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## CyberPAL: a mobile resource for cyberbullying

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Pepperdine University  
Graduate School of Education and Psychology

CYBERPAL: A MOBILE RESOURCE FOR CYBERBULLYING

A clinical dissertation submitted in partial satisfaction  
of the requirement for the degree of  
Doctor of Psychology

by

Beverly S. Shieh

April, 2016

Drew Erhardt, Ph.D. - Dissertation Chairperson

This clinical dissertation, written by

Beverly S. Shieh

under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF PSYCHOLOGY

Doctoral Committee:

Drew Erhardt, Ph.D., Chairperson

Carol Falender, Ph.D.

Dorothy Espelage, Ph.D.

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## DEDICATION

This dissertation is dedicated to those who experience bullying but do not have a voice and to my father for helping me find mine.

## ACKNOWLEDGEMENTS

First and foremost, I am grateful to my dissertation chairperson, Dr. Drew Erhardt, for his contribution and dedication to this project. His intellect and commitment to his students and academia are truly inspiring. My gratitude also extends to my committee persons, Dr. Carol Falender and Dr. Dorothy Espelage, for their expertise and commitment to the field.

I have also had the good fortune to be mentored by caring and amazing individuals. I am especially grateful to Dr. Michael Wetter for believing in my goals and guiding me throughout my professional development. I wish to acknowledge Dr. Jennifer Reesman for her perseverance and motivation. Special appreciation also goes to Dr. Alan Hartley for helping me take the first step into this field.

I would like to acknowledge my family and friends for their unwavering understanding and support. The encouragement of my parents and sister were indispensable; without you I would not be where I am today. I am also blessed to have undying friendships that were vital to reaching this point: Joanne Chan, Elizabeth Hatayama, and Peter Wang. Lastly, my gratitude extends to Kevin Drumm for believing in my efforts.

VITA  
BEVERLY S. SHIEH, M.A.

- Education**      **Pepperdine University**      **Sept. 2012-Present**  
**Graduate School of Education and Psychology**  
Doctor of Psychology (Psy.D.) in Clinical Psychology (*anticipated May 2016*)  
*APA-Accredited Program in Clinical Psychology*  
*Current Cumulative GPA: 4.0 (A)*  
*Academic Awards: Summa Cum Laude; Psi Chi (NHS in Psychology)*  
*Dissertation Title: CyberPAL: A Proposed Mobile Resource for Cyberbullying*  
*Dissertation Committee: Drew Erhardt, Ph.D. (Pepperdine Univ.), Carol Falender, Ph.D. (Pepperdine Univ.), & Dorothy Espelage, Ph.D. (Univ. of Illinois)*
- Pepperdine University**      **Sept. 2009-May 2012**  
**Graduate School of Education and Psychology**  
Master of Arts (M.A.) in Psychology  
Cumulative GPA: 4.0 (A)  
*Academic Awards: Summa Cum Laude; Psi Chi (NHS in Psychology) Vice Pres.*
- Scripps College (Claremont, CA)**      **Aug. 2004-May 2008**  
**Bachelor of Arts (B.A.) in Psychology**  
*Cumulative GPA: 3.8 (A-)*  
*Academic Awards: Cum Laude, Scripps College Dean's List (all 4 yrs); National Dean's List; Psi Chi (NHS in Psychology).*
- Clinical Experience**      **Kennedy Krieger Institute,**      **July 2015-Present**  
**John's Hopkins Univ. School of Medicine**  
**(Baltimore, Maryland)**  
Pediatric Psych. Clinic & Consult Service/Pediatric Neuropsych & Deafness  
*Pediatric Psychology Doctoral Intern*  
*Primary Supervisors: Keith Slifer, Ph.D. and Jennifer Reesman, Ph.D., ABPP*  
Two 6-month Rotations:  
(1) Pediatric Psychology Clinic and Consultation Service: Providing behavioral analysis and therapy (e.g., cognitive behavioral therapy (CBT), biofeedback, relaxation skills, etc.) to children and families for participation and adherence with medical care (neuroimaging, radiation, breathing/stress tests, respiratory equipment, medication, insulin, etc). This also includes consultation to health professionals in a variety of *inpatient* and *outpatient* pediatric settings at the Kennedy Krieger Institute (KKI) and Johns Hopkins Hospital (JHH)

Children's Center: Pain Clinic, Sleep Clinic, and Rehabilitation Clinic.

Medical conditions range from spina bifida, oncology, congenital disorders, concussion, etc.

- (2) Neuropsychology and Deafness: Providing neuropsychological assessment to a diverse outpatient pediatric population in 3 neuropsychology outpatient clinics: (1) Deafness-Related Evaluations and More (DREAM) Clinic (2) Oncology Clinic, and (3) Congenital Disorders Clinic. Patient populations include those who are currently undergoing treatment for or are survivors of cancer, organ transplant, a variety of common and rare congenital, genetic, and metabolic disorders, and children who are deaf/hard of hearing. Pre- and post-cochlear implant evaluations are also conducted in the deaf/hard of hearing clinic as part of a disciplinary team.
- Additional clinical activities include classroom observations, multidisciplinary consultations (e.g., physicians, nurses, audiologists, teachers, etc.), conducting therapy/evaluations with interpreters (e.g., Spanish, Mandarin, ASL, etc.), and clinical research (please see research below).
  - Attending grand rounds, pediatric oncology conference, pediatric neurology grand rounds, neuropsychology seminar, brain cutting at JHH, neuropsychology journal group, Center for Autism & Related Disorders (CARD) trainings at KKI, and completed requirements of Leadership Education Neurodevelopmental and Other Related disabilities (LEND).

**Children's Hospital of Orange County (CHOC)**  
**(Orange County, California)**

**Aug. 2014-June 2015**

Neuropsychology, Cognitive Rehabilitation

*Psychology Extern*

*Supervisors: Grace Mucci, Ph.D., ABPP and Chris Min, Ph.D.*

- Provided neuropsychological assessment *and* therapy to a diverse, majority Latino, population of children and adolescents (3-18 years old) with brain tumors within a multidisciplinary hospital setting.
- Implemented a cognitive remediation program (FIT Brain): (1) lead group therapy to the patient and their families, (2) provided individual therapy, and (3) conducted baseline and follow-up assessments.
- Participated in multi-disciplinary meetings, grand rounds, and neuropsychology assessment seminars and labs.

**Cedars-Sinai Medical Center  
(Los Angeles, California)**

**June 2013-June 2015**

General Surgery Department, Weight Loss Center

*Psychology Extern*

*Supervisor: Michael Wetter, Psy.D., FAPA*

- Provided consultations and liaison services to adolescent and adult bariatric surgery patients as a psychology extern. Worked with physicians and nutritionists to evaluate each patient's eligibility for surgery (physical and psychological health) and develop behavioral weight loss treatments and medication adherence plans for obesity and co-morbid illnesses.
- Provided CBT, supportive psychotherapy, clinical assessment (e.g., mood disorders, eating disorders), pre-surgical evaluation, and follow-up consultations.
- Lead group therapy/didactic classes for pre- and post-operative patients on behavioral therapeutic techniques and emotional eating.
- Patients treated included those with co-morbidities and chronic ill: organ transplant, cardiovascular disease, diabetes, cancer, and orthopedic disabilities.

**Long Beach Child & Adolescent Program/  
Adult CalWORKS Program  
(Long Beach, California)**

**Sept. 2013-July 2014**

Department of Mental Health

*Psychology Extern*

*Supervisors: Teri Paulsen, Psy. D. and Ronette Goodwin, Ph. D., ABPP*

- Provided individual and family therapy to children and adolescents in the Child program, and adults in the CalWORKS program (women on welfare re-entering the workforce). Gained experience with crisis intervention and child abuse reporting.
- Administered cognitive and personality assessments (e.g., WISC-IV, VMI, personality and projective testing, academic achievement screening, etc.).
- Received weekly supervised assessment trainings, was involved in IEP planning, and attended a 9-month CBT training at Harbor-UCLA.

**Pepperdine University  
(Los Angeles, California)**

**Sept. 2012-Dec. 2013**

Community Counseling Center, West Los Angeles

*Psychology Extern*

*Supervisors: Aaron Aviera, Ph.D. and Dity Brunn, Psy.D.*

- Provided psychotherapy (individual, couple, and family) to children and adults with mood disorders, substance abuse, and personality disorders. Utilized psychodynamic therapy, CBT, dialectical behavioral therapy, and mindfulness.

**Guam Latte Treatment Center, LLC  
(Tamuning, Guam)**

**March 2009-Sept. 2009**

Child & Adolescent Day Treatment Center & Group Home

*Psychology Clinical Assistant*

*Supervisor: Kirk Bellis, DO*

- Conducted client intakes, parent interviews, created service plans, and administered medication to children and youth with severe behavioral and emotional problems (e.g. depression, ADHD, psychosis, and intellectual disability).

**Research  
Experience**

**Kennedy Krieger Institute,**

**July 2015-Present**

**John's Hopkins Univ. School of Medicine**

Research: Neuropsych. Deafness Clinic (DREAM) Alphabet Knowledge Project

*Co-Author: Jennifer Reesman, Ph.D., ABPP & Rachael Plotkin, Ph.D.*

Publication: In Prep

**Kennedy Krieger Institute,**

**July 2015-Present**

**John's Hopkins Univ. School of Medicine**

Olivier, T., Shieh, B., Reesman, J., Plotkin, R., & Jacobson, L. (2016).

*Preliminary Examination of WISC-V Indices in a Clinical Sample of Children with Hearing Loss.* Abstract accepted to present at the International Neuropsychological Society (INS) Meeting, Boston, MA.

**CHOC Children's Hospital, Neuropsychology**

**Sept. 2015-Present**

Shieh, B., Tucci, L., Satacrúz, G., Mucci, G., & Min, C. (2015). *CHOC*

*Children's FIT Brain: A Case Study of an Innovative Cognitive Remediation*

*Program for Pediatric Cancer Survivors.* Abstract accepted to present at the 2015 World Congress of Psycho-Oncology, American Psychosocial Oncology Society.

**CHOC Children's Hospital, Neuropsychology**

**Sept. 2010-April 2011**

Shieh, B., Mucci, G., & Min, C. (2015). *Development of CHOC Children's FIT*

*Brain: a Cognitive Remediation Program for Pediatric Cancer Survivors.*

Presented at Society of Pediatric Psychology Annual Conference, San Diego, CA.



**Guam Medical Association (GMA)** **Sept. 2010-April 2011**  
Shieh, B., & Bellis, K. (2011). *The Effects of the H1N1 Virus on Fetal and Child Brain Development*. Presented at the Guam Medical Association Annual Conference, Tumon, Guam.

**Scripps College (Claremont, CA)** **Aug. 2007-May 2008**  
Senior Thesis Defended: April 2008 - Grade Received: (A)  
Shieh, B., & Hartley, A. (2008). *The Effects of Awareness and Empathy on Adolescents' Morals, Personality, and Behavior on Computer-Mediated Communications*. Presented at the Youth for Youth Conference and the Guam U.S. Attorney Office, Tumon, Guam.  
Published: In Prep for *Cyberpsychology, Behavior, and Social Networking*

**Scripps College (Claremont, CA)** **Aug. 2005-May 2008**  
Adult Development Project Lab: Cognitive Memory  
*Supervisor: Alan Hartley, Ph.D.*  
Assisted a research study on the changes in cognitive processes and intellectual functioning during development from young adulthood to old age (N=398; age 18 to 89 years) using a variety of computer stimulated activities used to measure cognitive processes in memory retrieval.

**Scripps College (Claremont, CA)** **Aug. 2006-May 2007**  
Adult Development Project Lab: Cognitive Memory  
Shieh, B., & Hartley, A. (2007). *Positivity Effect in Affective Working Memory*. Presented at Scripps College, Psychology Department, Claremont, CA.

**Scripps College (Claremont, CA)** **Aug. 2005-May 2006**  
Psychology Department  
Shieh, B., & Hartley, A. (2006). *The Effects of Reading and Viewing a Rape Scene on Rapist and Rape Victim Empathy*. Presented at Scripps College, Psychology Department, Claremont, CA.

**Workshops/** **Kennedy Krieger Institute,** **December 15, 2015**  
**Programs** **John's Hopkins Univ. School of Medicine**  
Plotkin, R., Shieh, B., & Olivier, T. (December 15, 2015). *Attention Deficit Disorders and Deaf Children*. Presenting at the Maryland School for the Deaf, Columbia, MD.

**Guam Bone Marrow Registry Workshop** **May 2008**

Shieh, B. (May 2008). *Drive for Justice*. Presented at the Guam Youth for Youth Conference, SAMHSA, Tumon, Guam.

**HERO Program: American Sign Language (ASL)** **May 2008**

Created a program through an ASL-I program and instructed children (5-12 years) from lower social economic status at the Salvation Army HERO Program (Ontario, California).

**University of Guam Bone Marrow Drive & Out Reach Education** **May 2008**

Registered and collected bone marrow swab samples. Registered over 300 new Pacific Islanders on the Guam Bone Marrow Registry. Provided outreach education on need for bone marrow donors from Pacific Islanders (representation on registry is less than 1%).

**Pacific Health Conference, Guam Medical Association** **February 2016**

*“Heart and Lung Disease”* - Pacific Health Conference  
Continuing Medical Education: accredited Good Samaritan Hospital

**Pacific Health Conference, Guam Medical Association** **February 2016**

*“International Conference On Early Detection”* - Pacific Health Conference  
Continuing Medical Education: accredited Cedars-Sinai Dept. of Continuing Edu.

**Youth for Youth LIVE Guam - SAMHSA,** **May 2013**

**Guam Behavioral Health & Wellness**

*“Bullying & Cyberbullying”* - Youth for Youth Conference

**Leadership** **Conference Co-Coordinator, Guam Medical Assoc.** **February 2016**

*“Heart and Lung Disease”* - Pacific Health Conference  
Continuing Medical Education: accredited Good Samaritan Hospital

**Conference Co-Coordinator, Guam Medical Assoc.** **October 2014**

*“International Conference On Early Detection”* - Pacific Health Conference  
Continuing Medical Education: accredited Cedars-Sinai Dept. of Continuing Edu.

**Guam Bone Marrow Registry, Guam Medical Assoc.** **Aug. 2014-Present**

*Drive Donor Recruiter and Education Coordinator*

Recruited over 3,000 new registered donors with approximately three drives a year. Created website dedicated to the bone marrow recruitment for minorities on Guam.

**Conference Co-Coordinator, Guam Medical Assoc.** **October 2013**  
“*Healthcare Innovations Conference*” - Pacific Health Conference  
Continuing Medical Education: accredited Cedars-Sinai Dept. of Continuing Edu.

**Conference Co-Coordinator, Guam Medical Assoc.** **October 2012**  
“*Pacific CANCER Conference*” - Pacific Health Conference  
Continuing Medical Education: accredited Cedars-Sinai Dept. of Continuing Edu.

**Co-Chair, Guam Medical Assoc.** **May 2010-Present**  
*Continuing Education Committee*

**Guam Student Rep. in Art to Am. Medical Assoc. (AMA)** **Feb. 2009**  
Represented Guam in creating two acrylic paintings to the National American  
Medical Association Foundation Charity with Congressional endorsement.

**Youth Leader, Bone Marrow Drive Guam** **Aug. 2003-May 2004**  
Organized Guam’s first bone marrow drive to increase Pacific Islander’s  
representation.

## ABSTRACT

Bullying continues to be a global concern in schools and communities, especially in light of its adverse short- and long-term impacts on youth with respect to both psychiatric and physical health (Espelage & Swearer, 2003; Rodkin, Espelage, & Hanish, 2015; Witted & Dupper, 2005). As a result, numerous programs and resources aimed at preventing bullying and intervening with both victims and perpetrators have been developed. An increased use of computer-mediated communications (CMCs) among adolescents (Patchin, 2013) has lead to the emergence of a new form of bullying called *cyberbullying*, which involves intentional acts of aggression through online or cellular phone communications. Therefore a need for resources specifically targeting cyberbullying that are accessible and easy-to-use is also needed.

The current project involved developing a resource in the form of wireframing for a mobile-app, aimed at decreasing cyberbullying among adolescents (ages 12-18 years) by providing them with a reflective learning tool to heighten their awareness of their involvement in cyberbullying, its potential adverse consequences, and to connect them with relevant resources. The project was informed by a review of the literature on physical bullying, cyberbullying (e.g., prevalence, forms, and roles involved), and the efficacy of current prevention/treatment programs and resources. The resulting mobile-app wireframe is presented in the form of a manual and simulation using the *JustinMind* program (Farrell-Vinary, 2011). The wireframe is comprised of four modules: (1) An Assessment Module to assess user's cyberbullying role (bully, victim, bully/victim) and tailor the mobile-app's content, (2) a Psychoeducation Module providing information on the adverse affects, signs, and symptoms of cyberbullying, (3) a Daily Log Module to monitor online behaviors and increase online awareness, and (4) a Resources Module to provide additional support to other programs, information, and personal contacts.

