thus negatively

impacts the way in which individuals are interacting.

Although online disinhibition seems to be directly applicable to cyberbullying behavior,

few studies have examined the link between this framework and cyberbullying (Udris, 2014). In

some studies, however, researchers found that disinhibited self-representations online were

significantly related to higher levels of cyberbullying behaviors (Görzig & Ólafsson, 2013;

Udris, 2014). These findings should encourage other professionals to continue to produce

quality research that shows support for the relationship between disinhibition and cyberbullying.

Challenges of conceptualization. Unfortunately, a comprehensive conceptualization of cyberbullying is stunted by little high-quality research. Specifically, some researchers claim that the non-existent definition of cyberbullying largely obstructs advancement in this line of research (Law et al., 2012; Mehari, Farrell, & Le, 2014; Tokunaga, 2010; Ybarra, Boyd, Korchmaros, & Oppenheim, 2012). While some argue in favor of the tripartite definition, Law et al. (2012) warned that even if these characteristics are present online, they may "function in very different ways" (p. 227). Dooley et al. (2009) supported this concern, reporting that certain aspects of the proposed cyberbullying definition are particularly challenging to operationalize.

Although the literature regarding the conceptualization of cyberbullying is sparse, particularly regarding cyberbullies' intent, some research supports that online aggression is similarly used to inflict harm or fear in another (Dooley et al., 2009). These claims parallel some motives associated with more traditional forms of bullying. The motives, however, may also diverge from those seen in traditional bullying. In a study that employed focus groups of adolescents, students reported that although many perpetrators acted with the intent to harm another, others engaged in the behavior because of boredom or because they "wanted to display their technological skills and power" (Vandebosch & Van Cleemput, 2007, p. 501).

The repeated offenses by bullies and their victims may also be conceptualized differently. Dooley et al. (2009) propose that repetition may be clear in instances that multiple texts or direct messages are sent to the victims; however, cyberbullies have the power to post a single photo or comment online that many people can access consistently over time. A single behavior, then, can result in ongoing ridicule and/or humiliation for the target (Dooley et al., 2009; Hinduja & Patchin, 2015; Law et al., 2012; Wolak et al., 2007). In addition, students report that a single aggressive act online could then persist in offline environments (Vandebosch & Van Cleemput,

2008). Arguably, this may result in an inability to escape from the targeting and corresponding feelings of powerlessness on the victim's part.

Assessing power poses is particularly challenging on cyber platforms primarily because it can be social or psychological in nature. Although some researchers argue that the power imbalance is an unnecessary consideration for conceptualizing cyberbullying (Dooley et al., 2009), others disagree, claiming that the power imbalance in online domains is significant but may have multiple interpretations. Vandebosch and Cleemput (2008) reported that because some perpetrators targeted victims that they had already identified as weaker in the real world, the power differential was preconceived before the attack and failed to take place online. Law et al. (2012), though, argued that victims might be more comfortable responding to attacks due to the absence of the bully's physical presence, thus diminishing the effects of the power imbalance. Evidently, there is much disagreement in the field surrounding cyberbullying. As a result, professionals must continue to vigorously explore this phenomenon to produce meaningful results.

Prevalence of cyberbullying. In a review of the literature, Cassidy et al. (2013) reported disagreement in the field regarding the prevalence rates of cyberbullying over time. The variability may be attributed to differing measurements of cyberbullying in addition to inconsistencies in populations studied (Görzig & Ólafsson, 2013). Some researchers argue that the rate of cyberbullying has not increased since its emergence; others report increased rates in more recent years. In one of the earliest studies, Ybarra and Mitchell (2004) concluded that 19% of Internet users between the ages of 10 and 17 had reported being involved in cyberbullying. In another study, which further attempted to identify the prevalence rates of cyberbullying, Patchin and Hinduja (2006) found that 30% of participants below the age of 18 had been a victim of

cyberbullying. Ybarra et al. (2012) attempted to reassess the prevalence rates of cyberbullying, concluding that an average of 10% were bullied online and 8% via text messaging.

Measurement of cyberbullying. In a comprehensive review of the literature, Mehari et al. (2014) reported finding few "carefully developed measures" (p. 404). In reviewing the methods used in cyberbullying research, Espinoza and Juvoven (2013) found that many studies aimed at measuring the phenomenon have primarily used surveys and focus groups that were intended to provide descriptive information. This is largely due to the fact that cyberbullying is a relatively new phenomenon. Mehari et al. (2014) argues that to explain the prevalence, predictors, and consequences of cyberbullying, "researchers have generally neglected the more basic goal of establishing gold standard measures for cyberbullying" (Mehari et al., 2014, p. 404).

Some researchers agree that a lack of valid measures has retarded meaningful research surrounding the relatively new phenomenon (Cross, Bauman, & Walker, 2013; Espinoza & Juvoven, 2013; Mehari et al., 2014; Tokunaga, 2010). One primary contributing factor to the lack of systematic approaches to measurement is cyberbullying's rapid development (Mehari et al., 2014) and subsequent need for descriptive data (Espinoza & Juvoven, 2013). Our need to comprehensively understand the use of online applications, and the role that they play in cyberbullying, however, is critical. Professionals must work to develop meaningful measures with empirical and theoretical support to address the increasingly complex questions about the phenomenon (Espinoza & Juvoven 2013; Mehari et al. 2014).

Outcomes of cyberbullying. Because cyberbullies can reach their victims at any place and at any time of the day, researchers have theorized that the outcomes associated with cyberbullying are potentially more harmful (Tokunaga, 2010). In addition, the breadth of the

audience may also contribute to heightened negative effects for the victims (Smith et al., 2008).

Cyberbullies have the power to target individuals in a variety of ways, such as making comments

or posting pictures. These behaviors on online platforms make the attacks longer lasting because

the posts cannot permanently be erased. The comments or pictures posted by the bullies can be

saved by others via screenshot and recycled for later ammunition to re-target the same victims.

The cyberbullies also have the power to more efficiently reach wider audiences with less effort

than traditional bullies because a single degrading comment or picture can simultaneously be

posted across several social networking platforms (Hinduja & Patchin, 2015). Cyberbullying is

even more complex because social networking sites offer a "share" feature to its users, which

allows online friends to repost comments or pictures on their personal pages with a single click.

While some studies have attempted to measure the outcomes associated with cyber-

victimization, the authors of emerging literature suggest that the effects are like traditional

bullying victims. Schneider et al. (2012) reports that more serious distress, such as self-harm and

suicide, may also be linked to cyber-victimization. In addition, victims of both cyber and

traditional bullying were more likely to experience greater psychological distress than might be

experienced by being the victim of one form alone. Specifically, victims of both cyber and

traditional bullying were reported to be more than four times as likely to report depressive

symptoms, suicidal ideations, and self-injury as compared to non-victimized peers. Furthermore,

the victims of both forms of bullying were more than five times as likely to report suicide

attempts.

Traditional bullying and cyberbullying. To understand the new extension of bullying

behaviors, researchers have attempted to examine the ways in which cyberbullying may be

comparable to the more traditional forms. While Law et al. (2012) found support for traditional

bullying and cyberbullying being independent forms of interpersonal aggression, many others have conducted research based on the likelihood of relatedness. Some of the early studies began explorations intending to identify perpetrators and victims. These researchers found that some victims of traditional bullying were also victims of cyberbullying (Patchin & Hinduja, 2006; Tokunaga, 2010); and comparably, traditional bullies tended to also be cyberbullies (Smith et al., 2007). To further these findings, Wolak et al. (2007) conducted telephone interviews with youth Internet users and found that approximately 45% of online targets had had similar aggressive contacts in offline environments. Even higher overlap was demonstrated by a more recent study conducted by Schneider et al. (2012), in which public school students in the Boston metropolitan area reported that 59.7% of cyberbullying victims were also victims of traditional bullying.

These data might be skewed, however, because Law et al. (2012) found that after being given specific instances of traditional and online aggressions, participants struggled with differentiating the roles of cyberbully and cybervictim as compared to traditional bully and traditional victim. Given the uncertainty of online audience size, researchers have examined the role of traditional bullying bystanders as sources of power for the bully (Beran & Li, 2007; Law et al., 2012). Law et al. (2012) argues that the nature of this power transfer is largely unclear on online domains; and, more so, the unique role of bully, bystander, and victim may all be unclear online. Beran and Li (2007), though, reported that a parallel might be drawn from traditional bullying occurring in the presence of peers and cyberbullying being viewed by peers as well as strangers. Regarding the overlap, then, more research is needed to draw reliable conclusions.

Behaviors associated with online bullying have also been explored. Specifically, researchers have hypothesized that behaviors associated with relational bullying and social bullying may translate well onto SNS, concluding that cyberbullying may be indirect bullying

being expressed virtually. Cassidy et al. (2013) highlighted cyberbullying's "close parallels with the paradigm of relational aggression" (p. 578) while Beran and Li (2007) proposed cyberbullying as another indirect form in which "the aggressor does not harass in a face-to-face interaction" (p. 18). Hinduja and Patchin (2015) further argued that although cyberbullying may be comparable to indirect aggression, the newer phenomenon might be more severe because the platform has the power to "greatly expand the reach and augment the intensity of interpersonal harm" (p. 52).

Similarly, the impacts of these forms of bullying have been under examined. Some researchers have attempted to compare the impacts of cyberbullying and traditional bullying, arguing that cyberbullying is worse than more traditional forms (Dooley et al., 2009; Tokunaga, 2010). Sticca and Perren (2012) reviewed the few quality studies that existed on perceived severity of each type of aggressiveness and concluded that it was "not yet known" whether cyberbullying was indeed worse than more traditional forms (p. 41). The lack of literature in this domain seems to hinder researchers' conclusions about the true impact of cyberbullying, leaving researchers with few definitive conclusions.

Theory

Much of the bullying research that exists focuses on the causes and results of cyberbullying as well as other variables related to it (Tanrikulu, 2014; Vandebosch & Cleemput, 2008). Although researchers have attempted to develop explanatory theories about cyberbullying, they are scant, underdeveloped, and piecemeal (Bauman, Cross, & Walker, 2013). This may be due, in part, to the newness of the phenomenon in additional to its rapid development. Cyberbullying is hypothesized to be a permutation of more traditional forms of bullying (Patchin & Hinduja, 2011), and as a result, the existing literature on cyberbullying

theories has been developed through the adaptations and applications of traditional bullying theories. Much like explanations of traditional forms of bullying, researchers have used the same theories applied to the development of aggressive behaviors in children, including social information processing, social-cognitive learning, and social-ecological theories (Rubin et al., 2011). Despite these attempts at explanation, findings regarding cyberbullying are largely inconsistent (Chisholm, 2014), further evidencing the complexity of the new phenomenon. Despite the inconsistencies, the literature emphasizes the importance of examining theoretical explanations to fully understand cyberbullying (Tanrikulu, 2014). At present, however, the existing literature is lacking an empirically-supported theoretical framework (Mehari et al., 2014). As a result, some preliminary research has attempted to apply traditional bullying theories to the cyberbullying phenomenon.

Social Information Processing (SIP) Model. Because the Social Information Processing (SIP) model explains social interactions as well as aggressive behaviors in adolescents, some researchers have examined the model in context of cyber aggression and victimization (Runions, Dooley, Shapka, & Modecki, 2012). Researchers employing this model propose that individuals engage in several mental steps before enacting a social behavior: encoding situational cues; interpreting the cues based on prior experiences and on the current context; activation of social goals to promote or inhibit behavioral responses; evaluation of potential responses in terms of their social efficacy; and, finally, selecting a behavior or response (Crick & Dodge, 1994; Dooley et al., 2009; Runions et al., 2012). While deficits in SIP stages are associated with reactive aggression, proactively aggressive children are thought to make associations with positive outcome expectations for aggressive behaviors (Cross et al., 2013). Furthermore, aggressive acts and behaviors are thought to become a part of an individual's repertoire, and

selected more often, after having been maintained through external reward attainment and reinforcement (Bandura, 1973). In effect, proactively aggressive youth are conditioned to perceive aggressive acts as socially effective in granting them access to positive outcomes and certain rewards (Cross et al., 2013; Coyne et al., 2006; Crick & Dodge, 1994; Dooley et al., 2009).

The application of the SIP model to cyberbullying assumes that cyberbullying is in fact proactive in nature (Cross et al., 2013). Espelage et al. (2013) further argues that if cyberbullying can be supported as being proactive in nature, the model may be a legitimate fit. This proves to be challenging, though, because a fundamental aspect of the SIP model focuses on social and nonverbal cues. Regarding online communications, however, researchers have emphasized that the facial, nonverbal, and intonational cues that traditionally guide behaviors are nonexistent online (Mehari et al., 2014; Runions et al., 2012: Tokunaga, 2010). Instead, online SNS are largely made up of text-based content, which results in delayed reaction times and subsequent associated rewards (Bauman, 2013). The lack of real-time interaction contributes to how online information is processed, what attributions are made, and what behaviors emerge from the interactions as a result (Tokunaga, 2010, p. 51). During online exchanges, the lack of social cues may contribute to miscommunications and aggressive offenses even if unintentional (Mehari et al., 2014).

Cyberbullying is especially complex because offline interactions and experiences may influence the interpretations of the aggressive content online (Runions et al., 2012). The existing literature suggests that new social norms are being adopted for online environments. Specifically, emoticons have become an acceptable substitute for real life social cues (Cross et al., 2015). Such replacements, however, have not yet been determined to be adequate in

clarifying the intent of the communicative exchanges. To further complicate the examination of

cyberbullying, researchers have questioned whether cyberbullies are being conditioned by 'likes'

online or by 'shares' of their online posts (Espelage Rao, & Craven, 2013). Given the many

uncertainties, more evidence is needed to support this theory as it relates to cyberbullying

behavior.

  Social-Ecological Theory. Urie Bronfenbrenner proposed that, "The ecological

environment is conceived topologically as a nested arrangement of structures, each contained

within the next" (Bronfenbrenner, 1977, p. 514). Emphasis is further placed on the overlapping

systems and the impact of immediate and indirect factors on human behavior (Cross et al., 2015).

As it applies to traditional bullying, the framework supports that bullying results from reciprocal

interactions between the various levels of the socio-ecological systems (Görzig & Machackova,

2015; Swearer & Doll, 2001).

  Despite the social ecological theory's successful application to traditional bullying

behaviors, researchers have yet to discover quality evidence to suggest that the theory can also

help to explain cyberbullying (Cross et al., 2015; Espelage et al., 2013; Görzig & Machackova,

2015). As a result, the empirical support for such theoretical explanations is somewhat lacking.

Some have proposed that to apply this theory to cyberbullying contexts, however, the ecological,

cognitive, and psychosocial risk and protective factors that could potentially be mediated at the

individual, family, peer, online, and community levels would first need to be identified.

Moreover, researchers would also be tasked with conceptualizing the seamless online/offline

social context of adolescents' lives (Cross et al., 2015).

  Although little empirical support exists for the social-ecological theory's applicability to

cyberbullying, one study identified hostility and alcohol and drug use as mediating factors for the

association between family conflict and cyberbullying perpetration. These findings show promise for cyberbullying perpetration to be explained by individual- and family-level characteristics (Espelage et al., 2013). In another study, researchers found that interventions targeting mediating factors across various social-ecological domains were able to slightly reduce cyberbullying behaviors (Cross et al., 2015). The identification of exact mediating factors, and which of these were most influential to the change, could not be identified. Despite these findings, more research is needed before cyberbullying can confidently be explained by this theory.

Gap in the Current Literature

Despite the importance of investigating cyberbullying as a rapidly growing phenomenon, inconsistencies and little empirical support for explaining cyberbullying appear to have hindered meaningful research. In particular, Mehari et al. (2014) proposed that the literature surrounding cyberbullying lacks empirically-supported theoretical frameworks that could assist in guiding future research. Without definitive definitions of the phenomenon, or existing theoretical frameworks that explain cyberbullying behaviors, the development of measurement tools is challenging (Mehari et al., 2014).

Currently, there seems to be little to no clear evidence to suggest that cyberbullying is a "distinct form of aggression" (Mehari et al., 2014, p. 399). In a comprehensive review of the current literature, Cassidy et al. (2013) reported that much of the cyberbullying research focuses on the similarities and differences in traditional bullying and cyberbullying, the impacts of cyberbullying on the victims, and coping strategies for the victims of cyberbullying. Some researchers have argued in favor of the relationships among indirect forms of traditional bullying and cyberbullying; however, more research is needed (Bauman, 2013). Although some studies

have attempted to measure the types of behaviors that are employed by online perpetrators, the literature is still lacking, and empirically-supported measurement tools are seemingly non-existent.

The changes that online SNS have undergone in recent years call for more quality research. To explain the phenomenon amidst its rapid development, cyberbullying has been hypothesized to serve similar functions of more traditional forms of bullying (Law et al., 2011), specifically indirect forms of aggression, which is due to perpetrators' use of messages and pictures to spread rumors, secrets or insults about others (Hinduja & Patchin, 2012; Mehari et al., 2014; Raskauskas & Stoltz, 2007). Patchin and Hinduja (2006) emphasize the importance of social acceptance among adolescents within peer groups and indicate that cyberbullying attacks may be used because SNS have greater utility for more permanent destruction of social standings within those groups. And while anonymity is considered to play a key role in online perpetration, many victims report that they know, or believe they know, who is responsible for the attacks. Frequently, the cyberbully is someone from the victim's social circle (Hinduja & Patchin, 2012), which further supports the potential correlations among social and relational aggression and cyberbullying.

Indirect or covert psychological bullying, which often includes behaviors associated with relational and social aggression, appears to be an adequate starting point for meaningful cyberbullying research; however, few studies have been produced to strongly support these hypotheses (Cassidy et al., 2013). As a result, professionals are now tasked with finding whether cyberbullying is considered a distinct construct or one that has links to more traditional forms of bullying that have been thoroughly explored. According to Mehari et al. (2014), if researchers can integrate cyberbullying into other frameworks of bullying or aggression, the findings will

assist in creating cyberbullying measures, guiding future research, and informing future prevention programs.

Measuring Cyberbullying Behaviors as Indirect Aggression. Much of the cyberbullying research that exists has attempted to measure cyberbullying as an independent construct. According to Mehari et al. (2014), "The measures created to assess cyberbullying reflect the common assumption that cyberbullying is a new form of aggression, distinct from physical, verbal, and relational aggression" (p. 404). Despite researchers' hypotheses that indirect forms of aggression may translate well to the cyber world because online platforms lend themselves to targeting individuals with the goal of harming that individual's social status (Cassidy et al., 2012; Hinduja & Patchin, 2015), few have considered these claims when attempting to measure the phenomenon.

To find support for cyberbullies employing indirect forms of aggression while online, the YASB and FCBVSs may be of good utility. In using the YASB and FCBVSs, evidence may emerge suggesting that the behaviors being employed on online platforms are relative to behaviors classified as indirect bullying behaviors. If the results suggest that the behaviors are similar, online realms may be the preferred environments for reaching a wider audience with minimal effort but with similar goals. Furthermore, the YASB and FCBVSs will help to determine whether constructs of indirect bullying are applicable in the online world. If the YASB and FCBVSs are found to measure similar behaviors, researchers may better understand how traditional forms of bullying relate to cyberbullying and, if they are related, what are the goals or intentions of the perpetrators. Finally, an assessment of potential gender differences in the use of cyberbullying and indirect bullying will be conducted to add to the extant literature base.

Summary

In this chapter, the definitions, constructs, and prevalence rates related to bullying and cyberbullying were described. Adolescence was identified as the primary age group affected by this phenomenon. In this chapter, distinctions among indirect forms of aggression, how these forms of aggression are measured, and how indirect aggression is thought to translate to online communication platforms were outlined. The challenges in conceptualizing and measuring cyberbullying behaviors were emphasized while also identifying the theories that are thought to be applicable to this relatively new phenomenon.

Methodology related to measuring cyberbullying behaviors will be identified in the next chapter. Specifically, the participants for the current study, the measurement tools that will be used to collect the data, the data collection procedures, and methods of data analysis will be provided. The primary aims of this research was to determine whether cyberbullying could be considered an extension of traditional indirect bullying and if gender differences existed among self-reported cyberbullying and indirect bullying perpetration. These research questions will be expanded upon in the following chapter.

Chapter III: Methods

The purpose of this quantitative study was to investigate the commonalities between indirect bullying and cyberbullying behaviors. The study was further intended to provide support for cyberbullying as an independent construct or as an extension of relational and social bullying. Additionally, as a means of providing more information to the extant literature base, this study also examined gender differences in measures of cyberbullying and indirect bullying behaviors. In the following sections the procedures for the recruitment of participants, the measures and procedures used for data collection, the psychometric properties of these measures, the research methodology, the limitations of the study, and methods of data analysis are described.

Research Questions

Research Question 1. Is cyberbullying an extension of traditional indirect bullying?

Hypothesis 1. It was hypothesized that items from the YASB will load together with items from the FCBVSs on one of two factors previously-identified on the YASB: socially-aggressive behaviors or relationally-aggressive behaviors.

Research Question 2. Do gender differences exist in a measure of cyberbullying perpetration?

Hypothesis 2. It was hypothesized that there will be no gender differences in self-reported cyberbullying perpetration.

Research Question 3. Do gender differences exist in a measure of indirect bullying?

Hypothesis 3. It was hypothesized that there will be no gender differences in self-reported indirect bullying perpetration.

Participants

  Participants for this study were sought from a small, liberal arts university located in the mid-Atlantic US. At the time of the study, the university enrollment was 2,668 students, with 1,745 undergraduate students. The total number of freshmen and sophomores enrolled in the university was not available for reporting but is estimated to be approximately 873 students. Participants in the current study consisted of a convenience sample of 96 late adolescents (approximately 10% of the freshmen and sophomore student population) who attended the participating university. Participants received an email message from the university's Director of the Center for Student Engagement and Leadership Development indicating the parameters of the study and an invitation to participate. The investigator's contact information was provided in the email message. Because the freshman and sophomore students could not be filtered from the general campus population, the email message specifically requested participation from individuals between the ages of 18 and 20. There were no incomplete surveys.

  All 96 student surveys were included in the current investigation. Of the 96 participants, 75 identified as female (78.1%) and 21 identified as male (21.9%). Twenty-one participants identified as being 18-years-old (21.9%), 31 identified as being 19-years-old (32.3%), 33 identified as being 20-years-old (34.4%), and 10 reported "Any Other Age" (10.4%). Participants were also prompted to report their ethnicity. All participants responded to this question and were permitted to select all ethnicities that were applicable. Of the 96 participants, 86 identified as Caucasian (89.6%), 7 as Asian (7.3%), 3 as African American (3.1%), 1 as Hispanic (1%), 1 as Native American (1%), and 1 as biracial (3.1%). Overall, most participants identified as being 20-years-old (34.4%) and Caucasian (89.6%)

A description of the general terms of the study was provided to students when seeking their participation. The students were asked to complete a survey in an area of campus that was devoid of distraction and in an area in which their responses could be kept private. They were further instructed to complete the survey independently. The participants were provided with a contact phone number for the National Suicide Prevention Line if the questions about indirect bullying or cyberbullying on the survey evoked strong emotional stress related to victimization of past or current bullying experiences. Participants were informed that by calling the number provided, they would be immediately connected to speak to someone for support.

Measures

Although effective measurement instruments are cited as being a "necessary condition for valid research" (DeVellis, 2012, p.15) and are referenced as being the first step in developing comprehensive anti-bullying programs (Crothers & Levinson, 2004), there is a noticeable lack of empirically-validated instrumentation designed for use in measuring cyberbullying behaviors (Espinoza & Juvoven, 2013; Mehari et al., 2014). After an extensive review of the existing literature, however, two instruments were selected for use in this study. The instruments are described in detail below.

Young Adult Social Behavior Scale (YASB). The Young Adult Social Behavior Scale (YASB) is a self-report measure that was created by Crothers et al. (2009) for the purposes of identifying behaviors associated with relational aggression, social aggression, and interpersonal maturity among adolescents and young adult populations. The YASB consists of 14 items which are presented on a 5-point Likert-type scale ranging from one (*Never*) to five (*Always*).

According to Crothers et al. (2009), the items on the self-report measure were created based on behaviors associated with the definition of each of the constructs as well as through

previous research that recorded behaviors reported by adolescents. For the YASB measures, socially-aggressive behaviors include: gossiping, social exclusion, isolation, alienation, writing notes or talking about someone, and stealing friends or romantic partners. If many of these behaviors are endorsed, the individual is considered to score high on the social aggression factor. Direct relationally-aggressive behaviors on the YASB include: not talking to or hanging around with someone, deliberately ignoring someone, threatening to withdraw emotional support or friendship, and excluding someone from a group by informing him or her that he or she is not welcome. If the participant endorses many of these behaviors, then that individual is considered to demonstrate relational aggression as measured by the relational aggression factor. Finally, the interpersonal maturity factor includes prosocial behaviors that are used in friendships, such as assertively managing conflict (Crothers et al., 2009).