Although the resource is intended primarily for use by teens as a self-help tool, it may be implemented as part of a hybrid approach in conjunction with therapy or school-based programs.

Following a discussion of strengths, limitations and potential improvements to the current resource, plans for evaluating its efficacy once developed into a functional mobile-app and disseminating it to relevant professionals are described.

## Chapter I: Introduction

Views on bullying as a common childhood experience and “rite of passage” have historically minimized its impact on children (Hertzog, 2011). However, increased media coverage, research, and intervention programs related to bullying over the past two decades have highlighted its adverse short- and long-term impacts (Espelage & Swearer, 2003; Olweus, Limber, & Mihalic, 1999; Rodkin, Espelage, & Hanish, 2015; Witted & Dupper, 2005). Recent findings indicate that adolescents who are victims of bullying show lingering signs of “poor mental health,” including symptoms of depression (Bogart et al., 2014). They have also been found to experience higher rates of adult psychiatric symptoms, including depression, anxiety, suicidal ideation, impulsivity, and aggression (Copeland, Wolke, Angold, & Costello, 2013). Most concerning have been the reports of *bullycide*, where victims of bullying have taken their own life (Kessler, 2010; Marr & Field, 2001). Increased awareness of bullycide has lead forty-nine states in the U.S. to pass school anti-bullying legislation (Stuart-Cassel, Bell, & Springer, 2011). The adverse effects of bullying underscore the importance of directing clinical attention to helping its victims and preventing its occurrence.

Investigating bullying in the contexts where it is more likely to occur has been a focus of such clinical attention (Ball, Arseneault, Maughan, Caspi, & Moffitt, 2008; Boulton & Smith, 1994; Meyer-Adams & Conner, 2008). In our current digital age, communications are increasingly occurring through computers, particularly among youth (Kann et al., 2014; Lenhart et al., 2011). Such computer-mediated communications (CMC) have enabled a new type of bullying, known as *cyberbullying*. Given its recent emergence, cyberbullying is less well understood than traditional bullying. Nonetheless, its forms, prevalence, associated features, and impacts have increasingly been a focus of attention among both clinicians and researchers, who

have begun to use this emerging knowledge base to inform the development of resources and interventions.

### **Aims of the Chapter**

In an effort to summarize recent developments in bullying, the following sections review different forms of bullying, its prevalence, and bullying roles, as well as the short- and long-term impact of bullying on the physical and psychological health of both victims and perpetrators. An overview of leading current prevention/intervention programs for traditional and cyberbullying will also be provided along with a review of their efficacy in reducing bullying and victimization. The chapter concludes with the rationale and aims for the proposed project, which entails developing the wireframing for a mobile application cyberbullying resource, to be based in part, on empirical findings and current effective bullying programs.

### **Overview of Bullying**

**Definition of bullying.** Bullying is a multifaceted construct that varies greatly in its expression and in the contexts in which it occurs. Defining it requires consideration of a behavioral dimension, the relative roles of perpetrator and victim, and the various forms of bullying. Bullying has been defined as “a form of aggressive behavior in which someone intentionally and repeatedly causes another person injury or discomfort” (American Psychological Association, 2011). Although widely recognized as a form of aggression (Espelage, Bosworth, & Simon, 2000; Smith & Myron-Wilson, 1998), bullying is distinguished from other forms of aggressive behavior by a number of factors, including an imbalance of power between the target and perpetrator, the repetitiveness of the act, and the intent to harm (Olweus et al., 1999). Although imbalance of power has traditionally been seen as distinction between bully and victim based on strength and/or physical size, Fuller’s (2004) investigation on

bullying and the idea of “rankism” shows that the power imbalance may also relate to hierarchical differences in social standing, popularity, age, and ethnicity.

**Types of bullying.** Bullying can manifest in multiple forms, ranging from hostile physical contact and words to more subtle actions such as posting unflattering or potentially damaging photos online (American Psychological Association, 2011). Although physical bullying has traditionally received the most attention, three additional forms of bullying are now widely recognized: verbal, emotional, and cyber (Brank, Hoetger, & Hazen, 2012). *Verbal bullying* is a direct form of bullying that includes name-calling, insults, teasing, intimidation, homophobic or racist remarks, or verbal abuse. *Emotional (or covert)* bullying, which more typically occurs among females, is more indirect than verbal bullying and involves acts such as lying and spreading rumors, mimicking unkindly, and encouraging others to socially exclude someone (Owens, Shute, & Slee, 2000). The newest form of bullying is online harassment or *cyberbullying*, which is an intentional and overt act of aggression towards another person online that involves communications containing swearing, insults, name calling, and/or hostile comments (Ybarra & Mitchell, 2004). Cyberbullying also includes additional forms of on-line hostile acts that are intended to frighten, anger, devalue, denigrate, embarrass, and humiliate, such as posting compromising pictures of someone online.

**Prevalence.** In 2005, the U.S. Department of Justice estimated that a child is bullied at school every seven minutes. According to the 2011 *School Crime Supplement* (SCS), 28% of youth (12-18 years) experienced some form of bullying at school (Robers, Kemp, & Truman, 2013), whereas 9.6% of high school students experienced bullying in the past 12 months (Kann et al, 2014). In addition to bullying’s frequency, recent research has also investigated the different types of bullying and their frequencies. Robers et al. (2013) found that 18% of youth



ages 12-18 were verbally bullied, 8% experienced direct physical bullying, and 5% experienced a physical threat. In terms of emotional bullying, 18% had rumors spread about them, and 6% were intentionally excluded from social activities. Unfortunately, being bullied is often not a one-time event, as indicated by the 2005-2006 survey conducted by the *Health Behaviors in School-age Children* (Iannotti, 2008). It was reported that among the 6th-8th grade student participants, 11% were bullied two or more times within the last two months. Information pertaining to the prevalence of cyberbullying is provided below.

**Bullying roles.** Traditional roles related to bullying have often been simplified into a stable dichotomy of “bully” and “victim.” However, studies on bullying have revealed this to be an oversimplification, as the roles related to bullying are actually less stable and more multifaceted than this traditional view suggests. Espelage and Swearer (2003) found that 87% of adolescents involved in bullying changed their initial bullying or victimization roles to either bully, victim, or both. These findings are pertinent to intervention programs in that they challenge bullying stereotypes, including the belief that participants are fixed in their initial roles. For example, The *Let’s Get Real* anti-bullying intervention and prevention program (Kim, Logan, Chasnoff, Cohen, & Stilley, 2003) is based on a “four-square relational model” that describes how people can shift between bullying roles of being the aggressor, an ally to the aggressor, a bystander to the aggression, and/or a victim of the aggressive behavior.

Despite the shifting nature of roles related to bullying, studies have suggested some features that are common to those occupying a given role, which are thought to be relevant to prevention efforts. Those who are more likely to become victims of bullying have been shown to be physically weak compared to their peers, socially withdrawn, low in social understanding, and high in emotionally sensitivity (Woods, Wolke, Nowicki, & Hall, 2009). Children with mental

health disorders are three times more likely to be identified as a bully compared to those with no mental health disorders, and those specifically diagnosed with oppositional defiance disorder (ODD) are six times more likely to be identified as a bully (Benedict & Frances, 2012). The limited empirical data available on those occupying the dual bully-victim role suggests that they show low self-esteem, poor social cue understanding, impulsivity, and are part of dysfunctional families to a greater degree than those in either the bully or victim role (Arseneault, Bowes, & Shakoor, 2010; Lereya, Samara, & Wolke, 2013). They are also characterized by high rates of mental health disorders such as depression, anxiety, and eating disorders (Sansone & Sansone, 2008).

**Impact of bullying.** Results of a considerable amount of research have associated bullying with immediate and long-term physical, psychological, and emotional problems (Idsoe, Dyregrov, & Idsoe, 2012; Patrick, Bell, Huang, Lazarakis, & Edwards, 2013; Reijntjes, Kamphuis, Prinzie, & Telch, 2010; Russell, Sinclair, Poteat, & Koenig, 2012). Although the impact of bullying has become a well-researched topic, its focus has been more on victims than on perpetrators.

**Effects on victims.** Studies have investigated the short-term effects of bullying on a victim's academic performance and psychological well-being (McDougall & Vaillancourt, 2015). Victims of bullying experience lower academic attendance and success (Arseneault et al., 2010; Nakamoto & Schwartz, 2010), along with higher rates of depression, suicide ideation, and actual suicide attempts (Hinduja & Patchin, 2014; Klomek et al., 2009). Additionally, being bullied may have adverse consequences with respect to physical health, since victims have been found to experience increased rates of a number of somatic symptoms including sleep disturbance, decreased appetite, abdominal pain, and headaches (Forero, McLellan, Rissel, &

Bauman, 1999; Gini & Pozzoli, 2009; Lereya et al., 2013; Wolke, Woods, Bloomfield, & Karstadt, 2001).

More recently, research has begun to focus on the long-term effects of bullying on victims, specifically in the area of psychological health. Copeland et al. (2013) conducted a 17-year longitudinal study on three cohorts of children, ages 9, 11, and 13 years old. The findings indicated that bullying victims experienced elevated rates of mental health problems, most notably anxiety, panic disorder, and agoraphobia. However, the risks associated with being a victim of bullying extend beyond mental health outcomes. With respect to chronic health problems, Copeland et al. (2014) found that bullying victims produced higher levels of C-protein (CPR) which, when sustained over time, have been linked to heart disease, cancer, and neurodegenerative disorders (Pasceri, Willerson, & Yeh, 2000). Therefore, victims of childhood bullying appear to have a higher risk of developing medical and mental health problems later in life. Additionally, Brown and Taylor (2008) found that victims of bullying experienced more financial stressors (e.g., lower income) in adulthood.

Certain factors may moderate the short and long-term impact of bullying on victims. Bogart et al. (2014) found that victims experienced more negative symptoms if bullied both in the past and present. This suggests that the consequences of bullying on mental and physical health may be compounded for those who are bullied chronically over time (Winsper, Lereya, Zanarini, & Wolke, 2012). Another factor that may moderate the effects of bullying is parenting style. Victims with low authoritative parents who did not support them in asserting themselves tended to have more negative impacts than those with supportive and encouraging parents (Smith & Myron-Wilson, 1998). In addition, coping strategies adopted by victims also appear to moderate their responses to bullying, such that victims who adopt more internalizing coping

strategies experience more negative impacts than those who take a more constructive problem-solving approach (Bijttebier & Vertommen, 1998; Bryant, 1992; Erwin, 1993).

***Correlates of the bully role.*** Although research has focused on the negative impacts on the victim, findings indicate that the bully may also experience negative effects (or at least that there are a number of negative factors associated with being a bully). Studies investigating academic and social correlates of bullying found that bullies tend to receive lower grades and perceive a more negative climate at school compared to those who do not bully (Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996). Bullying may be part of a larger pattern of antisocial behavior, as those who bully have been found to also have higher tendencies to steal, vandalize property, engage in substance use, and carry weapons (Olweus, 2001). Although negative correlates have been associated with both perpetrators and victims, the highest risk of depression, future criminal offense, panic disorder, and suicidality, was found among those who were both perpetrators *and* victims of bullying (Copeland et al., 2013).

Research on the long-term correlates of bullying on the perpetrator has investigated the maintenance and progression of aggressive behavior into adulthood. Sourander et al. (2011) found that bullies, particularly males, have a higher risk of engaging in antisocial behavior in the future (Ttofi, Farrington, Lösel, & Loeber, 2011), as well as displaying additional antisocial characteristics such as lack of empathy, risk-taking behaviors, and impulsivity. The results of a longitudinal study showed that bullying was associated with higher rates of mental health problems (Copeland et al., 2013). Youth who bullied were found to be at risk for antisocial personality disorder, while youth who both bullied and were victims of bullying were at a higher risk for adult depression, panic disorder, agoraphobia in females, and suicidality in males.

## Overview of Cyberbullying

**Definition of cyberbullying.** Bullying is a form of antisocial behavior, in which a person engages in “aggressive, impulsive, and sometimes violent actions that violate the established rules, conventions, and codes of society” (Chamberlin, 2006, p. 62). Situational and environmental factors influence the likelihood of engaging in antisocial behavior, and in all likelihood, the form that such behavior takes. Computer-mediated communications (CMC) represents one relevant environmental/contextual factor; as such communications have become nearly universal among adolescents in the developed world. Lenhart et al. (2011) investigated Internet usage among 12-17 year olds in the greater Washington, DC metropolitan area and found that 95% use the Internet; with 80% engaging in social media sites such as Facebook, MySpace, or Twitter. The most recent data from the Youth Risk Behavior Surveillance Survey (YRBSS) (Kann et al., 2014) reported that nationwide approximately 41.3% of students use computers for out-of-school work for 3 or more hours a day. These data reflect a marked increase over the preceding decade. Therefore, communicating and interacting online is an increasingly relevant environment for adolescents, and one that may influence both their likelihood of committing antisocial behaviors and the nature of those behaviors. A relatively new emerging form of bullying occurring in this context is known as online harassment or *cyberbullying*.

Cyberbullying involves intentional acts of aggression toward another person conducted through email, instant messaging (IMing), chat room exchanges, Web site posts, cellular phone communications (e.g., texting and digital images), or personal digital assistant devices (PDA) (Kowalski, Limber, & Agatston, 2012). Cyberbullying, like traditional bullying, takes different forms as described in the cyberbullying taxonomy created by Willard (2007):

- *Flaming*: Known as online fights, these interactions begin with an angry, rude, or obscene message being sent privately to the individual. A back and forth exchange of obscenities are exchanged in a “flamewar.”
- *Harassment*: The user sends direct hurtful messages to annoy, harm, degrade, humiliate, or abuse the individual. However, unlike flaming, it does not involve a response from the victim or “flamewar” exchange.
- *Denigration*: Harmful material in the form of texts, pictures, or videos are posted online in public forums or sent to others.
- *Trickery*: The act of tricking a victim into providing damaging digital material, which is then disseminated.
- *Exclusion*: The act of socially isolating an individual or excluding him/her from an online group or online exchange.
- *Cyberstalking*: Repeated harassment online that causes fear in the victim because it is experienced as intrusive of one’s privacy and/or intimidating.

**Cyberbullying versus traditional bullying.** Cyberbullying is characterized by a number of distinctive features that distinguish it from traditional bullying. These features, reviewed below, also appear to facilitate online forms of bullying and likely interact to increase the prevalence of cyberbullying. Specifically, the anonymity attainable through online communications can result in deindividuation, which refers to a loss of self-awareness and reduction of inner restraints that can lead to atypical or inappropriate behavior (American Psychological Association, 2011). This disinhibitory effect of anonymity, in turn, can contribute to bullying.

**Deindividuation.** Identity plays a key role in communications and is essential for understanding and evaluating an interaction (Donath, 1999). According to traditional deindividuation theory, when a person's identity is anonymous or concealed there is a decrease in one's sense of awareness of their behaviors, which increases the possibility of violating societal norms (Zimbardo, 1969). Because anonymity is easily attained on CMCs, deindividuation may occur online and contribute to online aggression. A common form of online anonymity is *online masquerades*, where an individual creates an alternative identity online (Wiszniewski & Coyne, 2002). Once the person is in a CMC, he or she is able to use deception effectively to choose a different gender, race, class, and even personality for him or herself with just the click of a button. As noted by Reid (1998), the "freedom to obscure or re-create aspects of the self online allows the exploration and expression of multiple aspects of human existence" (p. 35). Previous studies on disinhibition have shown that lacking awareness of one's own actions on CMCs (e.g., amount of time spent online, forms of CMCs used that day, the nature and impact of one's online activity) increases the possibility of antisocial behavior (Batson, Ahmad, & Stock, 2004; Prentice-Dunn & Rogers, 1982). Moreover, the person wearing the online mask may not be aware he or she is engaging in antisocial behavior because of the new role that the person has created for him or herself.

Kiesler, Zubrow, Moses, and Geller (1985) stated that when people are anonymous while communicating on CMCs they focus on the task at hand rather than self-presentation, which increases the deindividuation and consequent disinhibition. Early theories on deindividuation looked at anonymity and hypothesized that it increases aggressive behavior (Deiner, Lusk, DeFour, & Flax, 1980; Zimbardo, 1969). However, the Social Identity Model of Deindividuation Effects (SIDE Model) challenged traditional deindividuation theory by

emphasizing that deindividuation can only be understood in a social context (Lea & Spears, 1991; Reicher, Spears, & Postmes, 1995). With respect to the social context of CMCs and online group behaviors, Postmes, Spears, Sakhel, & De Groot (2001) investigated the effects of anonymity online and found that when individuals were anonymous but the group identity (e.g., member of group forum) was highly salient, social influence was higher than if members were not anonymous because they tended to follow the group's social norm. Therefore on CMCs it is possible that one online bully may follow another, creating a "social norm" to continue bullying a victim online. Despite the difference in focus, both traditional deindividuation theory and SIDE theory contend that anonymity contributes to deindividuation, which contributes to aggression. (Kiesler, Siegel, & McQuire, 1984; Lee, 2007).