The main purpose of the current study was to examine whether a relationship between indirect bullying behaviors and cyberbullying behaviors existed. Accordingly, it was determined that the items measuring interpersonally-mature behaviors on the YASB could be excluded, as they were not relevant for the purposes of this study (Crothers et al., 2009). Thus, the items from the YASB representing relational and social aggression only are represented in Table 1.

Table 1

YASB Subscale Items

Relational Aggression	Social Aggression
• When I am angry with someone, that person is often the last to know. I will talk to others first.	• When I do not like someone's personality, I derive a certain degree of pleasure when a friend listens to

- When I am frustrated with my partner/colleague/friend, I give that person the silent treatment.
- I criticize people who are close to me.

- I intentionally exclude friends from activities to make a point with them.
- When I am angry with a friend, I have threatened to sever the relationship in hopes that the person will comply with my wishes.

and agrees to my assessment of the person's personality.

- I contribute to the rumor mill at school/work or with my friends and family.
- I break a friend's confidentiality to have a good story to tell.

- I confront people in public to achieve maximum damage.
- I have attempted to steal a rival's friend.

Crothers et al. (2009)

YASB Reliability and Validity. The factor structure of the YASB was assessed using a Confirmatory Factor Analysis (CFA) and validity measures. Crothers et al. (2009) reported good model fit for the hypothesized three-factor model, which was supported by satisfactory factor loadings on one of the three internally consistent latent constructs: relational aggression, social aggression, and interpersonal maturity. Support for the YASB was reported using internal consistency statistics, which were at .70 and provided sufficient support for factor reliability. Fit indices reported by Crothers et al. (2009) indicated strong support for the model (Tucker-Lewis Index = .97; comparative fit index = .98); and, although limited, evidence for convergent and divergent validity were provided via the administration of the Hyperfemininity Inventory.

Findings revealed that lower relational aggression and social aggression scores were associated with higher levels of femininity and higher levels of hyperfemininity were associated with lower levels of interpersonal maturity (Crothers et al., 2009). The findings reported by Crothers et al. (2009) supported the utility of the YASB as a measure of indirect bullying behaviors.

Scoring. Raw scale scores for relational aggression and social aggression were obtained by summing the response values for all items within each factor of the scale. Higher scores on the scales indicate greater use of relational aggression and social aggression.

Florence Cyberbullying-Cybervictimization Scales (FCBVSs). The Florence CyberBullying-CyberVictimization Scales (FCBVSs) is a revised instrument intended to assess cyber perpetration and cyber victimization behaviors as they relate to cyberbullying (Palladino et al., 2015). The original version of the instrument included 10 items measuring two dimensions: visual behaviors and written-verbal behaviors. The revised version includes 8 additional items intended to measure exclusion and impersonation behaviors. The scale requires participants to rate how often they have experienced behaviors/events in the past few months. Each item is evaluated on a five-point Likert-type scale ranging from one *(Never)* to five *(Several Times per Week)*, with higher ratings indicating a higher frequency of behavior experiences. Seven items measure written-verbal behaviors, four items for visual, three items for exclusion, and four items for impersonation (Palladino et al., 2015).

In considering the main research question, which was whether cyberbullying behaviors were an extension of traditional indirect bullying behaviors, the items on the FCBVSs that measured impersonation behaviors were excluded. These items were excluded from this study because these questions investigated attacks that were based on identity theft (Palladino et al.,

2015). These behaviors were not a relevant dimension of the current study. The items from the

FCBVSs that were presented to participants are in Table 2.

Table 2

FCBVSs Subscale Items

Written-Verbal	Visual	Exclusion
• I send threatening and insulting text messages	• I share violent videos/photos/pictures by mobile phone	• I ignore others on purpose in an online group.
• I make threats and insults on the Internet (Websites, chatroom, blogs, MSN, Twitter, Facebook, MySpace).	• I share videos/photos/pictures of embarrassing or personal situations by mobile phone.	• I have excluded others from an online group (chats, forum, Facebook groups).
• I make silent/prank phone calls.	• I share violent videos/photos/pictures shared on the Internet.	• I have blocked others in a chatroom or on Facebook in order to exclude them from the group.
• I send threatening and insulting emails.	• I share videos/photos/pictures of embarrassing or personal situations on the Internet (e-mail,	

Websites, YouTube,

Facebook).

- I make threatening

  and insulting phone

  calls.

- I have made phone

  calls with rumors

  about me.

- I have started rumors

  on the Internet.

Palladino et al. (2015)

  Scoring. Raw scale scores were derived by summing the response values for all items

within each scale. Higher scores on a single scale reflect higher levels of cyberbullying

perpetration using written-verbal, visual, or exclusion methods.

  FCBVSs reliability and validity. To further examine the psychometric properties of the

FCBVSs using CFA, Palladino et al. (2015) administered the survey to an Italian population.

Researchers concluded that the FCBVSs was a valid and reliable measure of cyberbullying and

cybervictimization. Internal consistency was reported to be at or above .70 for each of the

factors, which supports sufficient levels of reliability. Palladino et al. (2015) reported good fit

indices and strong factor loadings on the identified latent constructs for cybervictimization and

cyberbullying: written-verbal, visual, impersonation, and exclusion. All parameters were

reported to be significant ($p < 0.001$). The results of the study provided support for a four-

dimensional model, which includes four distinct categories of behaviors that are carried out online. Two items were eliminated during the CFA due to low frequency and low discrimination indexes; therefore, the supported model included 16 of the original 18 items.

FCBVSs Additional Considerations. Palladino et al. (2015) tested the instrument's utility on an Italian population. Because poor measurement tools limit a researcher's ability to draw valid and meaningful conclusions (DeVellis, 2012), it is important to consider the utility of instruments developed and tested on populations from other countries. The following considerations for using an instrument developed in a different language were proposed by Geisinger (1994): first, it is typically unclear whether the instrument is measuring the same characteristic as is identified in the original language; and, second, it is possible that the meaning of some questions may have been altered enough to affect the participant's pattern of responding. Specifically, cyberbullying behaviors may systematically differ regarding their functions in Italy as compared to the US.

In a study examining the measurement of cyberbullying behaviors, however, Menesini, Nocentini, and Calussi (2011) argue that measurement tools may be relevant across cultures because "researchers have attempted to operationalize the construct of cyberbullying in specific acts pertaining to a general dimension of perpetrated or received behaviors" rather than by function or intention (p. 268). In discussing the development of the FCBVSs, Palladino et al. (2015) report that the items included in the scale were intended to measure the four types of cyberbullying behaviors that were found to be relevant across different countries. As a result, limitations surrounding the generalizability of the FCBVSs are seemingly minimal.

Research Design

  Variables. The following variables were used in the current study: relational aggression, social aggression, written-verbal aggression, visual aggression, and exclusion (the latter three represent forms of cyberbullying). For this study, direct relationally-aggressive behaviors were conceptualized as acts intended to "damage the target's social status or self-esteem" through the use of confrontational strategies (Crothers et al., 2009, p. 18) and included behaviors such as not talking to someone, deliberately ignoring someone, or threatening to withdraw friendships. Socially-aggressive behaviors were conceptualized as acts intended to "harm the target's social standing (Crothers et al., 2009, p. 19) and included behaviors such as social exclusion, alienation, or stealing friends (Crothers et al., 2009). In this investigation, relational and social aggression were measured using the YASB.

  Cyberbullying was conceptualized as various aggressive behaviors being carried out online. According to Palladino et al. (2015), written-verbal behaviors include acts such as phone calls, text messages, and emails; visual behaviors include acts such as posting compromising, embarrassing pictures and videos; and, exclusion behaviors are aimed at "defining those considered members of the ingroup and outgroup" and include behaviors such as intentionally excluding someone from an online group (Palladino, 2015, p. 113). In this study, cyberbullying behaviors were measured using the FCBVSs.

Procedures

  Upon approval from the Duquesne University Institutional Review Board (IRB) and the participating university's IRB, the investigator provided the Director of The Center for Student Engagement and Leadership Development an email message that would be used for dissemination. The email message contained an invitation for participation for students between

the ages of 18 and 20 and included details describing the study. The emailed invitation was sent to the student body on three separate occasions and indicated, during each dissemination, that the survey would be available for completion for one week. Students were permitted to complete the survey within the given timeframe and at their convenience from any computer that was accessible to them. The email indicated the timeframe for completing the online survey and directed students to complete the survey items independently. If students were interested in participating in the research study, they clicked on the link provided in the emailed invitation and were provided with an Informed Consent notification at the top of the webpage prior to being exposed to the survey questions (Appendix A). Their agreement to participate in the survey was indicated by their procession to the survey questions. Participation was anonymous. The survey questions consisted of 10 items from the revised YASB scale, followed by 14 items from the revised FCBVSs.

Participants were presented with all the questions from the revised YASB and FCBVS on one screen, since previous research has shown that a single-screen presentation method yielded higher levels of participation and completion of surveys (Crawford, Couper, & Lamias, 2001). No identifying information was requested from the participants. The responses to the survey questions were voluntary and took approximately 10 minutes to complete. Responses from the participants remained anonymous and were maintained on a password-protected computer for analysis. Those who disagreed to participation did not complete the survey questions, and could, at the time of deciding not to participate, navigate away from the survey page.

Potential Limitations

External Validity. External validity refers to the generalizability of results. In the current study, several factors are possible threats to external validity. First, the experimentally-

accessible population was late adolescents between the ages of 18 and 20 who attended a small, liberal arts university located in the mid-Atlantic US. In considering the sample in this study, the results may only be generalizable to similar populations.

The Hawthorne effect serves as an additional possible threat to external validity. This phenomenon refers to an individual's awareness of being studied and the possible impact on his or her behavior (McCambridge, Witton, & Elbourne, 2014). More so, this awareness potentially leads respondents to respond in a way that conforms to researcher expectations and social desirability. It is possible that this occurred, despite responding anonymously, because participants were aware that their responses would be reviewed. It is also possible that the individuals wanted to respond in a way that was socially acceptable. To encourage honest responding, the investigator emphasized that no identifying information would be collected from participants. Additionally, the participants were made aware that their responses would remain confidential.

Sample. In discussing generalizability, I mentioned that the sample for this study represents a threat to external validity due to selection bias. The study's population was comprised of late adolescents between the ages of 18 and 20 who attended a small, liberal arts university located in the mid-Atlantic US. This specific population weakens the generalizability of the findings of this study. Volunteer bias is also considered to be a limitation of the study. In considering that indirect bullying is the focus of this study, it is likely that females would be more inclined to volunteer for responding. It is also possible that the individuals volunteered to participate in the study for a personal reason (i.e., experiencing bullying). These sampling biases potentially threaten the external validity of this investigation.

Instrumentation. The FCBVS was developed in Italian and tested on Italian populations. This limitation was previously discussed in an earlier section. According to Geisinger (1994), translations in instrumentation may result in inconsistent measurement of the original construct. This may also affect the participant's pattern of responding. Additionally, cyberbullying behaviors may differ in their mode and function as compared to individuals in the US.

Method of Data Analysis

The IBM Statistical Package for the Social Sciences (SPSS) – Version 24.0 as well as the SPSS – Analysis of Moment Structures (AMOS) – Version 24.0 were used for the statistical analyses of the data for this study. Factor analysis was the statistical procedure used to test the major hypothesis for this study.

Research Questions. The main purpose of this study was to determine whether cyberbullying behaviors were an extension of traditional indirect bullying behaviors. Such a finding would suggest that sets of intercorrelated variables would parsimoniously describe indirect bullying behaviors and cyberbullying behaviors as related constructs. In considering the preliminary research findings about cyberbullying and behaviors that individuals may use when interacting online, I hypothesized that items on the YASB would be statistically similar to items on the FCBVS. If items were statistically similar, then the items from both the YASB and FCBVSs would load on one of the two factors of the proposed model: relational aggression or social aggression.

Questions designed to assess potential gender differences regarding cyberbullying and indirect bullying behaviors were also posed to participants. More recent research studies have suggested that college-age males and females may be consistent in their use of indirect bullying

(e.g., Forrest, Eatough, & Shevlin, 2005), while the limited research on this topic suggests that cyberbullying appears to be more often perpetrated by males than females (e.g., Barlett & Coyne, 2014). Nevertheless, there has been sufficient ambiguity in the research to warrant non-directional hypotheses for the latter two research questions.