***Online disinhibition.*** In addition to deindividuation, another component found in CMCs that affects one's online behavior and self-awareness is known as the *online disinhibition effect* (Suler, 2004). Online disinhibition occurs in the same conditions as other forms of disinhibition (e.g., anonymity, deindividuation, physical distance), where there is a reduction in concern for self-presentation and the judgment of others (Joinson, 1999). Kiesler et al. (1984) studied uninhibited verbal behaviors in four conditions: face-to-face communication, anonymous computer conferencing (one-to-many), non-anonymous computer conferencing (one-to-many), and e-mail. They found higher levels of *uninhibited verbal behavior*, defined as hostile comments such as swearing, name-calling, and insults, in each condition where people used computers to communicate. The highest levels of uninhibited behavior occurred when people communicated anonymously using a real time (synchronous) computer-conference system. Therefore, it appears that increased aggressive behavior is more likely to occur online, especially when the user is anonymous and amongst a group of online users.



**Physical distance.** Another feature that distinguishes cyberbullying from traditional bullying is the physical distance inherent in CMCs. This distance tends to facilitate anonymity and deindividuation and, consequently, the possibility of antisocial behavior. However, even in the absence of anonymity, physical distance during CMCs appears to promote increased cyberbullying as it decreases empathy among participants who are unable to see one another's expressions and the fear of possible physical retaliation that might be present in proximal exchanges. Physical distance was also investigated by Castellá, Abad, Alonso, and Silla (2000), who found that while uninhibited behavior such as *flaming* (online fights) was rare, it was significantly more likely to occur in a text-based discussion than during face-to-face or video conferencing. Specifically, they found that *flaming* occurred 94 times in text-based discussion (4.72% of remarks), compared to 8 times (0.21%) and 16 times (0.39%) in face-to-face and video conferencing conditions, respectively. Thus, the physical distance between online users appears to increase the likelihood of online aggression, especially during anonymous situations where participants are unable to see one another through video.

**Accessibility.** One of the most attractive features of CMCs is accessibility. The ease of engaging in a CMC through different devices (e.g., computers, smart phones, tablets) allows for higher usage among adolescents and, consequently, a higher risk of experiencing cyberbullying. Although there are features implemented in CMCs intended to decrease negative online behaviors (e.g., codes of conduct), they currently fall far short of preventing cyberbullying.

**Bystanders.** Most traditional bullying episodes occur in the presence of other people who assume the role of bystanders or witnesses. The phenomenon of being a bystander in the cyber world is different in that the person in a bystander role may receive, view, and forward emails,

web pages, and images. In contrast to traditional bullying, the number of bystanders in the cyber world can reach into the millions, rapidly accelerating the scale and impact of cyberbullying.

**Prevalence.** Earlier researchers investigating CMCs were startled to find high levels of name-calling, swearing, and insults between CMC users (Kiesler & Sproull, 1992; Walther, Anderson & Park, 1994). Although physical bullying still has a higher prevalence than cyberbullying, reports suggest that the rate of cyberbullying among adolescents is nonetheless concerningly high (DeVoe, Kaffenberger, & Chandler, 2001; Robers et al., 2013; Ybarra, Mitchell, & Espelage, 2012). The 2011 Youth Risk Behavior Surveillance Survey (YRBS) (Eaton et al., 2012) found that 16.2% of students were electronically bullied in the past 12 months, while the 2013 YRBS found that, on average, 14.8% of students were electronically bullied across the 40 states sampled. Although the YRBS showed a slight decrease in cyberbullying, it was not considered to be significant, and the National Crime Victimization Survey (Lessne & Harmalker, 2013) reported a slight increase in cyberbullying from 6.2% (2009) to 9% (2011).

As for the population that seems to be most affected by cyberbullying, the 2013 YRBS (Kann et al., 2014) indicated that females (21.0%) were cyberbullied more than males (8.5%), particularly white females (25.2%). Among those in the 9-12<sup>th</sup> grade levels, 9<sup>th</sup> graders appeared to experience the highest rate (16.1%) of cyberbullying. The 2012 NCVS (Lessne & Harmalker, 2013) investigated the frequency of bullying experienced among 12-18 year olds enrolled in grades 6 through 12, and found that 71.9% reported being cyberbullied at least once a year, 19.6% at least once a month, 5.3% at least once a week, and 3.1% nearly everyday. The type of cyberbullying or medium in which they were cyberbullied was also recorded with findings indicating that 4.4% were cyberbullied via text message, 3.6% had hurtful information presented

on the internet, 2.7% via instant messaging, 1.9% via email, and 1.1% through private information being shared publicly.

### **Features associated with cyberbullying roles**

Studies have identified both overlapping and distinctive features associated with being a cybervictim and a cyberbully. Sourander et al., (2010) distributed questionnaires to 2,438 Finnish adolescents in the seventh and ninth grade (age range, 13 years to 16 years) identified as either a victim of cyberbullying, cyberbully, or both victim and perpetrator of cyberbullying. They found that being a cybervictim was associated with difficulties in managing emotions, maintaining concentration, headaches, and getting along with other people, along with being more socially unpopular, isolated, depressed, anxious, and fearful compared to their peers. Certain online behaviors that were common among cybervictims included a higher tendency to search for acceptance and attention online, vulnerability to manipulative techniques, less attentiveness to Internet safety messages, less resilience in dealing with a difficult situation, and an unwillingness to ask parents for help or to report a dangerous online situation to an adult.

Perpetuators of cyberbullying were found to have many of the same perceived difficulties as cybervictims (e.g., managing emotions, concentration, headaches, and getting along with other people). However, in comparison to cyberbullying victims, cyberbullies were more likely to be targets of traditional bullying, to engage in delinquent behavior and substance use, and to experience hyperactivity. A separate study found that cyberbullies, like traditional bullies, tend to have poor relationships with their caregivers, and tend to be frequent daily Internet users (Feinberg & Robey, 2009).

The study conducted by Sourander et al. (2010) found that being both a perpetrator and victim of cyberbullying was associated with all the risk factors associated with being solely a

cyberbully or cybervictim. Results of this study also indicated that being both a cyberbully and a cybervictim was more common among girls than boys. In addition, perpetrators of traditional bullying tend not only to perpetrate cyberbullying but also to be victims of cyberbullying.

**Impact of cyberbullying.** Compared to conventional bullying, there is limited research on the impact of cyberbullying. However, results of the few studies on the topic do suggest significant adverse psychological and physical impacts on both cyberbullies and cybervictims. According to the National Crime Prevention Council (2007), the possible effects of cyberbullying for victims and associated features for cyberbullies overlap with those associated with face-to-face bullying, and include a drop in grades, low self-esteem, loss of interest, and depression. However, there are also unique and in some cases more severe impacts associated with cyberbullying, including increased risk of suicide among victims of cyberbullying (Kann et al., 2014). Gámez-Guadix, Orue, Smith, and Calvete (2013) examined the relationship between being a cybervictim and substance use, depression, and problematic internet use behaviors among a sample of 845 adolescents over a one-year period. They found that cyberbullying has a more negative effect on adolescent development than traditional bullying, and victims may suffer long-term psychological consequences such as depression and substance use. Additionally, being a bully-victim (in contrast to only a victim) was found to be correlated with higher levels of problematic internet use, such as spending too much time on the internet.

In separate longitudinal studies both spanning over ten years, Patchin and Hinduja (2012) and Kulig, Hall, and Kalischuk (2008) found that there are also long-term implications for cyberbullies. For example, cyberbullies were found to exhibit higher levels of antisocial, violent and/or criminal behaviors in adulthood than those who did not cyberbully. Although such findings are notable, it is important to recognize that the extent to which such future antisocial

conduct was somehow spurred by cyberbullying as opposed to cyberbullying being merely one expression of a durable pattern of aggressive/antisocial behavior is unknown.

Overall, the following factors may, in some regards, intensify the nature and adverse impacts of cyberbullying: being bullied while at home detracts from the safety youth typically feel in that setting, things are said online that would not be said in person because the recipient's reaction is not visible, internet-based CMC's allow single acts of bullying to be exposed to and/or replicated by others across the world, anonymity of the bully adds to a victim's insecurity, and cyberbullying can take away from the victim one of the major places youth currently socialize (National Crime Prevention Council, 2007). Additionally, a majority of parents are unaware of cyberbullying because it is a new form of bullying that often occurs outside of school where watchful adult eyes may not be present (Penrod, 2007). Therefore, not only is the adolescent faced with some potentially more extreme effects from cyberbullying than physical bullying, but also they also often lack parental guidance and support to help them cope with those effects.

### **Intervention and Prevention Programs**

As research on the prevalence and impact of bullying has increased, so has attention to the development of intervention and prevention programs. The widely recognized pioneer in this field is Dan Olweus who, after initiating the study of bullying in the 1970s (Olweus, 1978), developed the first campaign against school bullying in 1983 (viz., the First Bergen Project). However, it was not until the early 1990s, when attention to bullying grew in the United States, that the efficacy of Olweus's program was evaluated (Olweus, 1991). The evaluation, which spanned over a 2.5-year period and involved 2,500 students from 42 schools, found that victimization decreased by approximately 50% after the intervention was implemented. Since

these promising findings were reported, numerous other anti-bullying programs, with varying formats and intervention components, have emerged across the world.

Accompanying the proliferation of anti-bullying programs has been an increase in empirical investigations of their efficacy. Describing these individual studies is beyond the scope of this review but a general picture of the results can be gleaned from a meta-analysis of 44 anti-bullying school programs conducted by Ttofi et al. (2011). The meta-analytic findings indicated that these programs decreased bullying by 20-23%. The following treatment components were found to be efficacious in reducing bullying: parent training/meetings, playground supervision, disciplinary methods, classroom management, teacher training, classroom rules, whole-school anti-bullying policies, school conferences, information for parents, cooperative group work. The findings also indicated that these programs reduced victimization by 17-20%. The following treatment components were found to be efficacious in decreasing victimization: disciplinary methods, parent training/meetings, psychoeducation videos, cooperative group work, and work with peers (peer mediation, peer mentoring, encouraging bystander intervention to prevent bullying). The meta-analysis also found that programs that effectively decreased bullying were geared towards children 11 years old and older, were longer in duration, and provided more training in bullying intervention and prevention.

A novel three-level meta-analysis of 23 studies examined the impact of age on anti-bullying program efficacy (Yeager, Fong, Lee, & Espelage, 2015). The results indicated declining program efficacy with age, with negative effects emerging among older teens. More specifically, small positive effect sizes were found for younger ages while negative effect sizes were found for older teens, suggesting possible iatrogenic effects of the intervention. This

finding is largely consistent with non-experimental evidence (Finkelhor, Vanderinden, Turner, Shattuck, & Hamby, 2014), which reported through a national probability sample survey that students in high school experienced a non-significant trend towards an increase in bullying when exposed to an anti-bullying program. Therefore the research suggests that existing anti-bullying programs that include an “age-up” portion for older adolescents may not be sufficient to reduce bullying.

In order to convey the conceptual bases, formats, and content of current interventions for bullying, the following section reviews a number of representative anti-bullying programs for conventional bullying and cyberbullying. The programs were selected based on their efficacy, use of evidence-based practice, popularity, and applicability to the target population for the proposed project (viz., adolescents identified as either a victim, bully, or bully-victim).

#### **Programs for conventional bullying.**

***The Olweus Bullying Prevention Program.*** As previously mentioned, Dan Olweus is considered to be the pioneer of bullying research, and *The Olweus Bullying Prevention Program* (OBPP; Olweus, Limber, & Mihalic, 1999) is regarded as the prototypical anti-bullying program. It is currently the most empirically-supported program and a common model for other programs, though all efficacy data on the program has been collected outside of the United States and is not currently in the registry for evidence based programs for bullying. The program was created based on the belief that bullying is a systemic problem occurring within an environmental system, such as the whole school system. Therefore OBPP uses a whole-school approach wherein the intervention is implemented in the school-wide context as opposed to being directed at just the individual bully and victim (Smith, Schneider, Smith, & Ananiadou, 2004). This means that OBPP implements its principles and components across multiple levels of the school

system (e.g., entire school, classrooms, teachers, students, and community members). Moreover, its system-change focus enables its core principles, rules, and supportive materials to be adapted for use by any program that youth attend on a regular basis, such as after-school programs, camps, or community-based programs.

The program's goal is to reduce current bullying, prevent future bullying, and improve peer relations in a given setting by targeting students age 5-15 years old using a hybrid approach that includes both group and individual implementation components. The program trains school administrators, teachers, and other school staff for 4-6 months before they implement it with the target population at four different levels: the school level, classroom level, community level, and individual level (described further below). All students participate in most aspects of the program with additional individualized interventions for just the bully or the victim. Because the program is based on a systems-change approach, implementing intervention at the four different levels previously described, it does not follow a classroom curriculum. Therefore, although there are guides referring the administrator to resources and providing step-by-step instructions for the program, neither the length of the program nor individual sessions are specified.

Materials used to implement the OBPP program include a Schoolwide Guide with DVD/CD-ROM step-by-step instructions, a Teacher Guide with DVD/CD-ROM primary implementation tool for teachers, and the *Olweus Bullying Questionnaire* that is administered to all students grades 3-12 before the program and at regular yearly intervals for pre-intervention and outcome assessment. The OBPP has four components that are implemented at the school, classroom, individual, and community levels. For the school-level component, the development of a committee is recommended (viz., Bullying Prevention Coordinating Committee) to develop uniform and consistent objectives and rules, and to increase adult involvement in supervision



through training seminars (e.g., committee/staff trainings and staff discussion group meetings). Parents are also encouraged to cooperate to help address beliefs and stigmas related to bullying, usually through annual meetings held at the school. The classroom-level component uses a consistent non-hostile discipline in the classroom and regular class meetings with the parents to help enforce school-wide rules against bullying. The individual-level component focuses on increasing and strengthening the supervision of children in the school, decreasing the social isolation often observed in victims of bullying, and increasing inclination of both adult and student bystanders to intervene when bullying is encountered. The community-level component develops partnerships with community members (e.g., parents, caregivers, volunteers, organizations) by providing community psychoeducation pertaining to bullying. Community support for the program is generated through anti-bullying messages and educational materials provided during community meetings.

Outcome research on the effectiveness of OBPP was conducted in separate randomized controlled trials by Olweus (1991) and by Black and Jackson (2007). Collectively, these studies found that participants in the OBPP experienced an average 20-70% decrease in bullying and victimization, and that overall school satisfaction increased among students, teachers, and parents. There was also a reduction in general antisocial behavior (e.g., vandalism, fighting, theft, truancy) and improvement in participants' classroom functioning (e.g., positive social relationships, positive attitudes towards schoolwork & school). Follow-up studies using the Olweus Questionnaires found that improvements were maintained 8 months later for youngsters in grades 4-7, and two years later for adolescents in grades 8-10.

***Bully Busters.*** This empirically supported program, developed by Horne, Newman-Carlson, and Barolomucci (2003), was initially implemented in a public elementary school in

Athens, Georgia. The program has since been replicated in other middle schools in small urban settings (Bedell & Horne, 2005) and tested for efficacy (Browning, Cooker, & Sullivan, 2005). Bully Busters is based upon a socio-ecological framework (Horne, Newman-Carlson, & Barolomucci, 2003; Horne, Stoddard, & Bell, 2008) and was initially designed as a staff development-training workshop. Currently, Bully Busters may be implemented as a school-wide program, an individual classroom agenda, or with individual children as part of a cognitive-behavioral treatment plan (Horne, Stoddard, & Bell, 2008).

The program is focused on changing the social system to reduce the amount of bullying and victimization in the classroom. It is based on the following assumptions: (a) changing the environment (e.g., teachers'/parents'/administrators' responsibilities and roles) is more powerful than changing the individual, (b) prevention is better than intervention, and (c) changing the environment requires support and understanding among teachers. The program aims at changing the social system by increasing the teachers' knowledge and use of bullying intervention skills, their personal self-efficacy, and their self-efficacy related to working with specific types of children. The program targets children grades K-5 and 6-8 (Kindergarten to middle school) using either a group or individual approach. Although the program can, as noted, be implemented in the context of individual therapy, it is designed to be administered in a group format by trained school staff on either a class-by-class or school-wide basis. Teachers are taught 36 program activities during 2 hour trainings run by senior program staff over the course of 3 weeks. After each workshop, teachers share with their students what they learned by using these activities in their classrooms. Upon completion of the psychoeducational workshops, teachers participate in supervision/team meetings for 1 hour, every 2 to 3 weeks, for 8 weeks.