Summary

In this chapter, the research design for the current study was identified. The sample, methods for data collection, procedures, limitations, and data analysis were discussed. This chapter also included a description of the general methods for data analysis that were used to test the hypotheses of this study. The next chapter will include an examination of the findings of the PCA and CFA, as well as potential gender differences in cyberbullying and indirect bullying perpetration in greater detail.

Chapter IV: Results

The current study was designed to examine whether shared variance exists among measures of cyberbullying and indirect bullying behaviors. Given some evidence in the literature that cyberbullying behaviors serve as an extension to indirect bullying behaviors, hypotheses that questions assessing indirect bullying behaviors and questions assessing cyberbullying behaviors would be intercorrelated were developed. EFA and CFA methodology was used to analyze the data to answer the first research question regarding cyberbullying as an extension of traditional indirect bullying. A Mann-Whitney U test and an independent samples t-test was also used to determine if differences existed between male and female responding to the cyberbullying and indirect bullying scales. Therefore, information about the analysis of demographic data from the participants, the structural equation modeling conducted, the Mann-Whitney U tests, and the results of these analyses will be provided in this chapter.

Demographics

The IBM Statistical Package for the Social Sciences (SPSS) - Version 24.0 was used for statistical analysis. Of the 96 participants, 75 identified as female (78.1%) and 21 identified as male (21.9%). Twenty-one participants identified as being 18-years-old (21.9%), 31 identified as being 19-years-old (32.3%), 33 identified as being 20-years-old (34.4%), and 10 reported "Any Other Age" (10.4%). Participants were also prompted to report their ethnicity. All participants responded to this question and were permitted to select all ethnicities that were applicable. Of the 96 participants, 86 identified as Caucasian (89.6%), 7 as Asian (7.3%), 3 as African American (3.1%), 1 as Hispanic (1%), 1 as Native American (1%), and 1 as biracial (3.1%). Overall, most participants identified as being 20-years-old (34.4%) and Caucasian (89.6%). Table 3 provides a summary of the descriptive statistics.

Table 3

Frequency Distribution: Demographics, Entire Sample

	N	**Percent**
Male	21	21.9
Female	75	78.1
Age 18	21	21.9
Age 19	31	32.3
Age 20	33	34.4
Other	10	10.4
Caucasian	86	89.6
Asian	7	7.3
African American	3	3.1
Hispanic	1	1.0
Native American	1	1.0
Biracial	1	1.9

Preliminary Statistical Analyses

All submitted surveys were reviewed and examined for completeness prior to coding the data in SPSS. All surveys were determined to be complete and thus were included in the data entry. The responses to the 10 items of the YASB and 14 items of the FCBVSs were coded and entered into SPSS. Items within each scale were summed to obtain scale scores for relational aggression, social aggression, written-verbal aggression, visual aggression, and exclusion. The scale scores were also used in the analysis.

Parameters regarding sample size for EFA is inconsistent. In a review of the literature,

researchers found that sample size recommendations for EFA and CFA ranged from 30 to 200

participants (Wolf, Harrington, Clark, & Miller, 2013). Wolf et al. (2013) proposed that

achieving adequate statistical power is typically prioritized over guidelines for sample size, with

power being dependent on the chosen alpha levels, the magnitude of the effect of interest, and

the sample size. For the current study, the statistics produced by the EFA and CFA analyses will

be evaluated regarding statistical power. A power analysis was conducted a-priori and

determined that a minimum of 90 participants were required to achieve a medium effect size.

The final sample size of 96 exceeded the minimum of 90 participants required for adequate

power.

Statistical Assumptions

In conducting PCA and factor analysis, Mertler and Vannatta (2013) report that the

assumptions regarding variable distribution in the population do not need to be assessed due to

the exploratory and descriptive nature of the analysis. For the current study, a two-component

model was most parsimonious: Cyberbullying and Indirect Bullying. Bartlett's Test of

Sphericity was significant (p = .000) and the Kaiser-Meyer Olkin Measure of Sampling

Adequacy (KMO) value exceeded the minimum threshold of .6 (KMO = .732; Kanyongo, 2017).

These values indicate that the variables are sufficiently correlated and that an adequate number

of items exist for each component. These statistics indicate that the minimum criteria for PCA

was met and provide strong support for rejecting the null hypothesis. These findings provide

further support of the use of EFA with the dataset.

Statistical Analyses Summary

An Exploratory Factor Analysis (EFA) was conducted via Principal Components

Analysis (PCA) with varimax rotation and revealed that a two-component model was the most

parsimonious fit for the data, explaining 75.84% of the common variance. Pattern coefficients

were examined to determine that the subscales measuring cyberbullying behaviors and indirect

bullying behaviors most appropriately represented the factors. Reliability statistics were

conducted regarding the proposed factors, revealing adequate internal consistency for each of the

factors (Cyberbullying Behaviors α .83; Indirect Bullying Behaviors α .65). These reliability

levels were considered to provide sufficient support for the proposed model.

The model was then tested using a Confirmatory Factor Analysis (CFA). Structural

Equation Modeling (SEM) methods were used to examine the factor structure and goodness of fit

indices revealed that the two-factor structure was adequate. The fit indices and the values

produced by the CFA are described in the following sections. Goodness of model fit provided

support for cyberbullying behaviors and indirect bullying behaviors as independent constructs.

Exploratory Factor Analysis (EFA). To determine the best possible factor structure to

represent the YASB and FCBVSs data, EFA procedures were performed using IBM SPSS 24.0.

PCA was chosen as the most appropriate exploratory factor-extraction technique because the

underlying factor structure was unknown. The 10 items from the YASB and 14 items for the

FCBVSs were used in the initial analysis. According to Costello and Osborne (2005), oblique

rotations are preferred given the assumption that some correlation among factors is generally

expected since behaviors rarely partition into independent units. As a result, PCA with a

varimax rotation was used because it was expected to produce a more accurate solution. The

number of components extracted was based on eigenvalues at 1.0 or higher.

Results of this analysis indicated a Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) value that exceeded the identified threshold of .60 (KMO = .725) and Bartlett's Test of Sphericity was significant ($p < .001$), which indicates sufficient correlations among variables and support for rejecting the null hypothesis. Eight components were extracted with eigenvalues greater than 1.0. According to Mertler and Vannatta (2013), however, it is generally most acceptable to retain the number of components that account for at least 70% of the total variance. The 8 extracted components only accounted for 66% of the total variance (Table 4). In considering the high number of extracted components, and seemingly low percentage of total variance explained, the hypothesis for this study was reexamined.

Table 4

Percentage of Variance and Total Variance Explained: Initial Eigenvalues

Component	Total	% of Variance	Cumulative %
1	5.36	22.34	22.34
2	2.33	9.74	32.08
3	1.827	7.61	39.70
4	1.51	6.31	46.01
5	1.45	6.04	52.054
6	1.17	4.89	56.94
7	1.12	4.69	61.64
8	1.07	4.46	66.11

After reevaluating the initial hypothesis and statistical analysis, it was determined that the subscale scores of the FCBVSs (Online Written-Verbal, Online Visual, and Online Exclusion)

and the subscale results of the YASB (Relational Aggression and Social Aggression) may better explain the relationship between cyberbullying behaviors and indirect bullying behaviors. A PCA with a varimax rotation was used to evaluate the subscales. Two components were extracted with eigenvalues over 1.0. These two components explained 75.84% of the total variance (Table 5). This higher percentage of total variance explained by fewer factors was more parsimonious and further supported a strong relationship among the variables under investigation.

Table 5

Percentage of Variance and Total Variance Explained: Initial Eigenvalues

Component	Total	% Variance	Cumulative %
1	2.66	53.31	53.31
2	1.12	22.53	75.84

In considering that sufficient factor loadings are dependent on sample sizes, the critical values of each loading were examined to determine adequate component loadings. For a sample size of 96, a range of .55 to .60 is recommended (Kanyongo, 2017). Each of the loadings met or exceeded the suggested minimum criteria. Three of the subscales loaded onto Component 1, including Online Written-Verbal Behaviors, Online Visual Behaviors, and Online Exclusion Behaviors. Two of the subscales loaded onto Component 2, including Relational Aggression and Social Aggression (Table 6).

Table 6

Rotated Component Matrix

Subscales	Component	
	1	2
Relational Aggression	.018	.905
Social Aggression	.334	.779
Online Written-Verbal Behaviors	.897	.150
Online Visual Behaviors	.796	.119
Online Exclusion Behaviors	.866	.173

Internal consistency was tested for each of the components using Cronbach's alpha.

Component One (Cyberbullying Behaviors) produced a Cronbach's alpha statistic of .84 and

Component Two (Traditional Indirect Bullying) produced a Cronbach's alpha statistic of .66. In

EFA, an alpha score of at least .60 is recommended. Considering the minimum value

recommended, it can be concluded that these components are adequate and should be retained in

the model.

Confirmatory Factor Analysis (CFA). The two-component model extracted from the

PCA was tested via CFA using SEM procedures. This model included two components:

Cyberbullying Behaviors (Online Written-Verbal Behaviors, Online Visual Behaviors, and

Online Exclusion Behaviors) and Indirect Bullying Behaviors (Relational Aggression and Social

Aggression). SPSS AMOS 24.0 was used to conduct the analysis and test the model. Many of

the loadings were high, with few within questionable ranges (Figure 1). Factor loadings may or

may not impact the goodness of model fit.
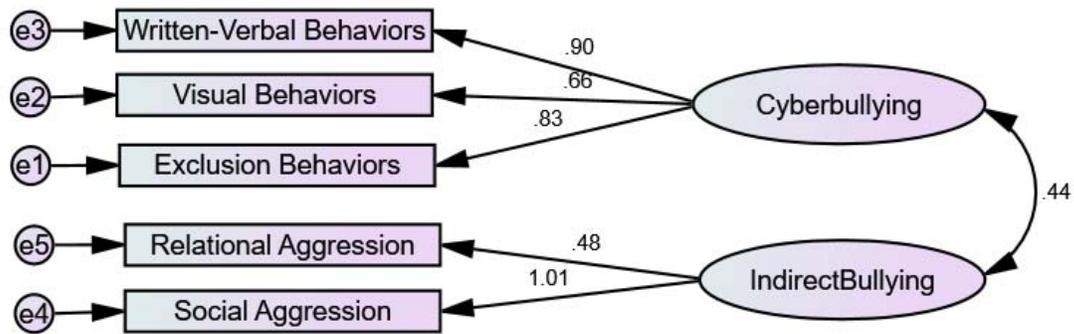
Figure 1. The CFA Model

Model fit was assessed by examining several fit indices. According to Kanyongo (2017), the following fit indices and proposed values are indicators of good model fit: Chi-Square values closer to zero, Comparative Fit Index (CFI) values closer to one, Goodness of Fit Index (GFI) values exceeding .9, Adjusted Goodness of Fit Index (AGFI) values over .9, the Root Mean Square Error of Approximation (RMSEA) values less than .06, and PCLOSE values greater than .05. Overall, the goodness of fit indices (please see Table 7) produced by the CFA support the two-factor model.

Table 7

Goodness of Fit Indices for the Two-Factor Model

Fit Index	Value	Threshold Value
Chi Square/degrees of freedom	.154	Closer to 0
Comparative Fit Index	1.0	Closer to 1
Goodness of Fit Index	.997	Values >.9
Adjusted Goodness of Fit Index	.991	Values >.9
Root Mean Square Error of Approximation	.000	Values <.06
PCLOSE	.975	Values >.05

Additional Analyses. Additional analyses were conducted to investigate subscale scores on the FCBVSs for males and females and determine if statistically significant gender differences existed between the measures of cyberbullying and indirect bullying behaviors between males and females. The findings of these analyses were further intended to contribute to the conclusions made about the relationship between cyberbullying behaviors and indirect bullying behaviors, although the nature of the relationship was not identified in the hypotheses.

Statistics for each of the subscales of the FCBVSs subscales were examined using SPSS. The Shapiro-Wilks test is preferred for data sets with fewer than 2,000 cases and was thus used to test the assumption of normality. The Shapiro-Wilks test revealed that the data was not normally distributed (p < .05). Skewness and kurtosis were also examined and provided further support for a non-normal distribution (please see Table 8). Because the data failed to meet the assumption of normality, a non-parametric test equivalent to the independent samples t-test was used to compare subscale scores for males and females on the FCBVSs and subscale scores measuring Relational Aggression for males and females on the YASB. The Mann-Whitney U Test yielded mean ranks that were used for analysis. Because the above-mentioned statistics supported a normal distribution for the Social Aggression subscale of the YASB, an independent samples t-test was used for evaluation of this subscale.