The school counselor or lead teacher facilitates team meetings and assists in identifying what aspects of the program are effective and what aspects need improvement.

The program addresses four types of bullying behaviors: physical aggression, verbal aggression, relational aggression, and sexual harassment. The program's techniques and components are based on three basic values or beliefs: (a) all children can learn academic content and behavioral skills to establish positive relationships, (b) all people in the school community are to be treated with respect and dignity, and (c) there is no place for violence, bullying, or aggression in school. The motto "Setting up for Success" is incorporated throughout the program to develop a positive school environment and increase students' social competence. The contents of the program include psychoeducation pertaining to bullying and victimization, recommended interventions, prevention strategies, stress-management techniques, and classroom activities. The implementers of the program (e.g., school administrators, teachers, staff) are trained in seven consecutive modules, each focusing on specific goals: (1) increasing awareness of bullying, (2) recognizing the bully, (3) recognizing the victim, (4) taking charge (interventions for bullying behavior), (5) assisting victims through recommendations and interventions, (6) understanding the role of prevention, and (7) developing relaxation and coping skills.

In addition to the 36 activities that teachers are trained to implement, there are additional materials and activities provided in a teacher's manual containing the 7 workshop modules as well as the classroom activities and worksheets for each module. The teachers' selection of which activities to implement is based on their relevance and the needs of the students. For example, the *Drawing a Bully* activity increases bully awareness and empathy by having the students draw their perception of a bully on a blank piece of paper and discuss their drawings with the class. Other activities implemented by the teacher include cognitive behavioral

techniques such as conflict resolution, empathy training, social-skills training, anger management, and problem-solving skills. An instructional manual, which serves as the educational guide and classroom curriculum resource, is also provided for students and parents. The manual specifically instructs bystanders on how to stop bullying when it is encountered, and increases the knowledge of how to identify when they should intervene independently or when they should seek help from a supervisor. The manual also educates teachers, parents, and students on the antecedents, behaviors, and consequences of bullying.

Results from two studies indicate that the Bully Busters program is effective in reducing school aggression, reducing victimization, and increasing knowledge about bullying. A pre- and posttest questionnaire analysis conducted by Orphinas, Horne, and Staniszewski (2003) reported a 40% decrease in elementary school aggression, with a 23% decrease in victimization in the 3rd-5th grades. Browning, Cooker, and Sullivan (2005) conducted a pretest-posttest control group design study in which they trained 36 school personnel (e.g., teachers, school administration) in the *Bully Busters* program and then tested their knowledge about bullying and related intervention strategies. They found that participants significantly increased their knowledge related to seven of the eight modules (all except Module 3: Building Personal Power) compared to their pre-training baseline. Participants also retained the knowledge acquired during in-service training for recognizing behaviors and characteristics of bullies and victims (Modules 4 and 5) and for identifying recommendations and interventions for bullies and victims (Modules 6 and 7).

***Second Step Program.*** This program is one of the most widely used social-emotional learning (SEL) programs developed by The Committee for Children. It focuses on the development of social and emotional skills to help children more effectively cope with

difficulties in the learning and social environment, including bullying (Ragozzino & Utne O'Brien, 2009). Key lessons involve the development of empathy, emotion-management skills, friendship skills, social problem solving, and assertiveness. The goal of the program is to increase a child's social-emotional competence by building these SEL skills. Additionally, an overarching goal of the Second Step program is to increase friendships and interactions with peers by building positive relationships.

The program was developed for students (preschool to 8th grade) using a lesson format implemented at the grade-level. Teachers and staff implement set lessons plans to each grade level, which may last 13 -28 weeks depending on grade level. The lessons consists of key concepts and objectives for each lesson which fall into the broad categories of empathy (e.g., showing compassion), emotion-management (e.g., handling accusations), friendship skills (e.g., making friends), social problem solving (e.g., solving peer-exclusion problems), and assertiveness (e.g., dealing with negative peer pressure). Lessons include small-group activities, discussions, as well as individual work, and whole class instructions through the support of a DVD and demonstrations. Focus is placed on skill building, which includes cueing, coaching, and utilization of homework; reinforcement is also incorporated.

Elements of SEL approaches have been shown to reduce several areas of antisocial behavior such as aggression, bullying, and other forms of violence (Brown, Low, Smith, & Haggerty, 2011; Frey et al., 2005). A two-year cluster randomized clinical trial of the Second Step Middle School Program (Committee for Children, 2008) was investigated by Espelage, Low, Polanin, and Brown (2015) in a multi-level analysis. Participants included 3,658 students from 36 schools in the 6<sup>th</sup> grade. They completed self-questionnaires measuring bullying, aggression, homophobic name-calling, and sexual harassment. Results indicated significant

intervention effects: 56% of students in interventions schools were less likely to self-report homophobic name-calling victimization, and 39% less likely to report sexual violence perpetration than students in control schools (Espelage et al., 2015).

***Steps to Respect.*** Sherry Catron Burke of The Committee for Children developed the *Steps to Respect* program in 2001 with a focus on teaching children problem solving strategies. Primarily, these involve assertiveness skills such standing up for themselves when they are not treated with fairness, caring, and respect. *Steps to Respect* also has a strong focus on building friendship skills (e.g., conversing, joining groups, maintaining friendships) as these have been shown to provide a buffer against the harmful effects of bullying (Frey, Hirschstein, Edstrom, & Snell, 2009; Hodges, Boivin, Vitaro, & Bukowski, 1999). The program aims to promote skills (e.g., group joining, conflict resolution) associated with general social competence with the following three goals: (a) reducing bullying and destructive bystander behaviors, (b) increasing prosocial beliefs related to bullying, and (c) increasing social-emotional skills.

The program was developed for students (grades 3-6) and their families using a group format implemented at the classroom and school-wide levels. Teachers and staff implement the program to students and family members through weekly 45-minute skill lessons and 15-minute follow-up booster sessions over the course of 12-14 weeks. The student curriculum consists of skill- and literature-based lessons with ten semi-scripted skill lessons focusing on social-emotional skills for positive peer relations, emotion management, and recognizing, refusing, and reporting bullying behavior. Upon completion of these skill lessons, teachers provide the students with grade-appropriate children's books that explore bullying-related themes to help increase awareness. Parents are provided information about the program throughout the implementation of the classroom curriculum, and school-wide anti-bullying policies are set in

place to help promote responsibility and trust. In the classroom, lessons are developed to help promote assertive responding and empathy towards victims. These lessons aim to address students' beliefs about bullying and bullying roles through perspective-taking skills, while teaching strategies for making and keeping friends, joining group activities, and coping with bullying (e.g., assertive responding, reporting). Empathy for bullied children is also emphasized along with positive social norms, particularly socially responsive behaviors when witnessing bullying.

Staff trainings use the Steps to Respect School-Wide Implementation Support Kit (trainers' manual with scripted training sessions, slides, digital handouts, and a DVD) to instruct teachers on how to use structured protocols to provide emotional and individual support to parents and students. If the schools/districts do not have the resources to deliver staff trainings using the School-Wide Implementation Support Kit, an alternative is offered in the form of a 3-hour program workshop called *The Committee for Children*.

Frey et al. (2005) evaluated the *Steps to Respect* program in a pre-post survey with 620 students and found a 24.6% decrease in bullying. Approximately 18 months after implementation, there was a 31.4% reduction in bullying, indicating lasting progressive effects (Frey et al., 2009). Results of the same uncontrolled study also suggested that students were significantly less accepting of bullying/aggression, felt more responsibility to intervene with friends who bullied, and reported greater adult responsiveness than those in control schools. Program replication (Brown et al., 2011) through a randomized control trial involving 25 schools and 2,940 students found significant positive outcomes on student climate perceptions in intervention schools compared to control schools, teacher/staff bullying prevention behavior, student bullying intervention behavior, teacher/staff bullying intervention behavior, and positive

bystander behavior. Measures of staff and teacher reports indicated significant program effects on school environment and student behavior, specifically social competency and prevalence of physical bullying.

***The Support Group Method.*** The *Support Group Method* uses similar anti-bullying methods as other bullying programs that are empirically supported (Rigby, 1997; Sullivan, Cleary, & Sullivan, 2003). Robinson, Maines, and Robinson (2008) developed *The Support Group Method* program based on a solution-focused, behavioral theory orientation. The program focuses on reducing retaliation that may occur by a bully towards a victim who reports the bullying (Robinson et al., 2008), by increasing empathy for the victim and developing supportive processes (e.g., report bullying) among bystanders.

*The Support Group Method* uses a combination of group and individual delivery formats and is implemented by teachers or adult facilitators to students age 6-18 years. Although the intervention is implemented with the bully and bystanders (usually in a group of about 8 people), information about the bullying events are gathered in one initial meeting with the victim. After the information is gathered, the teacher and/or adult facilitators meet with the bullies and bystanders over a 2-week period. Although the exact frequency and length of meetings are not specified, the program recommends that they take place over a span of 2-weeks. In implementing the program, the teacher follows a seven step procedure: (1) talking with the victim, (2) convening a group meeting with the bullies and bystanders, (3) explaining the problem, (4) promoting shared responsibility, (5) asking for ideas from the bullies and bystanders on how to resolve the problem, (6) creating and following a plan for the bullies and bystanders to resolve the problem, and (7) final meetings focused on maintaining this plan. Once a bullying situation is identified or reported, the teacher meets with the victim and asks him or



her to provide a thorough description of the situation and its negative impact on his or her functioning. The victim then describes the story through a written description, film, or art project, which the teacher shares alone with the bully and bystanders. Meetings called “no blame meetings” are arranged throughout the week to identify and modify distorted thoughts of the bully, bystander (e.g., “It’s not a big deal”), and victim (e.g., “Bullying is never going to stop”).

Results of an uncontrolled pretest-posttest study conducted by Maines and Robinson (1992) found *The Support Group Method* program to be effective in increasing awareness and empathy among surrounding peers in 60% of bullying cases. Young (1998) created a slight variant of the approach and evaluated it in 55 students over a two-year period. Young found that primary school cases treated through *The Support Group* approach experienced immediate cessation of bullying of the victim in 14% of cases with continued bullying in only 6% of cases. Despite this empirical support, *The Support Group Model* is controversial among bullying researchers. Olweus et al. (1999), for example, believes that this non-punitive approach to dealing with bullying is ineffective and that programs should instead focus on laying out clear rules and possible sanctions for bullying.

***KiVa Antibullying Program.*** The recently developed anti-bullying program *KiVa* (an acronym for Kiussamista Vastaa [Against Bullying]) was developed at the University of Turku in Finland and is funded by the Finnish Ministry of Education and Culture (Salmivalli & Poskiparta, 2012). *KiVa* follows a social-cognitive framework, with an emphasis on the notion that positive behaviors initiated by bystanders will reduce the social reward aspect that children gain from bullying others and their motivation to bully. In addition, strategies are used to enhance empathy, self-efficacy, and the perspectives of bystanders.

*KiVa* is composed of three units, which are currently expanding outside the borders of Finland, including the United States. Unit 1 is targeted towards children age 6-9 years, Unit 2 towards children age 10-12 years, and Unit 3 (currently not available outside Finland) is targeted towards children after middle school or in the lower secondary school transition. The program is comprised of two types of interventions: universal interventions and indicated interventions. Universal interventions include the *KiVa* curriculum, which is focused on preventing bullying through student lessons and online games; a teacher's manual is also provided with 13-23 lessons. In addition, bright vests are provided for recess supervisors, school posters, presentation graphics, and a parent guide for psychoeducation on bullying. The indicated intervention is specifically targeted towards those who have experienced bullying as a bully and/or victim. This intervention involves a team of three school personnel and the classroom teacher. The procedures are as follows: (1) identify if the incident would qualify as a case of bullying, (2) hold an individual meeting with the victim to discuss his/her perspective and their roles against anti-bullying, (3) call for an individual discussion with the bully or bullies using a confrontational approach (e.g., told by the team members to cease bullying) or non-confrontational approach (e.g., speak to concerns about victim), (4) meet with the school team and bullies as a group to discuss, and (5) hold a follow-up meeting to monitor and discuss.

Studies have shown that *KiVa* is effective in reducing victimization and bullying, bystander negative behaviors such as social praise for bullying, and increasing bystander self-efficacy to defend the victim being bullied in Grades 7-9 (Kärnä et al., 2011). The program was also found to be effective in Grades 1-6 after 9 months of implementation (Kärnä et al., 2013). Schools that implemented *KiVa* have also shown a decrease in anxiety, depression, and negative perspectives among peers towards the victim (Williford et al., 2013). As for generalization of the

program to multiple forms of victimization has also been shown to be effective (Salmivalli et al., 2011).

***The Bully Workbook for Teens.*** Lohmann and Taylore (2013) developed a self-help workbook entitled *The Bully Workbook for Teens*. This workbook uses a cognitive-behavioral model to help teens learn anti-bullying tips and strategies, emotion management skills (e.g., for depression, anxiety, and anger), and constructive communication skills. The book targets adolescents who are victims of bullying and uses an individual, self-administered, and self-paced format. It includes 42 step-by-step guided written activities for the adolescent to complete, with each activity preceded by 1-2 pages of psychoeducation pertaining to that activity's topic. Some psychoeducational topics include friendships and circles of support, ways to increase self-confidence through cognitive restructuring and activity selection, ways to identify when bullying escalates, and how to seek help. These activities are self-reflective and promote cognitive restructuring, while at the same time providing anti-bullying strategies and techniques to help increase awareness and management of emotions (e.g., fear, anger, and sadness). The efficacy of *The Bully Workbook for Teens* has yet to be investigated.

**Anti-cyberbullying apps.** There are few established anti-cyberbullying programs that are delivered to groups or individuals through traditional face-to-face formats due to this type of bullying being an emerging area of clinical attention. However a few software applications ("apps") have been developed to address cyberbullying. Many of these draw from traditional individual and school-based interventions for physical bullying. One of the most common interventions drawn from these traditional programs is a reporting function where victims or bystanders are able to report a bullying incident via the app. These software apps tend to also incorporate education on what bullying entails, strategies to intervene and report, and

adult/parental controls. A few anti-cyberbullying programs are attempting to accommodate the medium of online communication by implementing through an on-line or mobile device application format. Following is a review of a number of representative software-based anti-bullying programs for adolescents that either include a cyberbullying component or that target cyberbullying directly. To date, none of these apps has been tested empirically.

***STOPit.*** Developers in the Phoenix Venture Group (2013) created this mobile device app to help victims of cyberbullying in Grades K-12 and in college. The app aims to empower individuals and enhance their sense of control so as to promote reporting and obtaining support for cyberbullying.

There are two version of the *STOPit*; a school version that allows reports to be sent directly to the user's school, and an individual version. The school version personalizes the app with the school name, programs the School Cyberbully Contact button, and loads the crisis center of choice automatically. The individual version does not personalize the app to the school, but instead has the reported data sent to the child's parent or designated contact (e.g., therapist, guardian, family member). Additional features include a STOPit button which forwards offensive material to adults/authorized officials, a HELPit button that links the user to national organizations when they need to talk/text someone for support, a FRIENDit button which allows bystanders to anonymously report incidents and forward materials to trusted adults, and a REPORTit button which allow users to share evidence directly with law enforcement officials when a previous bullying incident has led to an official investigation.

***KnowBullying.*** This cyberbullying mobile application was developed through a partnership between The Substance Abuse and Mental Health Services Administration (SAMHSA, 2014) and the federal organization known as StopBullying.gov. The application is

geared towards parents, caretakers, and educators with the goal of increasing communication about bullying and cyberbullying with youth from age 3 through adolescence. The app focuses on psychoeducation on bullying, communication strategies and techniques to help parents to speak to their children about bullying, and providing resources to the caregiver on bullying. The program recommends the caregiver/adult utilize the application's components with the child/teen for at least 15 minutes a day. Generally, the app is aimed at helping caregivers start a conversation with their children about school, work, relationships, life, and bullying. This is achieved through the following seven components provided to the adult user: (a) tips about bullying for specific age groups; (b) warning signs to help the adult recognize that their child is bullying, being bullied, or witnessing bullying; (c) information on how to access trustworthy online resources screened for effectiveness by experts; (d) conversation starters to use with the child; (e) daily reminders to talk with the child when the time feels right (e.g., a quiet moment on the way to a game, after dinner, while relaxing outside); (f) conversation starters, successful strategies, and useful advice via social media, email, and text messages; and (g) resources for educators on how to prevent bullying in the classroom and support children who are being bullied.