Table 8

Skewness and Kurtosis Statistics for Males and Females for FCBVSs and YASB

Subscales	Skewness	Kurtosis
Written-Verbal Behaviors	3.895	21.444
Visual Behaviors	2.364	5.646
Exclusion Behaviors	2.650	10.107

Relational Aggression	.626	.960
Social Aggression	.256	-.194

Results of the Mann Whitney U test for the FCBVSs are reported in Table 9. Results revealed that although the group mean ranks trended toward males on all three subscales, only one scale was statistically significantly different ($p < .05$) between male and female responses. Specifically, the results revealed that males ($M = 61.45$) reported statistically significantly higher mean levels of cyberbullying behaviors on the Written-Verbal subscale of the FCBVSs as compared to females ($M = 44.87$), $U = 515.5$, $r = 0.07$, $p = .008$. However, the calculated effect sizes were below the suggested threshold for a small effect size.

Table 9

Mean Ranks and Significance Levels for Males and Females (FCBVSs)

	Males	Females	
FCBVSs Subscales	M	M	Asympt. Sig.
Written-Verbal Behaviors	61.45	44.87	.008
Visual Behaviors	52.52	47.37	.387
Exclusion Behaviors	53.10	47.21	.368

The Mann-Whitney U Test was also used to compare responding for males and females on the Relational Aggression subscales of the YASB. Results of the Mann-Whitney U test for the YASB are reported in Table 10. Results revealed that group mean ranks were higher for males ($M = 55.24$) on the Relational Aggression subscale as compared to females ($M = 46.61$).

However, mean ranks were not determined to be statistically significantly different ($p < .05$).

Effect size was also below the suggested threshold for a small effect size.

Table 10

Mean Ranks and Significance Levels for Males and Females (Relational Aggression: YASB)

	Males	Females	
YASB Subscale	M	M	Asympt. Sig.
Relational Aggression	55.24	46.61	.205

An independent samples t-test was used to determine whether the mean differences of self-reported Social Aggression on the YASB were statistically significant. The results of the independent samples t-test is reported in Table 11. Results revealed that although females reported higher mean levels of social aggression ($M = 9.60$) as compared to males ($M = 9.57$), the differences were not statistically significantly different ($p > .001$).

Table 11

Independent Samples t-test for Males and Females (Social Aggression: YASB)

	Males	Females	
YASB Subscale	M	M	Sig. (2-tailed)
Social Aggression	9.57	9.60	.959

Summary

This chapter included an outline of the specific statistical analyses performed on the dataset in addition to an evaluation of the results. EFA was conducted using PCA to determine the most parsimonious factor structure for the data. CFA was then used to determine whether the

factor structure produced during the EFA could be supported. SEM procedures were used to evaluate the factor model and determine model fit. Goodness of fit was examined using the following fit indices: Chi-Square/df, CFI, GFI, AGFI, RMSEA, and PCLOSE. The fit indices supported the two-factor model. Results of Mann-Whitney U test revealed mean ranks trending toward males on all three subscales of the FCBVSs; however, statistically-significant gender differences in the use of cyberbullying behaviors were only adequate on one of the three subscales: Written-Verbal Behaviors. Results further revealed insufficient evidence using the Mann-Whitney U test and an independent samples t-test to support statistically-significant gender differences in the use of relational aggression and social aggression as reported on the YASB. Higher mean values for males on the Relational Aggression subscale, and for females on the Social Aggression subscale were present. Mean scores and significance levels were evaluated to draw these conclusions. The effect sizes were small for all of these tests, suggesting mild differences between males and females. In the next chapter, a review of these findings in the context of the extant literature base will be provided. Recommendations for the clinical implications of this research and for future areas of study are also described.

Chapter V: Discussion

The current study was intended to provide support for cyberbullying as an extension of traditional indirect bullying or as an independent construct. Gender differences in cyberbullying and indirect bullying measures were also examined. Contrary to the hypothesis that items measuring cyberbullying behaviors (FCBVSs) and items measuring indirect bullying behaviors (YASB) would be intercorrelated and load onto one of two factors (relational aggression or social aggression), the results of the current study provided support for cyberbullying and indirect bullying as independent constructs.

Through factor analysis, two unique components were extracted with the subscales from each instrument used in the study loading onto one of the two components: cyberbullying behaviors or indirect bullying behaviors. These findings are largely inconsistent with hypotheses proposed in the literature that speculate on the relatedness between the two constructs (e.g., Beran & Li, 2007; Hinduja & Patchin, 2015; Patchin & Hinduja, 2006; Schneider et al., 2012; Smith et al., 2007; Tokunaga, 2010; Wolak et al., 2007).

Furthermore, the hypothesis that males and females would report similar levels of cyberbullying perpetration was largely supported. The Mann-Whitney U test revealed that males report higher levels of cyberbullying perpetration than females on all three subscales of the FCBVSs; however, the mean rank differences were not statistically significant on two of the three subscales. Effect size calculation was small, indicating only minor differences between males and females in overall cyberbullying perpetration. This appears to align with findings reported by Barlett and Coyne (2014) who found that males were more likely to use cyberbullying behaviors in late adolescence and older ages, but the differences reported were similarly small.

71

Results of the current study further suggest that males in the current sample reported higher levels of relationally-aggressive behaviors as compared to their female peers, while females reported higher levels of socially-aggressive behaviors as compared to males; however, neither represented a statistically-significant difference. Furthermore, the effect sizes were small, indicating only minor differences between males and females in their indirect bullying perpetration. This finding appears to be consistent with previous research that suggests that physical aggression is replaced by indirect aggression as children age, but similar levels of indirect aggression are demonstrated between men and women in young adulthood (Archer & Coyne, 2005; Barlett & Coyne, 2014; Forrest et al., 2005). In a meta-analysis conducted by Barlett and Coyne (2014), researchers found that age moderated the use of cyberbullying behaviors with older participants engaging in less cyberbullying behavior. The current results seem to find further support for cyberbullying's inverse relationship with age.

Although few studies represent a quantitative examination of the hypothesized relationship between indirect aggression and cyberbullying, some researchers have qualitatively examined the association. According to Cassidy et al. (2013), the likelihood of relatedness between indirect bullying and cyberbullying is emphasized in the literature (Patchin & Hinduja, 2006; Schneider et al., 2012; Smith et al., 2007; Tokunaga, 2010; Wolak et al., 2007). In the current study, the predicted intercorrelations among questions measuring indirect bullying behavior and cyberbullying behavior were tested and found to be unsupported. Contrary to this hypothesis, and much of the existing cyberbullying literature, results of the current study indicate that indirect bullying and cyberbullying behaviors are independent constructs. Consequently, this study adds to the extant literature base a quantitative investigation of the distinction between the constructs of cyberbullying and indirect bullying in a predominantly Caucasian college

sample. In one of the few studies that investigates this relationship, Law et al. (2012) made similar conclusions in support of the constructs' uniqueness. The present study used comparable research methodology to produce similar conclusions.

Cyberbullying Conceptualized

Overall, the study of cyberbullying has increased over the past several years along with concerns related to its effects on adolescent populations. In particular, young people are in constant day-to-day communications with others despite physical proximity (Kowalski & Limber, 2007; National Academies, 2016; Romera et al., 2015; Smith et al., 2008). In fact, an online presence is a critical component of adolescent relationships (Cassidy et al., 2013; Chisholm, 2014) and is largely inseparable from many adolescents' offline worlds (Chisholm, 2014; Hinduja & Patchin, 2008; Kowalski & Limber, 2007; National Academies, 2016; Romera et al., 2015; Smith et al., 2008).

In a meta-analysis conducted in 2014 regarding 131 international studies on cyberbullying in children and adolescents, victimization rates ranged from 10 to 40% (Kowalski et al., 2014). In a 2015 cross-national survey of cyberbullying in Canadian youth, 13.99% of a sample of 1,001 reported experiencing cyberbullying (Beran et al., 2015). Thus, it seems clear that as adolescents spend a significant amount of time online, the risks and documented outcomes associated with cyberbullying are sufficient enough to encourage serious efforts to produce comprehensive research in this area (e.g., Archer & Coyne, 2005; Dake et al., 2003; Elinoff et al., 2004; Hymel et al., 2005; Monks et al., 2009; Nansel et al., 2001; Olweus, 1993; Rigby, 2001; Wang et al., 2009). The current study has attempted to fill the void in the existing literature by providing professionals with conclusions about the distinctiveness of cyberbullying from other forms of bullying.

Given the relative newness of cyberbullying as a concept of study, researchers are struggling to keep pace with ever-modifying developments and emerging applications for social networking. The literature surrounding the phenomena is, therefore, incomplete. The scholarship that does exist is varied with inconclusive findings and disagreement about the most fundamental aspects of construct conceptualization, including uniformity in its labeling and a proper definition. Despite the apparent disagreement and lack of definitiveness, the need for a more comprehensive conceptualization of the phenomenon is clearly called for in the existing literature (e.g., Cassidy et al., 2013; Tokunaga, 2010). This study is the first step of a response to this need.

If policymakers and professionals in the field of education and psychology intend to address issues related to cyberbullying through intervention, they must first have the necessary knowledge about the behaviors being employed online. In considering the apparent stability of online environments, researchers have been speculative regarding the possible relationship between cyberbullying behaviors and traditional bullying. Specifically, some have hypothesized that cyberbullying may be indirect aggression expressed online because many indirect bullying behaviors are translatable to online realms (e.g., Beran & Li, 2007; Hinduja & Patchin, 2015; Patchin & Hinduja, 2006; Schneider et al., 2012; Smith et al., 2007; Tokunaga, 2010; Wolak et al., 2007). The findings of the present study, however, contradict the hypothesis that cyberbullying is an extension of indirect bullying, with results supporting that cyberbullying is a unique and distinct construct from indirect bullying.

Cyberbullying as an independent construct. Although few studies have examined cyberbullying as an independent construct, much of the scholarship promulgating this hypothesis is descriptive or qualitative in nature, with authors arguing that more research is needed to draw

meaningful conclusions (Dooley et al., 2009; Law et al., 2012; Mehari et al., 2014; Tokunaga, 2010). Mehari et al. (2014) proposed that empirically-sound measures of cyberbullying needed to be established to inform theory and understand how cyberbullying "fits into a larger framework of aggression" (p. 410). Accordingly, the findings of the current study seem to address the acknowledged disparity, test proposed theoretical models, and contribute to the development of theoretical frameworks of cyberbullying behaviors.

Indirect Bullying Conceptualized

Indirect bullying behaviors are thought to require a maturity and proficiency in social intelligence because individuals who employ such behaviors intend to disrupt and manipulate relationships within social groups (Archer & Coyne, 2005; Garandeau & Cillessen, 2006). As such, indirect bullying behaviors are possible only when the individual has highly-developed social skills with a mature understanding of social behaviors, intentions, and goals of others within peer groups (Garandeau & Cillessen, 2006).

Examinations of gender differences in indirect bullying have historically suggested higher prevalence rates among female populations due to the cliques that characterize traditional female friendships (Archer & Coyne, 2005; Björkqvist et al., 1992) as well as the strong influence of acceptance and connectedness on sense of self and self-esteem among females (Lagerspetz et al., 1988). Such strong desires for belongingness typically lead to some members of the peer group using the need for close interpersonal relationships as leverage against others (Crothers et al., 2005) to cause maximum damage (Crick & Grotpeter, 1995). However, the findings of this study, along with some relatively recent investigations (e.g., Forrest et al, 2005), suggest that males and females of college age may be similar in their use of relational and social aggression

Furthermore, given indirect bullying's uniqueness from cyberbullying, the results of the current study potentially suggest that the manipulation of social relationships is not the intended outcome of cyberbullying behavior, but rather, achievement of another goal. Cyberbullying behaviors may seemingly be better explained, then, by motivations more unique to males particularly because direct behaviors appear to be captured by questions on the Written-Verbal subscale that may be more reflective of male behavior. In a review of the cyberbullying literature, Bauman (2013) reported that some studies reported gender differences with males being significantly more likely to perpetrate online although only until late adolescence (Barlett & Coyne, 2014). Different patterns of cyberbullying based upon gender would appear to further support cyberbullying's uniqueness from indirect bullying and the findings of the current study.