***Cybersafe.*** Cybersafe, which emerged in 2014 from a collaboration between the Excited-Ed Community Research Company and a group of adolescent students at a UK-based school, is an interactive game-based app designed to build social skills and provide psychoeducation on cyberbullying. The app aims to provide practical tips and skills on how to deal with cyberbullying. This self-administered app is targeted towards children and teenagers who are victims of cyberbullying. Users choose among three games to play based on what area of education or coping they wish to engage. During the *Detective Charlee* game, the child directs a

cursor that is flying on the screen, and is taught to collect cyberbully evidence by taking screenshots of threatening comments on social networks that they can email to a trusted friend or adult. This not only increases the user's awareness of the types of messages that would be considered cyberbullying, but also helps him or her learn how to collect this evidence (e.g., screen shots and forwarding emails) and gain more confidence in reporting it. The *Pa\$\$w0rdBlockr* is a puzzle game that encourages the user to keep passwords safe. It includes tips on how to avoid having their online accounts hacked and signs that such hacking has occurred. The *Goof Run* game is a running game set in a colorful chatroom that incorporates helpful cyberbully advice throughout the race. In addition to these games, the app also provides links to the UK law enforcement agency CEOP to report bullying.

***CyberBullies Zombies Attack.*** The Netsmartz Workshop of the National Center for Mission and Exploited Children (2014) created the CyberBullies Zombies Attack mobile app game geared toward helping adolescents cope with cyberbullying. This app targets adolescent cybervictims and aims to increase their awareness of how and what to report with respect to cyberbullying. The game was also intended to provide a degree of “catharsis” for the user by enabling him or her to “keep bullies away from the school home base.” The zombie theme was chosen to attract adolescents based on the popularity of the genre.

The game instructs the user to attack cyberbully zombies that are trying to ruin their online experience. Although the school campus playing field environment is consistent during the game, a variety of icons and weapons are used, including the *Mominator*, which encourages adolescents to reach out to their parents. The zombies engage in several cyberbullying behaviors during the game (e.g, sending mean text messages, posting embarrassing pictures, stealing online identities), which serves to increase the user's awareness of different forms of cyberbullying.

***CyberBully Hotline.*** The CyberBully Hotline, developed by GroupCast (2004), is a mobile app that enables students to report bullying and other problems anonymously online. Applicable to youth who are bullies or victims, as well as to parent and child bystanders, it was created to serve as an adjunct resource for existing school-based bullying programs. The app's reporting system is personalized to send bully reports to the school or bullying program's staff (e.g., hall monitor, counselor). The CyberBully Hotline trainers train the people designated to receive reports and these persons are given an implementation kit for continued training.

The app's bullying report system has several components. The user makes a report using the app either via text message or phone. Text messages are auto-screened and flagged for the staff as high priority if they include key words such as "gun" or "suicide." The system administrators are notified of new reports instantly via text message while reporters are sent an auto-reply text that their report was received. The staff may respond in real time to new reports via text message with two-way anonymity between reporter and staff. A collaborative notes feature also allows the staff member to record notes on reports received.

The following school case studies suggest that the CyberBully Hotline app is effective in decreasing overall offensive behaviors at school. GroupCast published a report in April 2013 on Warren County R-III School District leaders (serving approximately 3,000 students) in Missouri implementing the program in 2012-2013. During the 2011-2012 school-year, approximately 60 students at Warren County's Black Hawk Middle School were disciplined for fighting. After implementing the CyberBully Hotline, the school reported a 92% decrease (to 5 students) in the number of students disciplined for fighting. GroupCast also announced Hardin, TX Independent School District (1,285 students enrolled) implemented the CyberBully Hotline at the outset of the 2012 school year. They reported that the most significant use was by students reporting physical

bullying occurring on school buses. The app enabled students to take immediate action by reporting the bullying from the bus while it was occurring. Finally, Cisco Independent School District (ISD; 800 enrolled students) implemented the CyberBully Hotline at the beginning of the 2012 school year. Upon implementation, the Cisco ISD hotline began to receive reports on name-calling and other issues, such as gym locker thefts.

***Put an End to Cyberbullying.*** Quick Series Publishing (2013) created this app to provide resources on how to identify, stop, and prevent cyberbullying. Using a psychoeducational framework, the app organizes information based on whether the user is a child, parent, educator, or community member. It provides information on cyberbullying (e.g., defining cyberbullying, types of cyberbullying, risk factors, warning signs), and instructs children and teens on how to avoid and respond to cyberbullying incidents. Adults are given information on how to deal with a cyberbullying incident and ways to help the child prevent further incidents. The app incorporates additional outside resources, as well as a component where users can test their knowledge on cyberbullying based on what they have learned from the app.

***Bully Blocker.*** Created by Spy Parent (2011), the *Bully Blocker* app incorporates a message-blocking component and a reporting tool. It aims to provide children who are cybervictims with an easy and accessible medium to report and block cyberbullying messages (including those that may be coming from a private or unknown number).

Specific components of the app include a variety of bully incident recording systems, different forms of message blocking, storage, and instant reporting for both bullying and cyberbullying. The *Bully Capture* tool utilizes a stealth audio recorder to capture bullies in the act. The user may then forward the audio as an email attachment or text message to appropriate



authorities. Additionally, audio can be downloaded to the *Bully File* (see below) to authenticate the bully's voice for legal evidence. The *Bully Blacklist* feature allows users to block all text messages from a list of numbers that the user selects. When the person on the blacklist calls, he or she will either hear a busy signal or pre-recorded message. All phone calls and text messages from the blocked list are automatically routed to the *Bully File* thereby preventing any communication with the bully and storing numbers as evidence. The *Bully File* captures all texts, pictures, and videos that the user copies to the file. All incidents are stored on the user's memory card to be used as evidence for parents, school administrators, HR departments, and law enforcement. Finally, the *Instant Reporting* feature allows the user to forward inappropriate texts, pictures, or videos via text messaging or email.

***Bully Proof Assistant Prof.*** This app was created by Robert Pearson Richardson (2014) after his personal experience with bullying in the workplace. It is geared towards both children who experience bullying in the school environment and adults who experience it in the workplace. This self-administered app provides a system to record and report bullying incidents. It instructs the user to select the environment the bullying is taking place (e.g., workplace or school), which triggers a setting-specific template for the user to complete. The template allows the user to upload a photo or video of the bully or incident, and provides an area to record a description of the incident, its date and time, the name of the bully, the type of bullying (e.g., mental, physical, cyber), and one's reaction to the incident (e.g., "I want to hurt myself," "I want to hurt the bully"). These reports are then sent out either via email or text message to personal contacts the user inputs such as a teacher, parent, counselor, or human resource department.

***Bully Tracker.*** Breakpoint Solutions (2012) created the first comprehensive standardized reporting system for students and schools to report bullying. This app is a reporting system that

provides students, bystanders, faculty, and parents with a confidential portal to report bullying incidents. The report includes several components including date and time of the incident, victim and bully names (if the user opts not to report anonymously), type of incident (e.g., verbal, physical, cyber), description of the incident, and proof of the incident (e.g., video, photos). The app also asks the user to indicate if the victim is in immediate danger, which directs the user to contact 9-1-1 emergency. These reports are then sent directly to the school where an email notification is then sent to the students involved, parents, and school officials, informing them that an incident report was filed.

**Mobile applications that monitor and restrict access to CMC's.** In addition to anti-bullying efforts such as formal anti-bullying interventions, classroom materials, and school policies, Kowalski, Limber, and Agatston (2012) suggest monitoring and restricting access to CMCs among children and adolescents. According to Willard (2007), adolescents often do not report cyberbullying because they fear that their internet privileges will be revoked by a teacher or parent. In lieu of such blanket revocations of internet privileges, he proposes responding to irresponsible online behavior through online monitoring software and restricted access to potential harmful online content such as profanity and pornography. The mobile applications described below provide a representative sample of those currently used for monitoring aggressive behavior online and restricting inappropriate access to harmful online information.

***Mobicip.*** This mobile application was created by Mobicip LLC (2008) and awarded the 2010 Parents' Choice Silver Honors as one of the top mobile apps for kids. It provides parental controls including category blocking, time limits, Internet activity reports, blocked phrases, and YouTube filtering. These come with three restriction levels based on the developmental level of the child and the associated online content. The elementary school level blocks social

networking, gaming, shopping, entertainment, clothing, and news content. The middle school level blocks online shopping, gambling, dating, liquor, and chat sites. The high school level blocks sexual, weapons, violence, proxy, virus, and hacking sites.

***MinorMonitor.*** This free, web-based software was developed by InfoGlide (2012) for parents to monitor their children's Facebook activities. The software scans Facebook messages for potential harmful material such as drug, sexual, and violent references. It also identifies the youth's Facebook friends that have a low number of mutual friends to help monitor if he or she may be communicating with strangers online. It delivers alerts when the child posts comments or pictures on Facebook with an additional alert when the posts (received or delivered) contain profanity and/or possible bullying-related terms and phrases (e.g., "stupid," "I hate you"). The data collected are saved in a dashboard that provides the parent with an overview of his or her child's Facebook activity (including an hourly breakdown of such activity and time of day they logged on).

***SocialShield.*** Aviera (2012) developed *SocialShield* to scan, analyze, and alert parents to their children's social network activity. Unlike *MinorMonitor*, this is fee-based web-monitoring service that covers other major social networking sites in addition to Facebook (e.g., Google+, Twitter, MySpace, and FormSpring). It scans for specific types of online interactions the child engages in using multiple *Safety Engines*: alerts engine, friends engine, photos engine, and activities engine. The *alerts engine* scans the child's social networking sites for online discussions that include inappropriate discussions about drugs, sex, violence, alcohol and suicide. The *friends engine* displays the child's online friends in an easy-to-read photo gallery and alerts the parent when the child interacts with an someone online who does not have common mutual friends with the child. The *photo engine* gathers photos that the child may have

posted or was tagged, and displays it in a gallery for the parent to view. The *activities engine* archives all the social network activities of the child (e.g. discussions, photos posted, and online friends interacted with) in a timeline. The results of all *safety engines* are displayed in a dashboard that is constantly updated.

***SafetyWeb.*** Arone and Clark (2009) developed *SafetyWeb* to provide parents with an online monitoring service that tracks their children's social networking activity, phone calls, and texts. *SafetyWeb* has five components to monitor for signs of cyberbullying and sexting: online account detection, mobile usage alerts, keyword/topic alerts, photo/video round up, and older friends alerts. The *online account detection* feature does an online search of the child's online accounts using his or her email address. Parents are notified as to whether these online accounts are public or private, when their child creates a new account using the same email address, and if he or she changes their privacy settings on their accounts. The *mobile usage alerts* connects to the mobile service provider to track the child's frequency of calling and texting, as well as compiling a list of phone numbers he or she communicates with via phone. The *keyword/topic alerts* notifies the parents to keywords used in the child's online conversation. These keywords fall under seven major categories (e.g., eating disorders, depression, adult content/profanity, bullying/threats, drugs/alcohol, suspicious contact, racism/hate), and can be customized by parents. The *photo/video round up* gathers all photos and videos the child posts to their online accounts and displays it in the dashboard for parents to view. The *older friend alerts* compares the child's age to those of his or her online friends and alerts parents to any significant age differences.

## **Rationale for Proposed Project**

Bullying continues to be a prevalent problem with adverse short- and long-term physical and psychological consequences for both victims and perpetrators. The use of computer-mediated communications (CMCs) among adolescents has led to the emergence of cyberbullying, a new form of bullying that involves threatening and/or harassing another person through the use of texts, pictures, or other forms of online media or communication. Despite significant advances in programs aimed at preventing or decreasing the frequency of traditional bullying, few resources to date have targeted cyberbullying and those that do have focused largely on reporting functions, monitoring and restricting online usage, and blocking certain types of messages (e.g., those that contain vulgarity) or specific online users (e.g., those that the child or parent identifies as a cyberbully). Generally lacking are cyberbullying resources that tailor their content to users' cyberbullying roles or that focus on increasing users' awareness of their involvement in cyberbullying and its possible impact.

**Delivering a cyberbullying resource via mobile application.** Since cyberbullying most often occurs outside of school hours using home computers and mobile electronic devices (Shariff & Hoff, 2007), providing the resource in a form applicable to these environments where cyberbullying occurs may enhance its use and effectiveness. Implementing the resource via a mobile application may also remove roadblocks that could occur when addressing bullying through traditional delivery methods. For instance, one of the most common obstacles to proactive action for victims of bullying is fear. Many targeted adolescents fear that if they tell someone or ask for help it will make the bullying worse and/or lead to their online privileges being taken away. Victims of bullying often do not share their experiences with parents or school counselors because they are embarrassed and do not want others to know they are

experiencing peer rejection. Because resources delivered via mobile applications may provide users with anonymity, a disinhibiting effect may occur that leads teens to be more engaged with the resource and more self-disclosing. As a result, they may be more likely to report bullying or ask for help via an app as opposed to through face-to-face interactions. Additionally, the 24/7 accessibility of a mobile app for adolescents provides the potential for greater engagement with and benefits from the tools it provides. This is based on the near ubiquity of access to CMCs for teens, as well as their familiarity and comfort level with the medium.

**Aims of proposed mobile application.** The goal of this proposed dissertation project is to develop a blueprint or visual guide (“wireframe”) for a mobile application (“app”). The proposed app will be designed to decrease cyberbullying among adolescents by providing them with an accessible reflective learning tool that will heighten their awareness of their involvement in cyberbullying and its potential adverse consequences while connecting them with relevant resources. To achieve this goal, the mobile application aims to: (a) assess the user’s cyberbullying role and tailor the content accordingly; (b) decrease disinhibition and, ideally, the cyberbullying it facilitates by promoting increased awareness of users’ online behaviors; and (c) provide current resources and psychoeducation related to cyberbullying. A cyberbullying-reporting tool will not be included as such tools are widely available in a number of existing apps.

## **Chapter II: Method**

### **Overview**

This clinical dissertation proposal is for the development of a blueprint (“wireframe”) of a mobile application focused on increasing adolescents’ awareness of their potential role in cyberbullying, the impact of cyberbullying, and resources available to help both victims and perpetrators. The mobile-app will be tailored to each user’s experience with online bullying based on his or her cyberbullying role(s) (e.g., cyberbully, cybervictim, or cyberbully/cybervictim). It will incorporate cyberbullying role assessment tools, psychoeducation, a daily log, and resources on cyberbullying. The proposed project aims to develop a detailed outline or “wireframe” for a mobile application resource for teenagers age 12-18 involved in cyberbullying either as cybervictims, cyberbullies, or both. Intended primarily for use by individual teens as a self-help tool, the app’s design will also enable it to be implemented as part of a hybrid approach in conjunction with therapy or school-based programs. Due to time, monetary, and logistical constraints, proceeding to the programming of the application itself is beyond the scope of the proposed project.

### **Goals of the Proposed Project**

The goal of the proposed project is to provide teens with an accessible tool that will help decrease cyberbullying through increased awareness of online behaviors and of cyberbullying resources (providing psychoeducation and coping strategies). The mobile-app will be tailored to each user’s role in cyberbullying to achieve the following specific goals. The goals for cybervictims are to increase their awareness of cyberbullying and its impact, connect them with resources selected to help them cope with bullying-related stressors, and, ideally, decrease their victimization. Coping resources are likely to include reporting of bullying, avoidance and

defense strategies, and social support. The goals for cyberbullies are to decrease future bullying by increasing awareness of both their behaviors online and the adverse impact of such behaviors. The resources selected for cyberbullies will aim at helping them cope with anger and aggression (Candelaria, Fedewa, & Ahn, 2012), reduce vengeful feelings (Topcu & Erdur-Baker, 2012), and improve emotional regulation (Laghi, Pallini, D'Alessio, & Baiocco, 2011). All the above goals apply to those users who are both victims and bullies, with the larger objective being to decrease both victimization and bullying behavior.

### **Rationale for Proposed Project**

As the use of computer-mediated communications (CMC) among teenagers increases (Lenhart et al., 2011), so does the prevalence of cyberbullying (Patchin, 2013) along with its adverse effects for both perpetrators and victims. In light of the limited number of current programs focused specifically on cyberbullying, an accessible and easy-to-use clinical resource for cyberbullying is needed. Because the mobile-app format enables the resource to be readily accessed in the online/mobile device environment where cyberbullying is most likely to occur (Shariff & Hoff, 2007), it will allow for more accurate monitoring and, ideally, modification of online behavior. Implementing the intervention via mobile-app may also eliminate possible roadblocks one may experience with face-to-face interventions for bullying (e.g., fear of peer rejection/retaliation, the prospect of losing online privileges, and stigma associated with traditional help-seeking). As previously mentioned, most of the electronic anti-cyberbullying resources and tools currently in place are focused on how to report cyberbullying, censoring and monitoring online behaviors, and ways for caregivers to speak to their child about cyberbullying. The proposed mobile-app focuses instead on increasing the individual bully or victim's



awareness of his or her own cyberbullying roles and behaviors through psychoeducation, self-monitoring, and tailored resources.