In considering gender roles and identity, researchers have asserted that, to some degree, males strive to maintain masculinity by "using characteristics they attach to gender and that they possess to confirm their gender identity" (Hoffman, Borders, & Hattie, 2000, p. 480). When one's gender identity is threatened, however, "[t]he masculine overcompensation thesis asserts that men react to masculine insecurity by enacting extreme demonstrations of their masculinity" (Willer, Conlon, Rogalin, & Wojnowicz, 2013, p. 981).

To further postulate on theories surrounding cyberbullying, gender identity might potentially be related to cyberbullying perpetration. Specifically, the content that males view on Social Networking Sites (SNSs) could be seen potentially as a threat to their masculinity, thereby triggering their desires to defend their attitudes, beliefs, and gender identities through sharing or posting aggressive content. Such behaviors would be possibly be enacted to restore their feelings of masculinity. More research is needed to investigate this hypothesis; however, this theory seems plausible considering the current findings.

Limitations

        Internal and external validity. The extent to which the results of this study can be generalized is impacted by the relatively small and homogeneous sample. Participants in the study were enrolled in a small, liberal arts university located in the mid-Atlantic US. The sample was largely characterized by participants who were 20-years-old (34.4%), Caucasian (89.6%), and female (78.1%). These results reflect a non-diverse sample with a disproportionate inclusion of these subgroups. The sample did not include the variability that may exist in more diverse populations, which thereby weakens the generalizability of the findings. Future studies should attempt to obtain a sample that is more representative of the overall population of the US.

        Self-report measures. The effects of self-report methods must also be considered as a potential limitation of this study because this was the primary means of data collection. Although the participants' responses were potentially susceptible to social desirability bias and volunteer bias, empirical support for the reliability and validity of the instruments used in this study exist. Biases in self-reporting were addressed by emphasizing anonymity with participants, specifically indicating that their responses were anonymous.

        Measuring cyberbullying behaviors. Despite the empirical support for the FCBVSs in previous research, the scale must be evaluated as a possible limitation for this study. The instrument's utility was established as an Italian instrument that was tested on an Italian population. Scholarship surrounding the issue of translation is inconsistent, and some factors must be considered. Scales developed in other languages potentially fail to measure the same construct after translation; and, the meaning of some questions may be impacted by the translation to such a degree that the participant's pattern of responding is affected (Geisinger, 1994). Measurement tools are potentially meaningful across cultures , however, due to the

operationalization of behaviors rather than the emphasis on intent or function (Menesini et al., 2011). Nevertheless, issues related to instrument translation must be considered because there is potential for minimal limitations surrounding generalizability.

Recommendations for Future Research

Noticeable deficiencies in cyberbullying research still exist, with many of the studies being conducted in the absence of theory (Tokunaga, 2010). Lacking a cohesive theoretical framework of cyberbullying, the present study was intended to be exploratory in nature. Nevertheless, replication is necessary to draw meaningful conclusions about theory. Future research should extend the current findings with the aim of providing further support for cyberbullying as an independent construct from indirect forms of bullying (Dooley et al., 2009; Law et al., 2012; Mehari et al., 2014; Tokunaga, 2010). Furthermore, additional work should focus upon theory development using the uniqueness of the behaviors of cyberbullying from indirect forms of bullying as a starting point.

Once a better theoretical framework for conceptualizing the phenomenon has been developed, it would be imperative for researchers to develop a meaningful definition. Continued and ongoing research conducted in the absence of a definition would be irresponsible. Dooley et al. (2009) argues that an appropriate definition is necessary to "proceed with uniformity" in ongoing research (p. 183). Namely, the definition proposed by Palladino et al. (2015) would appear to be preliminarily supported by the current findings. Additional support for a unique definition would be necessary for continuing the development of the existing literature base. The revisiting of this issue appears to be particularly important in reflection of the current study, which, essentially suggests what cyberbullying is *not* (e.g., another subtype of indirect bullying).

Although some researchers have argued in favor of a definition that parallels the tripartite bullying definition (i.e., power imbalance, intent to harm, and attacks occuring over time) (Dooley et al., 2009; Hinduja & Patchin, 2015; Law et al., 2012; Smith et al., 2008; Tokunaga, 2010), this aspect of conceptualization must be further examined. Palladino et al. (2015) employs a very different definition that does not maintain the structure of the tripartite definition and ignores researchers' propositions for similarity. This research group's definition states, "Cyberbullying is a new form of bullying, which involves the use of text messages, photos and videos, phone calls, e-mails … to attack another student" (p. 113). Given the findings of the current study, which supports cyberbullying as a unique construct, the previously-proposed definition for this phenomenon would be potentially be unacceptable. The definition proposed by Palladino et al. (2015) would better represent the phenomenon.

What is more, the data from this study may also suggest that a tripartite definition may be inapplicable because the characteristics proposed by such a definition may connote a different meaning in online realms. Results of the current study provide preliminary support for the rejection of a tripartite definition. Researchers should consider these findings when designing future studies regarding definition. Failing to establish an appropriate definition for cyberbullying would impede advancements in this line of research (Law et al., 2012; Mehari et al., 2014; Tokunaga, 2010; Ybarra et al., 2012), which makes such research imperative.

Replication would be necessary to further support the current findings. In future studies, a more heterogeneous sample would be preferable and should be sought in other research designs. The data collected for this study were provided by self-reports from a late adolescent population. Individuals from this age group likely have significantly difference experiences from those belonging to earlier adolescent populations. The needs of earlier adolescents include

79

a greater emphasis on peer acceptance and social status in peer groups (Caravita & Cillessen, 2011; Lafontana & Cillessen, 2009; Salmivalli, 2010; Sitsema et al., 2009). Given the positive relationship between agentic goals and aggression, earlier adolescent populations are likely to have different and possibly more significant experiences with indirect bullying and/or cyberbullying. This would require further investigation to determine which populations are most affected.

Cultural nuances should also be considered when developing future studies. In order to investigate the potential impact of cultural perspectives or contexts on cyberbullying and indirect bullying perpetration, researchers should aim to recruit individuals from various socioeconomic, racial, and/or ethnic backgrounds. Accessibility to technology and/or differing goals possessed by these diverse populations may further contribute to meaningful results. Due to the potential for these populations' experiences to differ from the current population, researchers would better be able to conclude which populations are being affected by these phenomena. Additional research would be required in order to determine the similarities or differences in cyberbullying and indirect aggression perpetration among diverse populations.

In this vein, investigating gender differences is also important. Indirect aggression is first and most prominently used by females until adolescence (Archer & Coyne, 2005) likely due to the role of cliques in female friendship groups (Björkqvist et al., 1992). The current study suggests gender differences trending toward males for relational aggression and trending toward females for social aggression. Although results were not found to be statistically significant, mean levels suggest that these results align with previous research that concludes similar use of indirect aggression among males and females in young adulthood (Forrest et al., 2005). In using research on other forms of bullying as a framework for conducting cyberbullying research, future

studies should continue to investigate the gender differences among various age groups to draw meaningful conclusions about the relationships among age, gender, and cyberbullying.

These results are relevant to those gender differences discovered regarding cyberbullying behaviors. The findings of this study support that although indirect bullying is an independent construct from cyberbullying, this newer phenomenon is still considered a form of aggression that could potentially be marked by gender differences across various age groups. Since indirect bullying has historically been associated with females, and the present results support cyberbullying as a unique construct, gender differences are called into question. In her review of the existing literature, Bauman (2013) reported that few studies investigated gender differences in relation to cyberbullying; however, the studies that did examine such differences concluded that males were more likely to commit cyberbullying offenses as compared to females.

In the current study, responses to the cyberbullying scales were examined using the Mann-Whitney U statistic. Results revealed higher mean levels of cyberbullying behaviors trending toward males; however, statistically significant differences did not exist except for one of the subtypes of cyberbullying. Furthermore, all these relationships were tempered by the findings of a small effect size. These findings, however, provide minimal support for gender differences in cyberbullying, which further contributes to the acknowledgement of the uniqueness of cyberbullying. Future research should continue to examine the role that gender may play in cyberbullying to provide more conclusive support. Researchers should specifically target different age groups to examine the relationships that exist between age, gender, and cyberbullying behaviors. The examination of gender differences would significantly contribute to cyberbullying theory development and aid professionals in creating targeted interventions.

Although the FCBVSs is empirically supported, investigators might look to examine the individual items on the scale. Language used in the questions of this instrument may have led to the underreporting of behaviors due to possible negative verbiage and the effects of social desirability bias. What is more, some behaviors assessed may have become so normalized that participants did not view the acts as aggressive. If this is true, verbiage of such measurement is increasingly more important. Researchers may wish to reevaluate the behaviors assessed on the FCBVSs that are representative of cyberbullying, reframe the questions to reflect a style that is more like the item-presentation on the YASB, and reassess the reliability and validity measures to contribute to the development of meaningful measures. As mentioned previously, the development of effective instruments for measuring constructs is among the first steps of effective anti-bullying efforts (Crothers & Levinson, 2004). This further emphasizes the importance of effective cyberbullying measurement instruments.

After a valid and reliable instrument has been verified as accurately measuring cyberbullying behaviors, the effects and outcomes associated with the phenomenon should be evaluated. Researchers have theorized that the outcomes associated with cyberbullying are significantly more harmful due to the constant contact that cellphones and the Internet afford users (Smith et al., 2007; Tokunaga, 2010). Attacks online can potentially be more long-lasting due to sharing features and screenshotting, which further contribute to concerns regarding the effects on victims. Future research should examine the impact on mental health as it relates to cybervictimization. This information is especially critical due to the seemingly wide range of age groups who currently have access to and regularly use online SNSs on a day-to-day basis.

Researchers also need to examine whether the traditional roles of bully, victim, and bystander are still applicable to cyberbullying. According to Law et al. (2012), even if these

roles exist online, they are unlikely to function in similar ways to traditional bullying. Similarly, some studies found that the roles online were "less salient than the modality used" (Bauman, 2013, p. 250). This seems likely considering that the current study has provided support for cyberbullying as an independent and unique construct. Researchers might discover cyberbullying roles to be ambiguous or nonexistent, which would further complicate professionals' abilities to develop adequate intervention programs. This information will be essential in developing a comprehensive understanding of the phenomenon.

Implications

While researchers continue to call for more meaningful research surrounding cyberbullying (Cassidy et al., 2013; Mehari et al., 2014), much of the existing literature seems to be exploratory and descriptive in nature with few studies producing relevant findings to support hypotheses about the phenomenon. Despite the importance of such scholarship, professionals in the fields of education and psychology must begin to produce research that explores theoretical models quantitatively to guide continued research and inform ongoing theories about the phenomenon.

The results of the current study provide support for cyberbullying behaviors and indirect bullying behaviors as unique constructs, which contradicts the prevailing wisdom in the field. As such, the current findings should be considered when developing future research. Accurate conceptualization of cyberbullying is essential in establishing theoretical frameworks and further informing theory. Although cyberbullying research continues to be in its infancy, the evaluation of cyberbullying as an independent construct will allow for professionals in the fields of psychology and education to more accurately conceptualize the phenomenon to develop meaningful prevention and intervention programs. Given the significance of online

communications, and the potential to be victimized via online platforms, professionals are under greater pressures to work quickly and efficiently to develop a meaningful literature base to address the growing phenomenon.

Summary

In this chapter, I discussed the results of the current study in the context of the extant literature. Findings of the current study provide preliminary support for cyberbullying as an independent construct and suggest that cyberbullying can be conceptualized as a unique form of bullying rather than an extension of indirect bullying behavior, as previously hypothesized. It was hypothesized that theories of masculinity may describe the gender differences in reports of cyberbullying behaviors in late adolescence. Recommendations were made for the clinical implications of this research and for future areas of study. In particular, future studies should continue to examine cyberbullying as an independent construct while also considering the role of age and gender as mediating factors in the use of cyberbullying behaviors.

References

Archer, J. & Coyne, S. M. (2005). An integrated review of indirect, relational, and social aggression. *Personality and Social Psychology Review, 9*, 212-230. doi:10.1207/s15327957pspr0903_2

Barlett, C. P. (2014). Anonymously hurting others online: The effect of anonymity on cyberbullying frequency. *Psychology of Popular Media Culture, 4,* 70-79. doi:10.1037/a0034335

Barlett, C. P., & Coyne, S. M. (2014). A meta-analysis of sex differences in cyber-bullying behavior: The moderating role of age. *Aggressive Behavior, 40,* 474-488. doi:10.1002/ab.21555

Barlett, C. P., Gentile, D. A., & Chew, C. (2016). Predicting cyberbullying from anonymity. *Psychology of Popular Media Culture, 5,* 171-180. doi:10.1037/ppm0000055

Bauman, S. (2013). Cyberbullying: What does the research tell us? *Theory into Practice, 52,* 249-256. doi:10.1080/00405841.2013.829727

Bauman, S., Cross, D., & Walker, J. (Eds.). (2013). *Principles of bullying research: Definitions, measures, and methodology*. NY: Sage.