### **Plan for Developing the Resource**

This section describes the development plan for the proposed mobile application. The content includes steps already completed as part of the preparation of this proposal, the proposed structure and content for the mobile mobile-app, and the anticipated steps for further development of the proposed mobile-app.

**Literature Review.** In order to inform the development of both the current proposal and the proposed mobile application, a thorough literature review was conducted related to bullying and cyberbullying. The review was based on the following areas of research: (a) increased attention to bullying in the wake of recent events receiving media attention; (b) current research and developments in the area of bullying/cyberbullying including its multiple forms, prevalence, and profiles of the victim and bully; and (c) features distinguishing cyberbullying from traditional bullying. These areas were researched through searches of online databases (viz., PsycInfo, PsycArticles, PubMed, Child Development and Adolescent Studies, ScienceDirect, and SpringerLink) affiliated with child and adolescent development, education, mental disorders, bullying, and cyberpsychology. Common search terms used were *bullying*, *cyberbullying*, *adolescent aggression*, *victims of bullying*, *bullying prevention*, and *bullying treatment*.

Current prevention programs, treatment programs, and resources for bullying and cyberbullying were reviewed to gather information to inform the structure, and content of the proposed mobile application. The review included programs and resources that were: (a) implemented in a variety of settings (e.g., at-home, school-based, classroom-based), (b) geared towards specific populations (e.g., teens, caregivers, faculty), and (c) implemented in different

forms (e.g., manual-driven school programs, DVDs/CD-ROMS, mobile applications). These areas were researched through searches of current bullying programs through Google search and online databases (viz., PsycInfo, PsycArticles, PubMed, Child Development and Adolescent Studies, ScienceDirect, and SpringerLink) that included descriptions and evaluations of bullying programs and resources. Common search terms used were *bullying programs*, *bully prevention*, *bully treatment*, *cyberbullying programs*, *top bullying mobile applications*, and *Olweus*. Mobile-apps for bullying were searched using the iTunes apps store and Google Play store. Additionally, any extant outcome research on each program was identified and reviewed to determine which programs and which constituent components appear to be most effective. Throughout the development of the proposed mobile application, the areas of research relevant to this proposal will be updated.

### **Anticipated Structure of the Proposed Mobile Application**

The mobile-app will comprise several modules: an Assessment Module, Psychoeducation Module, Self-monitoring Module (consisting of a daily log of online activities), and a Resources Module (Appendix C). The Assessment Module is administered to all users and determines each user's cyberbullying role. Although all modules will be available to users from all three cyberbullying roles, their contents will be tailored to the user's role (e.g., psychoeducation will differ for victims and bullies). The Assessment Module, which identifies the user's cyberbullying role, will include a modified version of the Reduced Aggression/Victimization Questionnaire (Orpinas & Frankowski, 2001; see Appendix D), which is among the measures included in the Center for Disease Control (CDC) Bullying Compendium (Hamburger, Basile, & Vivolo, 2011). Although all items from the original questionnaire will be used, the language has

been altered to address aggression and victimization through cyberbullying instead of physical bullying.

The Psychoeducation Module will include information on how to identify different forms of cyberbullying behavior, cyberbullying roles, the prevalence of cyberbullying, adverse effects of being a victim and/or bully, and what signs/symptoms might be suggestive of those effects. The psychoeducation content presented to the user will be based on his or her cyberbullying role determined by the Assessment Module. However, all topics will be accessible to all users to help increase overall awareness and knowledge of cyberbullying.

The Self-monitoring Module includes a daily log to monitor computer-mediated communications (CMC), cyberbullying experiences (e.g., bullying and victimization online), and online mediums used to bully. In addition to increasing users' awareness of behaviors associated with their initial cyberbullying role, the daily log will also be used to identify behaviors that might signify a change in users' cyberbullying roles. To help monitor possible changes in cyberbullying roles and increase overall awareness of online behavior, this module will be administered to all users (instead of only to those in specific cyberbullying roles).

The Resources Module will provide links to relevant adjunctive resources including other sources of information on anti-bullying programs, interventions, hotlines, coping skills for bullies and victims depending on assigned role (e.g., anger management for bullies), online communities, and personal contacts representing potential sources of support. The resources provided in the mobile-app will be tailored to the user's cyberbullying role as determined by the results from the Assessment Module.

**Administration.** The mobile-app will include a "welcome" page that will orient first-time users to the different components of the mobile-app, and provide descriptions/instructions

on how to use each. The user will then be administered the Assessment Module which will determine his or her cyberbullying role. The user will be prompted to complete the Assessment Module once a year in order to assess whether different content should be triggered based on a change in cyberbullying role. Upon initial and subsequent administrations of the assessment, the mobile-app will provide feedback in the form of goals (e.g., “Based on your feedback, the mobile-app’s content has been tailored to help increase your awareness of your online activities and decrease aggressive behavior online”) rather than cyberbullying role labels (e.g., “You’re a bully”).

Following completion of the Assessment Module, the user will be oriented to the Psychoeducation, Self-monitoring, and Resource Modules corresponding to that role. During orientation to the Daily Log in the Self-monitoring Module, the user will be prompted to select the time of day he/she would like to be reminded to complete the Daily Log. Because the Daily Log is written so as to collect information on CMCs over the course of the current day, users will be prompted to select a reminder time toward the end of each day. Although the user will be formally prompted only to complete the Daily Log, he or she will subsequently be reminded about the availability of the Psychoeducation and Resource Modules. The user may access specific modules in the mobile-app without reminders or prompting.

During orientation to the Resource module, the user will be instructed to input one or more personal contacts (e.g., a therapist, school counselor, parent, or friend), as possible resources for support. Depending on the results of their Daily Log, the mobile-app may prompt the user to reach out to one of their personal contacts.

**Module goals for each cyberbullying role.** As previously indicated, the modules are based on functions (e.g., assessment, psychoeducation, self-monitoring, and accessing resources)

with certain content being tailored to the cyberbullying role identified by the Assessment Module. The following describes the module goals for each cyberbullying role.

If the user is a cyberbully, the modules will focus on increasing awareness that they are cyberbullying and decreasing the user's cyberbullying behavior. These goals will be achieved through psychoeducation on the impact of their behaviors, heightened awareness of their cyberbullying behavior via self-monitoring, and connection to resources geared toward those engaged in cyberbullying such as anger management resources.

The modules for users identified as cybervictims will focus on increasing awareness of being cyberbullied and decreasing the negative psychological effects of being bullied, as well as future victimization. These goals will be achieved through psychoeducation, increased awareness of their daily online experiences via self-monitoring, and providing additional coping resources and safety precautions, which will also include ways to report bullying.

For the cyberbully/cybervictim user, the mobile-app will incorporate the aforementioned foci for both roles with an overall focus of decreasing the user's cyberbullying behavior and the negative psychological effects of being bullied.

### **Anticipated Content of the Mobile Application**

The components of the proposed mobile-app will incorporate aspects of existing bullying programs and cyberbullying related apps, as well as a Daily Log component to help increase awareness of online behaviors. Psychoeducation on bullying will direct the user to outside resources based on applicability to an adolescent population, the users' bullying role, use in other bullying programs, resource availability, and up-to-date findings on the effects of bullying. The specific resources users will be directed to are likely to include, but not be limited to, resources at Olweus Bullying Program (<http://www.violencepreventionworks.org>), [www.stopbullying.gov](http://www.stopbullying.gov),

and at the California Department of Education website (<http://www.cde.ca.gov>). The content of the resources provided would be specific to cyberbullying roles (e.g., types of roles, what is a cyberbully? How do you know if you're a victim) and to different types of cyberbullying. It will also incorporate the latest findings on bullying (e.g., frequency, settings, mediums).

As noted above, the Assessment Module will be based on the Reduced Aggression/Victimization Scale (Orpinas & Frankowski, 2001; Orpinas & Horne, 2006; see Appendix D). Originally designed to assess the level of physical aggression experienced or victimization perpetrated by the adolescent population (Orpinas & Horne, 2006), the scale will be employed as part of the proposed mobile-app to determine the user's cyberbullying role. Derived from the elementary school version of the Aggression Scale (Orpinas & Frankowski, 2001), The Reduce Aggression/Victimization Scale is intended to be used for elementary and middle school students. The scale was found to have good internal consistency (Orpinas & Horne, 2006) for a sample of fourth and fifth graders with Cronbach's alpha of .86 for aggression and .84 for victimization. Houston (2007) found similar internal consistency in a larger sample of middle school students with scores of .89 for aggression and .87 for victimization. The proposed project will include the 12 items and 2 subscales (aggression and victimization) from the Reduce Aggression/Victimization Scale, but because the scale was developed to assess for physical bullying, wording and specific behaviors for certain items will be modified to assess cyberbullying. No precedent exists for using scores from this measure to classify respondents as bullies, victims, or both (P. Orpinas, personal communication, October 29, 2014). Therefore, the item content will be analyzed in order to develop an algorithm to classify respondents as cyberbullies, cybervictims, both, or neither. Additionally, because increasing one's awareness of online behaviors has been shown to decrease aggressive online behavior (presumably, at least in

part, by countering the disinhibition effect), a monitoring component in the form of a log (see Appendix E) will be included in the mobile-app for the user to complete daily. This Daily Log was developed by the author and previously used with participants 13-19 years old ( $N = 57$ ) with 100% compliance over a 3-week period (Shieh, 2008). There will also be a prompt for users who endorsed a cyberbullying experience in their daily log to engage the Resource Module for additional support. For example, a user who endorses high levels of victimization may be prompted to the Resources Module where he or she may contact help lines.

Finally, the mobile-app provides resources directing the teen to anti-bullying organizations and other sources of intervention (e.g., what to do if you are being cyberbullied and how to report). The Resources Module also provides additional support to the user by connecting him or her to bullying hotlines, online communities, and personal contacts the user identified as potential sources of support.

### **Evaluation of the Resource**

Formal efficacy testing (e.g., expert review, user field testing and feedback; pilot tests, controlled trials) of the mobile-app is beyond the time-scope of this project. Moreover, with the possible exception of expert review, efficacy testing will not be feasible as part of this study given that the end product will not be a completed mobile-app but instead the outline/wireframing for such an mobile-app. Thus the Discussion chapter will articulate a plan for formal evaluation of the final product.

### Chapter III: Results

The results of this project comprise wireframing for an anti-cyberbullying mobile application called *CyberPAL*. The purpose of the app is to increase adolescents' awareness of their potential involvement in cyberbullying and its potential adverse consequences, to connect them with relevant resources, and, ideally, to decrease cyberbullying itself.

*CyberPAL* is a resource targeted towards a teenage population (age 12-18) involved in cyberbullying either as cybervictims, cyberbullies, or both. Although intended primarily for use by individual teens as a self-help tool, the app's design also enables it to be implemented as part of a hybrid approach in conjunction with therapy or school-based programs. After initially assessing each user's potential cyberbullying role (e.g., cyberbully, cybervictim, cyberbully/victim), the app provides several components and three tailored modules. The Psychoeducation Module helps to increase overall awareness and knowledge of cyberbullying by providing information on how to recognize different forms of cyberbullying behavior, roles, the adverse effects of being a victim and/or bully, and what signs/symptoms might be suggestive of those effects to. The Daily Log Module comprises a self-monitoring tool to monitor possible changes in cyberbullying roles and increase overall awareness of online behavior (e.g., cyberbullying experiences and online mediums used to bully). The Resources Module provides additional support through links to relevant adjunctive resources (e.g., anti-bullying programs, hotlines, coping skills, online communities, and personal contacts representing potential sources of support).

The manual for *CyberPAL: A Mobile Resource for Cyberbullying* can be found in its entirety in Appendix F.



## **Chapter IV: Discussion**

### **Project Summary**

Existing literature indicates that cyberbullying is a prevalent problem among teens, with approximately 71.9% reporting being cyberbullied at least once a year, 19.6% at least once a month, 5.3% at least once a week, and 3.1% nearly everyday (Lessne & Harmalkar, 2013).

Adverse short- and long-term psychological consequences for both victims and perpetrators have been identified (Kulig et al., 2008; Patchin & Hinduja, 2012), including increased risk of depression, substance use, antisocial behavior, and suicidality (Eaton et al., 2012; Gamez-Guadix et al., 2013; NCPC, 2007). The prevalence, forms, associated features, and impacts of cyberbullying have increasingly been a focus of attention among both clinicians and researchers, and their work has begun to inform the development of resources and interventions. However, traditional bullying programs have only recently begun to incorporate cyberbullying, and there are few current resources that specifically target cyberbullying. Therefore, accessible, easy-to-use clinical resources for cyberbullying are needed to address the emergence of this new form of bullying and reduce its harmful consequences.

Providing an anti-cyberbullying resource in the form of a mobile app enables it to be readily accessed in the online/mobile device environment where cyberbullying is most likely to occur (Shariff & Hoff, 2007). This would allow for more accurate monitoring and, ideally, modification of online behavior. Implementing the resource's components via a mobile-app would also eliminate possible roadblocks associated with face-to-face interventions for bullying (e.g., fear of peer rejection/retaliation, the prospect of losing online privileges, and stigma associated with traditional help-seeking). As a result, teenagers may be more prone to using a mobile-app to access resources and increase awareness of their involvement with cyberbullying.

They may also be more inclined to learn about cyberbullying's possible adverse effects, and, ideally, decrease their present and future involvement with cyberbullying. Existing electronic anti-cyberbullying resources are primarily focused on how to report cyberbullying, monitoring and censoring online behaviors, and guiding caregivers on how to speak to their child about cyberbullying. Generally lacking are electronic resources that provide information and supports \ tailored to the user's cyberbullying role and focused on increasing users' awareness of their involvement in cyberbullying. Therefore, there is a need for a mobile app-based cyberbullying resource that focuses on increasing the individual bully or victim's awareness of his or her own cyberbullying role and behaviors through psychoeducation, self-monitoring, and tailored resources.

### **Purpose and Goals of the Project**

The purpose of this project was to develop an accessible mobile-app tool (viz., *CyberPAL*) to increase teens' awareness of cyberbullying, their involvement in it, its potential adverse affects, and adaptive options for responding. The mobile-app aims to achieve this by connecting the user to relevant resources to increase knowledge of cyberbullying, coping skills, and online safety (e.g., hotlines, reporting systems, safety plans). The app includes an assessment tool to identify the user's cyberbullying role (e.g., cyberbully, cybervictim, or cyberbully/cybervictim) so that the content provided can be tailored to their individual needs. The mobile-app is intended primarily as a self-help tool for individual teens age 12-18 years, but may be implemented as part of a hybrid approach in conjunction with therapy or school-based programs.

The primary goal of this dissertation project was to develop a blueprint or visual guide ("wireframe") for a mobile-app aimed at decreasing cyberbullying among adolescents by

providing them with an accessible reflective learning tool to heighten their awareness of their involvement in cyberbullying and its potential adverse consequences. To achieve this goal, the mobile-app aims to: (a) assess the user's cyberbullying role and tailor the content accordingly; (b) decrease disinhibition and, ideally, the cyberbullying it facilitates by promoting increased awareness of users' online behavior; and (c) provide current resources and psychoeducation related to cyberbullying.

### **Development of the Mobile-App**

The development of the wireframing for the CyberPAL app was based on an extensive literature review of recent scholarly writing and research on bullying and cyberbullying (e.g., features distinguishing cyberbullying from traditional bullying, types of cyberbullying, prevalence, profiles of victims and bullies). Current prevention programs, treatment programs, and resources for bullying and cyberbullying were also reviewed to inform the structure and content of the CyberPAL application. This review included programs and resources implemented in a variety of settings (e.g., home, school-wide, classroom), geared towards specific populations (e.g., teens, caregivers, faculty), and delivered in different forms (e.g., manualized, DVDs/CD-ROMS, mobile applications). Additionally, any existing outcome research on each program was reviewed to determine which programs and constituent components appear to be most effective in reducing bullying or cyberbullying. Thus, efforts were made to base the content of the mobile-app on the most common and effective components of existing programs to decrease cyberbullying and its negative consequences for both bullies and victims.

### **Strengths of the Current Mobile-App**

This mobile-app (currently in wireframed form) provides an individually- tailored, accessible resource for teenagers to decrease cyberbullying behavior and/or decrease possible

negative effects from cyberbullying. In contrast to other existing cyberbullying resources, the CyberPAL app includes components aimed at increasing users' awareness of their online behaviors, assessing their cyberbullying roles, and providing resources tailored to that role, based on information, activities, and supports from current bullying intervention programs.

The components and content of the mobile-app comprise a multifaceted, fairly comprehensive resource. The inclusion of the Daily Log to increase online awareness is intended to help counter the disinhibition accompanying many computer-mediated communications that is thought to facilitate cyberbullying. Resources are provided to increase Internet safety, prevent the occurrence of future cyberbullying experiences, and connect users to other anti-cyberbullying programs. These include tips about online etiquette, guidance on how to report cyberbullying experiences, and direct links to relevant hotlines and anti-bullying programs. Directing the user to outside resources (e.g., anti-bullying program websites) also allows the app to be easily updated with new information.

There are several advantages related to providing this resource in the form of a mobile app. As discussed previously, a mobile-app format eliminates possible roadblocks associated with face-to-face interventions for bullying, such as fear of peer rejection and stigma associated with help-seeking. Additionally, teenagers' use of and engagement with the resource may well be enhanced by virtue of it being delivered in a "generationally appealing" mobile-app format with which they are highly familiar and comfortable. This format allows content (e.g., resources, psychoeducation, hotlines) to be easily updated as more information and interventions for cyberbullying become available. This will enable the resource to remain up-to-date with the latest advances related to cyberbullying. The mobile-app format also renders the resources accessible to users on a 24/7, as needed basis (in contrast to traditional school-based bullying

programs that occur at a particular place and time). This accessibility is highly advantageous for dealing with cyberbullying experiences, since they can often occur outside school, at any time of the day or night. The readily accessible nature of the app (along with its low cost) might also prove to be beneficial for school systems that lack the financial resources or instructional time to implement a full bullying program.

There are also strengths related to the style and structure of the CyberPAL app. Efforts were made to match the style of the app to the targeted teenage population. Resources selected include teenage-friendly videos and visually-oriented learning and skill-building activities (e.g., coping skills), with jargon commonly used among teenagers in the context of CMCs (e.g., “wall post”). The graphics include a diverse representation of teenagers (with respect to gender, age, and ethnicity) and are often presented in an illustrated or comic book form to appeal to a younger population. Vibrant colors were used throughout the app, and thoughtfully placed to help draw attention to key words, phrases, and icons on the screen. A “script-handwriting” font was selected for the content to appeal to a teenage population. As for the structure of the mobile-app, it is organized into four modules and presented to the user in a sequence that provides a clear, consistent, intuitive, and user-friendly experience.

With respect to the app’s structure, although some parts of the modules are sequenced to guide users toward recommended resources or supports based on Daily Log results, they can also freely access both tailored and generalized content (including supports, activities, and information on cyberbullying) on an “as-needed” or “as desired” basis. A tutorial will orient new users to the app, instruct them on its use, and guide them both to input personal contacts (names and phone numbers) as future sources of support and to customize the timing of their alerts to complete the Daily Log. Users may access the tutorial any time whereas adults may access

additional instructions in the manual accompanying the CyberPAL App (see Chapter 3).

### **Limitations of the Current Mobile-App**

There are several limitations associated with the CyberPAL app in its current form. Although efforts were made to incorporate graphics and pointed, concise text throughout, the app is nonetheless “text-heavy.” Thus, the content of the app may exceed some teens’ thresholds for how much they are willing to read while engaging with an app. Additionally, users with lower reading levels may experience difficulties understanding the app’s content.

Although tailoring of the app’s content based on the results of the Assessment module and Daily Log is a general strength, such customization does require repeated administration of the assessment measures. This may prove to be time-consuming and somewhat frustrating for users, potentially decreasing engagement, usage, and/or accurate reporting of online behaviors/experiences. Attempts were made to decrease this possibility by having the assessment module administered only once a year with friendly reminders to complete the brief Daily Log.

Despite its aforementioned advantages, the presentation of the resource in the form of a mobile-app will render it inaccessible to potential users who do not have access to web-accessible mobile technology. This limitation may disproportionately affect adolescents from underprivileged backgrounds. The current plan to initially program the app only for iOS devices will make the resource inaccessible to potential users with android devices. Moreover, some potential users may be unfamiliar with mobile apps; an issue that the developer has tried to address via the inclusion of a tutorial.

Although efforts were made to ensure that the app is current with respect to emerging knowledge in the field and available bullying-related programs, such knowledge and programs are continually evolving. Thus, the information provided (and the links through which users

access it) may become outdated. For this reason, the app will require a lot of monitoring and upkeep on the part of the developer to ensure that its links are intact and its content up to date

Finally, any formal evaluation of the CyberPAL app (e.g., expert review beyond the dissertation committee, pilot testing with members of the target population, controlled efficacy trials) was beyond the time-scope of this project. Moreover, pilot testing and efficacy trials were not feasible as part of this study given that the end product was not a completed mobile-app but only the wireframing (outline) for such an app. It is worth noting that some of the app's content is derived from bullying programs that have been subjected to efficacy trials.

### **Considerations Not Addressed**

Although efforts were made to include empirically informed features of cyberbullying (e.g., cyberbullying roles) and common bullying-intervention components (e.g., anger management), other aspects of bullying and programs aimed at addressing it are not incorporated into the proposed app (e.g., bystander role, peer mediation). However, the app does provide users with links to frequently updated sites and bullying programs, so as to keep them informed of recent developments in this area.

Retaining users and their engagement is a common challenge for mobile apps (Dekhane, Xu, & Tsoi, 2013). With respect to the CyberPAL app, this issue is likely to apply to both victims and cyberbullies but to be particularly relevant to the latter group. Obstacles to motivating cyberbullies to begin and sustain use of the app are likely to include their motivation to change their behavior, school/peer climate, and incentives to reduce cyberbullying. Although some attempts were made to help motivate cyberbullies once they initially engaged with the app (e.g., giving praise for reading the “how to stop bullying” resource section), these obstacles went largely unaddressed in the app.

As noted earlier, the CyberPAL app is primarily designed as a self-help resource for individual adolescents but may also have value as an adjunct to individual therapy or as a component that could be incorporated into existing anti-bullying programs. However, guidelines as to how to facilitate these latter uses are not currently included as part of this project. Such guidelines would need to include content on how to embed the app as part of the larger school climate, how to establish its perceived value among relevant stakeholders (viz., bullies, victims, school systems, parents), and how individual clinicians working one-on-one with teens might integrate it as part of their practice.

### **Future Directions**

**Potential improvements to the current mobile-app.** Following are potential improvements to the current mobile-app, some of which address the previously discussed limitations and omissions. One line of inquiry with respect to bullying research not reflected in the current CyberPAL app is the role of the bystander. Research has suggested that peer bystanders intervene in bullying situations less than 20% of the time (Atlas & Pepler, 1998). Inclusion of the “electronic bystander” as a fourth potential cyberbullying role could further enhance the quality of the CyberPAL app and expand the user population. This might serve to increase awareness among those who are not directly involved in cyberbullying, but who may play a role in prevention, intervention, and support efforts. Nickerson, Aloe, Livingston, and Feeley (2014) developed a measure based on Latane and Darley’s (1970) bystander intervention model, which outlines the five sequential steps involved in taking action (steps that include awareness of the violence and knowledge on how to intervene). Including this measure as part of the Assessment Module and Daily Log to identify those in the bystander role might enhance this



mobile resource, along with providing information on the steps of the bystander intervention model as part of the Psychoeducation Module.

As some potential users may not have access to web-enabled mobile devices, it may be possible to expand access to CyberPAL's content by reformatting it as a website-based resource accessible from any internet-enabled computer (to coexist with the CyberPAL mobile-app). Developing a traditional paper anti-cyberbullying manual based on the contents of the CyberPAL app is also a possibility that might expand the number of adolescents ultimately reached by this resource (although this traditional format would be more challenging to keep up-to-date and would likely be less appealing to most teenage users).

The current version of CyberPAL might also be improved by including elements designed to enhance adolescents' motivation to use the app. These elements are likely to be generally useful but particularly so for the cyberbully population, who are likely to be less motivated to use the app than those in the cybervictim role. Incorporating gaming elements may be particularly useful for increasing engagement among the targeted teen population. Incorporating content based on the Transtheoretical Model's stages of change (Prochaska & Velicer, 1997) may serve to be beneficial for this population as well. Evers, Prochaska, Van Marter, Johnson, and Prochaska (2007) investigated tailored interventions based on the Transtheoretical model designed to reduce participation in each of three roles related to bullying (bully, victim and passive bystander) and found significant treatment effects for middle and high school students when compared to controls. Therefore, the app might be strengthened by incorporating the stages of change through either the Daily Log or an additional module that assesses a user's current stage and provides content tailored to that stage (e.g., an activity

prompting a user in the precontemplation stage to identify the pros and cons of changing his behavior).

Use of the Daily Log data to monitor progress may also improve the app. This would provide users with insight as their progress and potentially inform relevant adults (e.g., parents, teachers, therapists) about changes in teens' online activities related to cyberbullying.

**Plan for evaluation.** Although formal evaluation of the current version of the CyberPAL app was beyond the scope of this project, future directions should include the following series of evaluations to (1) inform further revisions of the app, (2) assess its acceptability and perceived usefulness to its target audience, and (3) examine its efficacy in reducing bullying behavior and helping to mitigate its adverse effects. The initial evaluation step would be to revise the wireframing for the app based on feedback from the committee evaluating this dissertation project, (which includes a leading expert on bullying interventions). Subsequently, a more formal expert review would occur, involving identifying cyberbullying experts, soliciting their agreement to review the app, and sharing the wireframing/simulation or a beta version of the app itself with those who agree to participate. These experts will then be asked to evaluate the app along with the accompanying manual by completing a structured questionnaire designed by the author to assess the app's content, format/presentation, accessibility, usefulness, strengths, and limitations. This feedback will then be incorporated into a revised version of the mobile-app. The revised app would then be used as the basis for the next step of the evaluation process; pilot testing with the target population. The app would likely be distributed to a sample of teenagers for a designated period of time (e.g., 4 weeks). At the end of this period, they will be asked to provide feedback on their experience with, reactions to, and satisfaction with the app via a web-

based feedback form developed by the author. Based on users' initial feedback, the author will decide whether further revisions to the app should be made.

An uncontrolled pilot study would then be conducted to gather initial efficacy data on the mobile-app with respect to increasing awareness of cyberbullying and decreasing cyberbullying experiences over a specified time period. This might involve a single-group, pre-test-post-test design examining changes related to the participants' knowledge of cyberbullying, familiarity with adaptive responses addressed in the app (e.g., warning signs, risk factors, coping skills, online safety), and victimization by/perpetration of cyberbullying (as measured by the Revised Reduced Aggression/Victimization Questionnaire; Orpinas & Frankowski, 2001). If results from this uncontrolled trial prove to be promising, these pilot data could be used to seek funding for a pretest-post test controlled efficacy trial wherein teenagers age 12-18 who have experienced cyberbullying as either bully, victim, or both would be recruited from high schools, stratified by cyberbullying role, and randomly assigned to either an experimental group provided with the CyberPAL app or a "treatment-as-usual" control group receiving whatever bullying-related interventions they would normally be exposed to through school or other contexts. After 1 month, the groups' pretest-posttest change scores would be compared on the same outcome variables referenced above for the uncontrolled pilot study, along with measures of engagement and satisfaction with the resources received. Ideally, the durability of any treatment gains would be evaluated as well via comparative follow-up assessments at 6-months and 1-year. Based on the results of this study, further revision of the mobile-app may be warranted.

**Plan for dissemination.** Once the app has been subject to some formal evaluation (described above) and revised based on the results, efforts will be made disseminate the resource to those who might benefit from it. First, the results of the usability/feasibility, pilot, and

controlled efficacy studies may be submitted for review to journals known to publish content related to bullying/cyberbullying (e.g., *Cyberpsychology, Behavior, and Social Networking*; *School Psychology Review*). Dissemination to schools, bullying programs, and mental health professionals working with the target population may be done through postings to listservs, press releases, a dedicated Facebook page or Twitter account, advertisement (e.g., school newsletters), physical and electronic flyers at schools, in-service workshops for school teachers, staff, and administrators, and outreach to existing school-based bullying programs. Once developed to a point of viability, CyperPAL will be submitted to the primary app distribution platform (viz., Apple App Store) for approval and, once approved, distributed through Apple's App Store (subsequent efforts to develop the app for Android devices would represent another strategy to broaden the potential user base). Additional efforts to increase awareness of the app among the target population and other relevant groups may include advertising targeted to teenagers (e.g., Facebook) or linked to anti-bullying websites.

## **Conclusion**

Cyberbullying is a recently emerging phenomenon and considerably more attention is needed to understand what types of interventions and formats for their delivery are likely to be most effective in decreasing it. However, the scholarly work done to date on cyberbullying along with extrapolation from prior work focused on traditional bullying can be used to inform the development of resources aimed at addressing both perpetrators and victims of cyberbullying. The CyberPAL app is such a resource, aimed at providing an accessible, engaging tool to increase adolescents' awareness of their involvement in cyberbullying and to link them to relevant resources. Although in the early stages of development, the CyberPAL app

has potential for helping teens connect to relevant resources to become more aware their online behaviors and to cope with their cyberbullying experiences.

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## APPENDIX A

### Table Review of Literature

## Section A – Non-Empirical Literature

Author(s), Year	Title	Purpose/Goals	Key Findings
American Psychological Foundation . (2011)	Psychology Topics: Bullying	Provide a definition of bullying, current news, resources, links to APA offices and programs.	Bullying is a form of aggressive behavior in which someone intentionally and repeatedly causes another person injury or discomfort. Bullying can take the form of physical contact, words or more subtle actions.
Arone, G., & Clark, M. (2009)	SafetyWeb	To provide parents with an online monitoring service that tracks their children's social networking activity, phone calls, and texts.	<ul style="list-style-type: none"> <li>• 5 components to monitor for signs of cyberbullying and sexting: online account detection, mobile usage alerts, keyword/topic alerts, photo/video round up, and older friends alerts.</li> <li>• <i>Online account detection</i> feature does an online search of the child's online accounts using his or her email address. Parents are notified as to whether these online accounts are public or private, when their child creates a new account using the same email address, and if he or she changes their privacy settings on their accounts.</li> <li>• <i>Mobile usage alerts</i> connects to the mobile service provider to track the child's frequency of calling and texting, as well as compiling a list of phone numbers he or she communicates with via phone.</li> <li>• <i>Keyword/topic alerts</i> notifies the parents to keywords used in the child's online conversation.</li> <li>• <i>Photo/video round up</i> gathers all photos and videos the child posts to their online accounts and displays it in the dashboard for parents to view.</li> <li>• <i>Older friend alerts</i> compares the child's age to those of his or her online friends and alerts parents to any significant age differences.</li> </ul>
Arseneault, L., Bowes, L., & Shakoor, S.	Bullying victimization in youths and	Reviews empirical evidence to determine whether bullying victimization is a	<p>Being victim of bullying:</p> <ul style="list-style-type: none"> <li>• Not a random event &amp; can be predicted by indiv characteristics</li> <li>• Can be stable across ages</li> </ul>

(2010)	mental health problems: 'Much ado about nothing'?	significant risk factor for psychopathology and should be a target of intervention & prevention strategies.	<ul style="list-style-type: none"> <li>• Associated w/severe lasting effects that can persist until late adolescence</li> <li>• Contributes independently to children's mental health problems.</li> </ul>
Aviera. (2012)	SocialShield	A free-based web-monitoring site to scan, analyze, and alert parents to their children's social network activity. Service that covers other major social networking sites in addition to Facebook (e.g., Google+, Twitter, MySpace, and FormSpring).	<ul style="list-style-type: none"> <li>• It scans for specific types of online interactions the child engages in using multiple <i>Safety Engines</i>: alerts engine, friends engine, photos engine, and activities engine.</li> <li>• <i>Alerts engine</i> scans the child's social networking sites for online discussions that include inappropriate discussions about drugs, sex, violence, alcohol and suicide.</li> <li>• <i>Friends engine</i> displays the child's online friends in an easy-to-read photo gallery and alerts the parent when the child interacts with an someone online who does not</li> </ul>
Batson, C.D., Ahmad, N., & Stocks, E.L. (2004)	Benefits and Liabilities of Empathy-Induced Altruism	Consider more practical implications of the empathy-altruism hypothesis. Focuses first on some of the potential social benefits of empathy-induced altruism then considers liabilities.	<ul style="list-style-type: none"> <li>• We help someone in a need to gain rewards, avoid punishment, or reduce own distress.</li> <li>• Lacking awareness of ones own actions decreases altruistic behaviors.</li> </ul>
Bedell, R., & Horne, A.M. (2005)	Bully Prevention in Schools: A United States Experience	Provide relevant vignettes, related literature on bullying. Define key terms	<ul style="list-style-type: none"> <li>• Piloted at a public elementary school in Athens, Georgia, a small city in the southeastern</li> </ul>
Brank, E.M., Hoetger, L.A., & Hazen, K.P. (2012)	Bullying	Review of criminal and civil legal interventions to prevent or punish bullying.	<ul style="list-style-type: none"> <li>• Most US states have enacted antibullying legislation that prohibits bullying behaviors.</li> <li>• Issues w/definition of bullying</li> <li>• Bullying victims have option to bring civil suits for tortious acts related to the bullying.</li> </ul>
Breakpoint	Bully	This app is a reporting	<ul style="list-style-type: none"> <li>• The report includes several components</li> </ul>