Beaty, L. A. & Alexeyev, E. B. (2008). The problem of school bullies: What the research tells us. *Adolescence, 43,* 1-11. Retrieved from http://njbullying.org/documents/beaty-adolesc-research3-08.pdf

Bem, S. L. (1981). Gender schema theory: A cognitive account of sex typing. *Psychological Review, 88*, 354-364. doi:10.1037//0033-295x.88.4.354

Beran, T. & Li, Q. (2007). The relationship between cyberbullying and school bullying. *Journal of Student Wellbeing, 1,* 15-33. Retrieved from

https://eclass.uoa.gr/modules/document/file.php/PPP357/the%20relationship%20between%20cyberbullying%20and%20school%20bullying.pdf

Beran, T., Mishna, F., McInroy, L. B., & Shariff, S. (2015). Children's experiences of cyberbullying: A Canadian national study. *Children & Schools, 37,* 207-214. doi:10.1093/cs/cdv024

Björkqvist, K., Lagerspetz, K. M., & Kaukiainen, A. (1992). Do girls manipulate and boys fight? Developmental trends in regard to direct and indirect aggression. *Aggressive Behavior, 18,* 117-127. doi:10.1002/1098-2337(1992)18:2<117::AID-AB2480180205>3.0.CO;2-3

Boldizar, J. P., Perry, D. G., & Perry, L. C. (1989). Outcome values and aggression. *Child Development, 60,* 571-579. doi:10.2307/1130723

Boulton, M. J. & Underwood, K. (1992). Bully/victim problems among middle school children. *The British Journal of Educational Psychology, 62,* 73-87. doi:10.1111/j.2044-8279.1992.tb01000.x

Bronfenbrenner, E. (1977). Toward an experimental ecology of human development. *American Psychologist, 32,* 513-531. doi:10.1037/0003/-066X.32.7.513

Caravita, S. C. S. & Cillessen, A. H. N. (2011). Agentic or communal? Associations between interpersonal goals, popularity, and bullying in middle childhood and early adolescence. *Social Development, 21,* 1-20. doi: 10.1111/j.1467-9507.2011.00632.x

Cassidy, W., Faucher, C., & Jackson, M. (2013). Cyberbullying among youth: A comprehensive review of current international research and its implications and application to policy and practice. *School Psychology International, 34,* 575-612. doi:10.1177/0143034313479697

Center for Disease Control (2014). The relationship between bullying and suicide: What we

    know and what it means for schools. Retrieved from

    http://www.cdc.gov/violenceprevention/pdf/bullying-suicide-translation-final-a.pdf

Chisholm, J. F. (2014). Review of the status of cyberbullying and cyberbullying prevention.

    Journal of Information Systems Education, 25, 77-87. Retrieved from

    http://jise.org/volume25/n1/JISEv25n1p77.pdf

Costello, A.B. and Osborne, J.W. (2005). Best practices in exploratory factor analysis: Four

    recommendations for getting the most from your analysis. *Practical Assessment*

    Research and Evaluation, 10, 1-9. Retrieved from

    https://www.pareonline.net/pdf/v10n7.pdf

Coyne, S. M., Archer, J., & Eslea, M. (2006). "We're not friends anymore! Unless…": The

    frequency and harmfulness of indirect, relational, and social aggression. *Aggressive*

    Behavior, 32, 294-307. doi:10.1002/ab.20126

Craig, W., Harel-Fisch, Y., Fogel-Grainvald, H., Dostaler, S., Hetland, J., Simons-Morton, B. …

    HBSC Bullying Writing Group. A cross-national profile of bullying and victimization

    among adolescents in 40 countries. *International Journal of Public Health, 54,* 216-224.

    doi:10.1007/s00038-009-5413-9

Crawford, S. D., Couper, M. P., Lamias, M. J. (2012). Web surveys: Perceptions of burden.

    Social Science Computer Review, 19, 146-162. doi:10.1177/089443930101900202

Crick, N. R. & Dodge, K. A. (1994). Review and reformulation of social information-processing

    mechanisms in children's social adjustment. *Psychological Bulletin, 115*, 74-101.

    doi:10.1037//0033-2909.115.1.74

Crick, N. R. & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development, 66*, 710-722. doi:10.2307/1131945

Cross, D., Barnes, A., Papageorgiou, A., Hadwen, K., Hearn, L., & Lester, L. (2015). A social-ecological framework for understanding and reducing cyberbullying behaviours. *Aggression and Violent Behavior, 23,* 109-117. doi: 10.1016/j.avb.2015.05.016

Cross, D., Bauman, S., & Walker, J. (2013). Theories of cyberbullying. In S. Bauman, D. Cross, & J. Walker (Eds.), *Summary and conclusions* (pp. 307-324). NY: Routledge.

Crothers, L. M., Field, J. E., & Kolbert, J. B. (2005). Navigating power, control, and being nice: Aggression in adolescent girls' friendships. *Journal of Counseling and Development, 83,* 349-354. doi:10.1002/j.1556-6678.2005.tb00354.x

Crothers, L. M. & Levinson, E. M. (2004). Assessment of bullying: A review of methods and instruments. *Journal of Counseling and Development, 82,* 496-503. doi:10.1002/j.1556-6678.2004.tb00338.x

Crothers, L. M., Schreiber, J. B., Field, J. E., & Kolbert, J. B. (2009). Development and measurement through confirmatory factor analysis of the Young Adult Social Behavior Scale (YASB): An assessment of relational aggression in adolescence and young adulthood. *Journal of Psychoeducational Assessment, 27*, 17-28. doi:10.1177/0734282908319664

Dake, J. A., Price J. H., & Telljohann, S. K. (2003). The nature and extent of bullying at school. *Journal of School Health, 73*, 173-180. doi:10.1111/j.1746-1561.2003.tb03599.x

Del Rey, R., Elipe, P., & Ortega-Ruiz, R. (2012). Bullying and cyberbullying: Overlapping and predictive value of the co-occurrence. *Psicothema, 24,* 608-613. Retrieved from http://www.psicothema.com/PDF/4061.pdf

DeVellis, R. F. (2012). *Scale development: Theory and applications* (3rd ed.). In L. Bickman &
  D. J. Rog (Eds.). Thousand Oaks, CA: Sage.

Dooley, J. J., Pyzalski, J., & Cross, D. (2009). Cyberbullying versus face-to-face bullying.
  Journal of Psychology, 217, 182-188. doi:10.1111/j.1746-1561.2003.tb03599.x

Due, P., Holstein, B. E., Lynch, J., Diderichsen, F., Gabhain, S. N., Scheidt, P., & Currie, C.
  (2005). Bullying and symptoms among school-aged children: International comparative
  cross-sectional study in 28 countries. *European Journal of Public Health, 15,* 128-132.
  doi:10.1093/eurpub/cki105

Eagly, A. H. & Steffan, V. J. (1986). Gender and aggressive behavior: A meta-analytic review of
  social psychological literature. *Psychological Bulletin, 100*, 309-330. doi:10.1027/0044-
  3409.217.4.182

Elinoff, M. J., Chafouleas, S. M., & Sassu, K. A. (2004). Bullying: Considerations for defining
  and intervening in school settings. *Psychology in the Schools, 41*, 887-897.
  doi:10.1002/pits.20045

Erdur-Baker, O. (2010). Cyberbullying and its correlation to traditional bullying, gender and
  frequent and risky usage of internet-mediated communication tools. *New Media and
  Society, 12*, 109-125. doi:10.1037/e683892012-001

Espelage, D. L., Rao, M. A., & Craven, R. G. (2013). Theories of cyberbullying. In S. Bauman,
  D. Cross, & J. Walker (Eds.), *Principles of cyberbullying research: Definitions, measure,
  and methodology* (pp. 49-67). NY: Routledge.

Espinoza, G., & Juvoven, J. (2013). Methods used in cyberbullying research. In S. Bauman, D.
  Cross, & J. Walker (Eds.), *Principles of cyberbullying research: Definitions, measure,
  and methodology* (pp. 112-124). NY: Routledge.

Forrest, S., Eatough, V., & Shevlin, M. (2005). Measuring adult indirect aggression: The

    development and psychometric assessment of the indirect aggression scales. *Aggressive*

    Behavior, 31, 84-97. doi:10.1002/ab.20074

Galen, B. R. & Underwood, M. K. (1997). A developmental investigation of social aggression

    among children. *Developmental Psychology, 33,* 589-600. doi: 10.1037/0012-1649.33.4.

Garandeau, C. F. & Cillessen, A. H. N. (2004). From indirect aggression to invisible aggression:

    A conceptual view on bullying and peer group manipulation. *Aggression and Violent*

    Behavior, 11, 612-625. doi:10.1016/j.avb.2005.08.005

Geisinger, K. F. (1994). Cross-cultural normative assessment: Translation and adaptation issues

    influencing the normative interpretation of assessment instruments. *Psychological*

    Assessment, 6, 304-312. doi:10.1037/1040-3590.6.4.304

Görzig, A. & Machackova, H. (2015). *Cyberbullying from a socio-ecological perspective: A*

    contemporary synthesis of findings from EU kids online. Retrieved from

    http://www.lse.ac.uk/media@lse/research/mediaWorkingPapers/pdf/WP36-FINAL.pdf

Görzig, A., & Ólafsson, K. (2013). What makes a bully a cyberbully? Unraveling the

    characteristics of cyberbullies across twenty-five European countries. *Journal of Children*

    and Media, 7, 9-27. doi:10.1016/j.chb.2014.09.036

Gottheil, N. F. & Dubow, E. F. (2001). Tripartite beliefs models of bully and victim behavior.

    Journal of Emotional Abuse, 2, 25-47. doi:10.4135/9781473935792

Hawley, P. H. (2003). Prosocial and coercive configurations of resource control in early

    adolescence: A case for the well-adapted Machiavellian. *Merrill-Palmer Quarterly, 49*,

    279-309. doi:10.1353/mpq.2003.0013

Hinduja, S., & Patchin, J. W. (2008). Cyberbullying: An exploratory analysis of factors related to offending and victimization. *Deviant Behavior, 29,* 129-156. doi:10.1080/01639620701457816

Hinduja, S., & Patchin, J. W. (2015). *Bullying beyond the schoolyard: Preventing and responding to cyberbullying.* Thousand Oaks, CA: Corwin Press.

Hoffmann, R. M., Borders, L. D., & Hattie, J. A. (2000). Reconceptualizing femininity and masculinity: From gender roles to gender self-confidence. *Journal of Social Behavior and Personality, 15,* 475-503. Retrieved from https://www.researchgate.net/profile/L_Borders/publication/289972894_Reconceptualizing_femininity_and_masculinity_From_gender_roles_to_gender_self-confidence/links/56cf1c6b08ae85c823447d81.pdf

Hymel, S., Henderson, N. R., & Bonanno, R. A. (2005). Moral disengagement: A framework for understanding bullying among adolescents. *Journal of Social Sciences, 8,* 1-11. Retrieved from http://www.krepublishers.com/06-Special%20Volume-Journal/JSS-00-Special%20Volumes/JSS-SI-08-Peer-Vicit-Schools-Web/JSS-SI-08-01-001-011-Hymel-S/JSS-SI-08-01-001-011-Hymel-S-Text.pdf

Kanyongo, G. (2017). Lecture on Confirmatory Factor Analysis. Personal Collection of G. Kanyongo, Duquesne University, Pittsburgh, PA.

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

Kowalski, R. M. & Limber, S. P. (2007). Electronic bullying among middle school students. *Journal of Adolescent Health, 41*, 22-30. doi:10.1037/e607152990-001

LaFontana, K. M., & Cillessen, A. H. (2010). Developmental changes in the priority of perceived

    status in childhood and adolescence. *Social Development, 19*, 130-147.

    doi:10.1111/j.1467-9507.2008.00522.x

Lagerspetz, K. M., Björkqvist, K., & Peltonen, T. (1988). Is indirect aggression typical of

    females? Gender differences in aggressiveness in 11- to 12-year-old children. *Aggressive*

    Behavior, 14, 403-414. doi:10.1002/1098-2337(1988)14:6<403::aid-

    ab2480140602>3.0.co;2-d

Law, D. M., Shapka, J. D., Hymel, S., Olson, B. F., & Waterhouse, T. (2012). The changing face

    of bullying: An empirical comparison between traditional and internet bullying and

    victimization. *Computers in Human Behavior, 28,* 226-232.

    doi:10.1016/j.chb.2011.09.004

Mahler, J. (2015, March 8). Who spewed that abuse? Anonymous Yik Yak app isn't telling. *The*

    New York Times. Retrieved from http://nyti.ms/1KGIUCk

McCambridge, J., Witton, J., & Elbourne, D. R. (2014). Systematic review of the Hawthorne

    effect: New concepts are needed to study research participation effects. *Journal of*

    Clinical Epidemiology, 67, 267-277. doi:10.1016/j.jclinepi.2013.08.015

Mehari, K. R., Farrell, A. D., & Le, A. H. (2014). Cyberbullying among adolescents: Measures

    in search of a construct. *Psychology of Violence, 4,* 399-415. doi:10.1037/a0037521

Menesini, E., Nocentini, A., & Calussi, P. (2011). The measurement of cyberbullying:

    Dimensional structure and relative item severity and discrimination. *Cyberpsychology,*

    Behavior, and Social Networking, 14, 267-274. doi:10.1089/cyber.2010.0002

Mertler, C. A. & Vannatta, R. A. (2013). Factor analysis. In M. Lopez & D. Dobies (Eds.),
Advanced and multivariate statistical methods: Practical application and interpretation
(pp. 237-266). Glendale, CA: Pyrczak.

Mesch, G. S. (2009). Parental mediation, online activities, and cyberbullying. *Cyberpsychology
and Behavior, 12*, 387-393. doi:10.1089/cpb.2009.0068

Mishna, F., Saini, M., & Solomon, S. (2009). Ongoing and online: Children and youth's
perceptions of cyberbullying. *Children and Youth Review, 31*, 1222-1228.
doi:10.1016/j.childyouth.2009.05.004

Monks, C. P., Smith, P. K., Naylor, P., Barter, C., Ireland, J. L., & Coyne, I. (2009). Bullying in
different contexts: Commonalities, differences, and the role of theory. *Aggression and
Violent Behavior, 14,* 146-156. doi:10.1016/j.avb.2009.01.004

Moroschan, G. & Hurd, P. L. (2009). Sex differences in the use of aggression in adult Canadians.
Evolutionary Psychology, 7, 146-159. doi: 10.1177/14747040900700201

Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Morton, B. S., & Scheidt, P. (2001).
Bullying behaviors among US youth: Prevalence and association with psychosocial
adjustment. *The Journal of the American Medical Association, 285,* 2094-2100.
doi:10.1001/jama.285.16.2094

National Academies of Sciences, Engineering, and Medicine. (2016). *Preventing bullying
through science, policy, and practice.* Washington, D.C.: The National Academies Press.
doi: 10.17226/23482

O'Connell, P., Pepler, D., & Craig, W. (1999). Peer involvement in bullying: Insights and
challenges for intervention. *Journal of Adolescence, 22,* 437-452.
doi:10.1006/jado.1999.0238

Olweus, D. (1993). *Bullying at school: What we know and what we can do.* Malden, MA:

Blackwell.

Olweus, D. (2003, March). A profile of bullying at school. *Educational Leadership,* 48-55.

Retrieved from

https://lhsela.weebly.com/uploads/7/9/0/8/7908073/_olweus_profile_of_bullying.pdf

Owens, L., Slee, P., & Rosalyn, S. (2000). "It hurts a hell of a lot …": The effects of indirect

aggression on teenage girls. *School Psychology International, 21*, 359-376.

doi:10.1177/0143034300214002

Palladino, B. E., Nocentini, A., & Menesini, E. (2015). Psychometric properties of the Florence

CyberBullying-CyberVictimization Scales. *Cyberpsychology, Behavior, and Social*

Networking, 18, 112-119. doi:10.1089/cyber.2014.0366

Patchin, J. W. & Hinduja, S. (2006). Bullies move beyond the schoolyard: A preliminary look at

cyberbullying. *Youth Violence and Juvenile Justice, 4*, 148-169.

doi:10.1177/1541204006286288

Patchin, J. W. & Hinduja, S. (2011). Traditional and nontraditional bullying among youth: A test

of general strain theory. *Youth and Society, 43,* 727-751.

doi:10.1177/0044118X10366951

Pornari, C. D. & Wood, J. (2010). Peer and cyber aggression in secondary school students: The

role of moral disengagement, hostile attribution bias, and outcome expectancies.

Aggressive Behavior, 36, 81-94. doi:10.1002/ab.20336

Remillard, A. M. & Lamb, S. (2005). Adolescent girls' coping with relational aggression. *Sex*

Roles, 53, 221-229. doi:10.1007/s11199-005-5680-8

Renouf, A., Brendgen, M., Seguin, J. R., Vitaro, F., Boivin, M., Dionne, G., . . . Perusse, D.
(2010). Interactive links between theory of mind, peer victimization, and reactive and
proactive aggression. *Abnormal Child Psychology, 38,* 1109-1123.
doi:10.1002/ab.21596

Rigby, K. (2001). Health consequences of bullying and its prevention in schools. In J. Juvonen,
& S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and
victimized* (pp. 310-331). NY: The Guilford Press.

Romera, E. M., Cano, J. J., García-Fernández, C. M., & Ortega-Ruiz, R. (2015). Cyberbullying:
Social competence, motivation, and peer relationships. *Comunicar, 24,* 71-79.
doi:10.3916/C48-2016-07

Rubin, K. H., Bukowski, W. M., & Laursen, B. P. (Eds.). (2009). *Handbook of peer interactions,
relationships, and groups.* NY: Guilford.

Salmivalli, S. (2010). Bullying and the peer group: A review. *Aggression and Violent Behavior,
15,* 112-120. doi:10.1016/j.avb.2009.08.007

Salmivalli, C., Lagerspetz, K., Björkqvist, K., Österman, K., & Kaukiainen, A. (1996). Bullying
as a group process: Participant roles and their relations to social status within the group.
Aggressive Behavior, 22, 205-218. doi:10.1002/(SICI)1098-2337(1996)22:1<1::AID-
AB1>3.0.CO;2-T

Seals, D., & Young, J. (2003). Bullying and victimization: Prevalence and relationship to gender,
grade level, ethnicity, self-esteem, and depression. *Adolescence, 38*, 735-747. Retrieved
from:
http://web.a.ebscohost.com.authenticate.library.duq.edu/ehost/detail/detail?sid=89f11306
-ec33-44f6-80cd-

0279c1837a91%40sessionmgr4009&vid=0&hid=4114&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#AN=12547286&db=s3h

Schneider, S. K., O'Donnell, L., Stueve, A., & Coulter, R. W. (2012). Cyberbullying, school bullying, and psychological distress: A regional census of high school students. *American Journal of Public Health, 102*, 171-177. doi:10.2105/ajph.2011.300308

Sitsema, J. J., Veenstra, R., Lindenberg, S., & Salmivalli, C. (2009). Empirical test of bullies' status goals: Assessing direct goals, aggression, and prestige. *Aggressive Behavior, 35,* 57-67. doi:10.1002/ab.20282

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

Smith, P. K. & Sharp, S. (1994). *School bullying: Insights and perspectives.* NY: Routledge.

Solberg, M. E., & Olweus, D. (2003). Prevalence estimation of school bullying with the Olweus bully/victim questionnaire. *Aggressive Behavior*, *29,* 239-268. doi:10.1002/ab.10047

Sticca, F., & Perren, S. (2012). Is cyberbullying worse than traditional bullying? Examining the differential roles of medium, publicity, and anonymity for the perceived severity of bullying. *Journal of Youth Adolescence, 42,* 739-750. doi:10.1.1.948.2551&rep=rep1&type=pdf

Suler, J. (2004). The online disinhibition effect. *Cyberpsychology & Behavior, 7,*184-188. doi:10/1037/t46448-000

Swearer, S. M. & Doll, B. (2001). Bullying in schools: An ecological framework. *Journal of Emotional Abuse, 2,* 7-23. doi:10.1300/J135v02n02_02

Tanrikulu, T. (2014). Cyberbullying from the perspective of choice theory. *Educational*

    Research and Reviews, 9, 660-665. doi:10.5897/ERR2014.1761

Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of

    research on cyberbullying victimization. *Computers in Human Behavior, 26*, 277-287.

    doi:10.1016/j.chb.2009.11.014

Urdis, R. (2014). Cyberbullying among high school students in Japan: Development and

    validation of the online disinhibition scale. *Computers in Human Behavior, 41,* 253-261.

    doi:10.1016/j.chb.2014.09.036

Vandebosch, H., & Van Cleemput, K. (2008). Defining cyberbullying: A qualitative research

    into the perceptions of youngsters. *Cyberpsychology, 11*, 499-503.

    doi:10.1089/cpb.2007.0042

Wang, J., Iannotti, R. J., Nansel, T. R. (2009). School bullying among adolescents in the United

    States: Physical, verbal, relational and cyber. *The National Institute of Health, 45*, 368-

    375. doi:10.1016/j.jadohealth.2009.03.021

Willer, R., Rogalin, C. L., Conlon, B. & Wojnowicz, M. T. (2013). Overdoing gender: A test of

    the masculine overcompensation thesis. *American Journal of Sociology, 118,* 980-1022.

    doi:10.1086/668417

Williams, K. R. & Guerra, N. G. (2007). Prevalence and predictors of internet bullying. *Journal*

    of Adolescent Health, 41, 14-21. doi:10.1016/j.jadohealth.2007.08.018

Wolak, J., Mitchell, K. J., & Finkelhor, D. (2007). Does online harassment constitute bullying?

    An exploration of online harassment by known peers and online-only contacts. *Journal of*

    Adolescent Health, 41, 51-58. doi:10.1016/j.jadohealth.2007.08.019

Wolf, E. J., Harrington, K. M., Clark, S. L., & Miller, M. W. (2013). Sample size requirements

    for structural equation models: An evaluation of power, bias, and solution propriety.

    Educational Psychology Measures, 76, 913-934. doi:10.1177/0013164413495237

Ybarra, M., Boyd, D., Korchmaros, J., & Oppenheim, J. K. (2012). Defining and measuring

    cyberbullying within the larger context of bullying victimization. *Journal of Adolescent*

    Health, 51, 53-58. doi:10.1016/j.jadohealth.2011.12.031

Ybarra, M. L., Diener-West, M., & Leaf, P. J. (2007). Examining the overlap in internet

    harassment and school bullying: Implications for school intervention. *Journal of*

    Adolescent Health, 41, S42-S50. doi:10.1016/j.jadohealth.2007.09.004

Ybarra, M. L. & Mitchell, K. J. (2004). Online aggressor/targets, aggressors, and targets: A

    comparison of associated youth characteristics. *Journal of Child Psychology and*

    Psychiatry, 45, 1308-1316. doi:10.1111/j.1469-7610.2004.000328.x

Ybarra, M. L., & Mitchell, K. J. (2007). Prevalence and frequency of Internet harassment

    instigation: Implications for adolescent health. *Journal of Adolescent Health, 41,* 189-

    195. doi:10.1016/j.jadohealth.2007.03.005

Appendix A
Informed Consent

You are invited to participate in this research study regarding social and relational aggression and cyberbullying behaviors. The following information is provided in order to help you to make an informed decision about whether you wish to participate or not. You are eligible to participate because you attend XXX University and are either a freshman or sophomore.

The purpose of this study is to determine if a relationship exists between social and relational aggression and cyberbullying among young people. The survey will be conducted entirely online. The information that you provide through your responses to the questions will be used to examine the extent of the relationship between social and relational aggression and cyberbullying.

Your participation in this study is <u>voluntary</u>. You are free to decide not to participate in this study or to withdraw at any time. If you choose to participate, all information will be held in strict confidence and will not be individually examined. Your responses on the survey will be anonymous. The information obtained in the study may be published in scientific journals or presented at scientific meetings. You are to complete this survey without input from others and in an area that is free of distraction.

By proceeding, you are providing consent to participate in the voluntary and anonymous survey. Please print a copy of this informed consent for your records. If you choose not to participate, immediately stop the survey and do not proceed.

If, at any time, strong emotional stress related to victimization of past or current bullying experiences are evoked please call 1-800-273-8255 to be immediately connected with support.

Latitia S. Lattanzio, Ed.S, NCSP
Doctoral Candidate
Duquesne University
Department of Counseling, Psychology, and Special Education
lattanziol@duq.edu