Solutions. (2012)	Tracker	system that provides students, bystanders, faculty, and parents with a confidential portal to report bullying incidents.	<p>including date and time of the incident, victim and bully names (if the user opts not to report anonymously), type of incident (e.g., verbal, physical, cyber), description of the incident, and proof of the incident (e.g., video, photos).</p> <ul style="list-style-type: none"> <li>• The app also asks the user to indicate if the victim is in immediate danger, which directs the user to contact 9-1-1 emergency. These reports are then sent directly to the school where an email notification is then sent to the students involved, parents, and school officials, informing them that an incident report was filed.</li> </ul>
Chamberlin, J. (2006)	Cyberbullies Increasingly Target Peers Online	Learn what cyberbullying is, its impact, and preventions/interventions.	<ul style="list-style-type: none"> <li>• Cyberbullying increased 50% last 5 yrs.</li> <li>• Cyberbullying includes: aggressive, impulsive, and sometimes violent actions that violate the established rules, conventions, and codes of society.</li> </ul>
Erwin, P. (1993)	Friendship and peer relations in children	Provide comprehensive and integrated review of psychological foundations & implications of children's relationships w/peers, and within a broad social and cognitive context.	<ul style="list-style-type: none"> <li>• The importance of early relationships for later dev., adjustment, and functioning.</li> <li>• Relationships are examined in detail—including significance of different points in a relationship for children in diff ages.</li> </ul>
Espelage, D.L., & Swearer, S.M. (2003)	Research on school bullying and victimization: What have we learned and where do we go from here?	Reviews current research efforts in American schools on bullying and peer victimization, and how this research can inform prevention and intervention planning. A brief overview of several major insights gained over the last decade in bullying research is presented.	<ul style="list-style-type: none"> <li>• Defining &amp; assessing bullying is complex. These methods include: self-report, peer nominations, teacher nominations, and behavioral observations.</li> <li>• Bully-victim behaviors fall along a continuum.</li> <li>• Relational aggression does not account for sex differences.</li> <li>• Need to view bullying from a social-ecological perspective: <ul style="list-style-type: none"> <li>○ DEP levels have been found for both male and female students who bully their peers</li> </ul> </li> </ul>

			<ul style="list-style-type: none"> <li>○ Victims of bullying have higher rates of anxiety than bullies</li> <li>• Normative beliefs held towards bullying exacerbate the act.</li> <li>• Not all children who bully lack social skills.</li> <li>• Less research examining bullying and school climate, and teacher's attitudes.</li> </ul>
GroupCast. (2004)	CyberBully Hotline	Mobile app that enables students to report bullying and other problems anonymously online.	<ul style="list-style-type: none"> <li>• Applicable to youth who are bullies or victims, as well as to parent and child bystanders, it was created to serve as an adjunct resource for existing school-based bullying programs.</li> <li>• The app's reporting system is personalized to send bully reports to the school or bullying program's staff (e.g., hall monitor, counselor).</li> <li>• The CyberBully Hotline trainers train the people designated to receive reports and these persons are given an implementation kit for continued training.</li> <li>• The app's bullying report system has several components. The user makes a report using the app either via text message or phone. Text messages are auto-screened and flagged for the staff as high priority if they include key words such as "gun" or "suicide." The system administrators are notified of new reports instantly via text message while reporters are sent an auto-reply text that their report was received. The staff may respond in real time to new reports via text message with two-way anonymity between reporter and staff. A collaborative notes feature also allows the staff member to record notes on reports received.</li> </ul>
GroupCast. (2013)	Warren County R-III School Sees 92% Drop in Students	Report the effectiveness of using the CyberbullyHotline App.	<ul style="list-style-type: none"> <li>• Warren County R-III School District leaders (serving approximately 3,000 students) in Missouri implementing the program in 2012-2013.</li> <li>• During the 2011-2012 school-year,</li> </ul>

	Disciplined for Fighting with CyberBully Hotline		<p>approximately 60 students at Warren County's Black Hawk Middle School were disciplined for fighting.</p> <ul style="list-style-type: none"> <li>• After implementing the CyberBully Hotline, the school reported a 92% decrease (to 5 students) in the number of students disciplined for fighting.</li> </ul>
Hamburger, M. E., Basile, K. C., & Vivolo, A. M. (2011)	Measuring Bullying Victimization, Perpetration, and Bystander Experiences: A Compendium of Assessment Tools	A compendium that provides researchers, prevention specialists, and health educators with tools to measure a range of bullying experiences.	<ul style="list-style-type: none"> <li>• Reduced Aggression/Victimization Scale available.</li> </ul>
Hertzog, J. (2011)	Bullying is not a rite of passage.	Reviews the how bullying is seen as a common experience and how that perspective needs to be altered.	<ul style="list-style-type: none"> <li>• It takes combination of schools, parents and children to stop bullying.</li> <li>• Kids who witness bullying must be encouraged to intervene or tell officials.</li> <li>• Bullied students must know it's not their fault and they can talk about it freely.</li> <li>• Schools must stop calling it a "rite of passage" and must work with families.</li> </ul>
Hinduja, S., & Patchin, J. W. (2014)	Bullying beyond the schoolyard: Preventing and responding to cyberbullying	Focusing on how technology can facilitate or magnify traditional forms of peer harassment, provides strategies, and prevention/intervention resources.	<ul style="list-style-type: none"> <li>• recounting the stories of victims</li> <li>• summarizing current research</li> <li>• reviewing recent legal rulings</li> <li>• proactive prevention and intervention strategies to equip parents, educators, counselors, law enforcement, and other youth-serving adults</li> <li>• includes as questions for reflection after each chapter, numerous illustrations, and reproducible resource documents to further educate those involved.</li> </ul>
Horne, A. M.,	Bully Busters: A	Provide a manual that helps teachers	<ul style="list-style-type: none"> <li>• Organized into 8 learning modules</li> </ul>

Newman-Carlson, D., & Bartolomucci, C. L. (2003)	Teacher's Manual for Helping Bullies, Victims, and Bystanders	increase their awareness, knowledge base, and intervention skills to address root causes of bullying behavior and problem solve.	<ul style="list-style-type: none"> <li>• Each module includes a teacher information component and a series of classroom activities</li> <li>• 36 activities designed to increase student participation in reducing and preventing bullying, as well as strengthen teacher/student relationship.</li> <li>• An accompanying CD of all the forms and student handouts is included with the book.</li> </ul>
Horne, A., Stoddard, J.L., & Bell, C.D. (2008)	A Parent's Guide to Understanding and Responding to Bullying:	To help parents assist their children in dealing with bullying situations.	<ul style="list-style-type: none"> <li>• It can be used independently or serve as the parent involvement component for a Bully Busters school-based program.</li> </ul>
InfoGlide. (2012)	MinorMonitor	A free, web-based software parents to monitor their children's Facebook activities.	<ul style="list-style-type: none"> <li>• The software scans Facebook messages for potential harmful material.</li> </ul>
Kessler, D. (2010, October 4)	The grief of bullycide	Reviews the evolution of bullying, how the stages of grief apply to bullycide, & what lessons we can learn from each stage.	<ul style="list-style-type: none"> <li>• Words have become more important, potent, and damaging due to increase in mass media.</li> <li>• Grief is complicated w/bullycide because not much is known.</li> <li>• Bullies lose life as well because forever labeled as "bad."</li> <li>• Stages: <ul style="list-style-type: none"> <li>○ Denial: talk to child &amp; school</li> <li>○ Anger: focus on breaking stereotypes/rite of passage</li> <li>○ Bargaining: demand answers</li> <li>○ DEP: empower teen to never let it reach that level.</li> <li>○ Acceptance: acknowledge, forgive</li> </ul> </li> </ul>
Kiesler, S., Siegel, J., & McGuire, T.W. (1984)	Social Psychological Aspects of Computer-Mediated Communication	Describe some of the issues raised by electronic communication, empirical approaches for investigation social psychological effects, and discusses why social	<ul style="list-style-type: none"> <li>• Computer-mediated communication had marked effects on communication, efficiency, participation, interpersonal behavior, and decision making.</li> <li>• CMC groups took longer to reach consensus than face to face.</li> <li>• CMC groups were as task oriented as face to face.</li> <li>• Group members using computer</li> </ul>



		psychological research might contribute to a deeper understanding of computer-mediated communications specifically and of computers and technological change in society more generally.	<p>participated more equally than they did when talked face to face.</p> <ul style="list-style-type: none"> <li>• CMC more uninhibited than face to face.</li> <li>• CMC groups showed higher choice shift.</li> </ul>
Kim, B., Logan, J., Chasnoff, D., Cohen, H. S., & Stilley, K. (2003)	Let's Get Real Curriculum Guide: Lessons & Activities to Address Name-Calling & Bullying	Guide is used in conjunction with the "Let's Get Real" film. Curriculum is used to educate and provide additional resources on how to combat bullying	<ul style="list-style-type: none"> <li>• Used in classroom, after-school programs, counseling, peer-education, parent/guardian support-meetings, in the community, or staff development tool.</li> <li>• Educates student on different bullying roles, behaviors, and impacts</li> <li>• Provides resources to help if a bully, victim, or bystander.</li> <li>• Has the individual create a personal action plan to stop bullying.</li> </ul>
Kowalski, R.M., et al., (2012)	Cyberbullying: Bullying in the Digital Age	Provide current information on cyberbullying, the challenges it raises for children, parents, and educators.	<ul style="list-style-type: none"> <li>• Cyberbullying involves intentional acts of aggression toward another through email, instant messaging (IMing), chat room exchanges, Web site posts, cellular phone communications (e.g., texting and digital images), or personal digital assistant devices (PDA)</li> </ul>
Latane, B., & Darley, J.M. (1970)	The Unresponsive Bystander: Why Doesn't He Help?	A research study into the factors that influence bystander intervention in emergencies	<ul style="list-style-type: none"> <li>• Social inhibition</li> <li>• Desensitization</li> <li>• Disinhibition</li> </ul>
Lohmann, R.C. et al. (2013)	The Bullying Workbook for Teens	A workbook that teens can use to help ease anxiety, fear, stress, and other emotions associated with being bullied using CBT techniques.	<ul style="list-style-type: none"> <li>• anti-bullying tips and strategies, emotion management skills (e.g., for depression, anxiety, and anger), and constructive communication skills.</li> <li>• targets adolescents who are victims of bullying and uses an individual, self-administered, and self-paced format</li> <li>• 42 step-by-step guided written activities for the adolescent to complete, with each activity preceded by 1-2 pages of psychoeducation pertaining to that activity's topic</li> </ul>

			<ul style="list-style-type: none"> <li>• psychoeducational topics include friendships and circles of support, ways to increase self-confidence through cognitive restructuring and activity selection, ways to identify when bullying escalates, and how to seek help</li> </ul>
Maines, B., & Robinson, G. (1992)	No Blame Approach: A Support Group Method for Dealing with Bullying (Vol. 952)	A look at the Support Group method and strategies	<ul style="list-style-type: none"> <li>• Refer to Support Group manual for descriptive.</li> </ul>
Marr, N. & Field, T. (2001)	Bullycide: Death at Playtime- An Expose of Child Suicide Caused by Bullying	This first in-depth study of bullycide reviews prevalence, stereotypes, stories, and psychoeducation for parents on signs and trauma.	<ul style="list-style-type: none"> <li>• Contains interviews with bereaved families and survivors.</li> <li>• Includes initiatives to combat bullying, helplines, organizations, suggested reading and web sites.</li> <li>• Reasons parents are often the last to find out their child is being bullied</li> <li>• Signs of bullying &amp; understand trauma caused by bullying.</li> </ul>
Mobicip LLC. (2008)	Mobicip	App provides parental controls including category blocking, time limits, Internet activity reports, blocked phrases, and YouTube filtering.	<ul style="list-style-type: none"> <li>• These come with three restriction levels based on the developmental level of the child and the associated online content.</li> <li>• The elementary school level blocks social networking, gaming, shopping, entertainment, clothing, and news content.</li> <li>• The middle school level blocks online shopping, gambling, dating, liquor, and chat sites.</li> <li>• The high school level blocks sexual, weapons, violence, proxy, virus, and hacking sites.</li> </ul>
National Center for Missing and Exploited Children. (2014)	Cyberbullies Zombies Attack	Mobile app game geared toward helping adolescents cope with cyberbullying. This app targets adolescent cybervictims and aims to increase their awareness of how and	<ul style="list-style-type: none"> <li>• The game instructs the user to attack cyberbully zombies that are trying to ruin their online experience.</li> <li>• Although the school campus playing field environment is consistent during the game, a variety of icons and weapons are used, including the <i>Mominator</i>, which encourages</li> </ul>

		what to report with respect to cyberbullying. The game was also intended to provide a degree of “catharsis” for the user by enabling him or her to “keep bullies away from the school home base.”	<p>adolescents to reach out to their parents.</p> <ul style="list-style-type: none"> <li>• The zombies engage in several cyberbullying behaviors during the game (e.g, sending mean text messages, posting embarrassing pictures, stealing online identities), which serves to increase the user’s awareness of different forms of cyberbullying.</li> </ul>
Olweus, D. (2001)	Peer harassment: A critical analysis and some important issues	A critical analysis of bullying or peer victimization	Perspectives on bullying and role of aggression among youth in schools and communities.
Olweus, D., Limber S., & Mihalic, S. (1999)	Blueprint for Violence Prevention : Book Nine. Bullying Prevention Program	This volume describes the anti-bullying program that was one of 10 programs selected nationally as meeting a high bullying frequency.	<ul style="list-style-type: none"> <li>• Aims to reduce the victim/bully problems among elementary and secondary school students</li> </ul>

Orpinas, P., & Horne, A.M. (2006)	Bullying Prevention : Creating a Positive School Climate and Developing Social Competence	Provides definitions, stats, and theories on how to identify and characterize bullying—as well as a model on how school professionals can prevent and reduce bullying by creating a positive environment and ensuring all children have social skills to communicate well and solve problems without aggression. Additionally presents research-based bullying prevention programs, and steps for assessing and evaluation program effectiveness.	<ul style="list-style-type: none"> <li>• Reduced Aggression/Victimization Scale) was originally designed to assess the level of physical aggression experienced or victimization perpetrated by the adolescent population.</li> </ul>
Owens, L., Shute, R., & Slee, P. (2000)	“Guess What I just Heard!”: Indirect Aggression Among Teenage Girls in Australia	To study the behaviors girls display, the effects of indirect aggression on girls and their reactions to it, girls’ and teachers’ explanations for girls’ indirect aggression, existing and possible interventions to redress girls’ indirect aggression, and the characteristics of victims of indirect aggression.	<ul style="list-style-type: none"> <li>• Key explanation of girls’ indirect aggression is the desire for close friendships and acceptance by the group that interacts with groups.</li> </ul>
Patchin, J. W. (2013, November 20)	Cyberbullying Research: 2013 Update	Literature Review	<ul style="list-style-type: none"> <li>• Cyberbullying is related to low self-esteem, suicidal ideation, anger, frustration, and a variety of other emotional and psychological problems (Brighi et al., 2012; Hinduja &amp; Patchin, 2010; Kowalski &amp; Limber, 2013; Patchin &amp; Hinduja, 2010; Wang, Nansel, &amp; Iannotti, 2011)</li> </ul>

Patchin, J.W., & Hinduga, S. (2012)	Cyberbullying prevention and response: Expert perspectives	Explore the many critical issues surrounding cyberbullying—up to date major issues that teachers, school administrators, counselors, social works and parents need to be aware of (identification, prevention, response).	<ul style="list-style-type: none"> <li>• Long-term implications for cyberbullies.</li> <li>• Exhibit higher levels of antisocial, violent and/or criminal behaviors in adulthood than those you did not cyberbully</li> </ul>
Penrod, D. (2007)	Using Blogs to Enhance Literacy: The Next Powerful Step in 21 <sup>st</sup> -Century Learning	Explore how spending hours online develops a 21 <sup>st</sup> century literacy among adolescents. Addresses the social, developmental, and pedagogical issues surrounding the use of blogs and the implications that blogging has for current and future students.	<ul style="list-style-type: none"> <li>• A majority of parents are unaware of cyberbullying because it is a new form of bullying that often occurs outside of school where watchful adult eyes may not be present</li> </ul>
Phoenix Ventura Group. (2013)	STOPit	An app that helps victims of cyberbullying in Grades K-12 and in college.	<ul style="list-style-type: none"> <li>• The app aims to empower individuals and enhance their sense of control so as to promote reporting and obtaining support for cyberbullying.</li> <li>• There are two version of the <i>STOPit</i>; a school version that allows reports to be sent directly to the user's school, and an individual version.</li> <li>• Additional features include a STOPit button which forwards offensive material to officials, a HELPiT button that links the user to national organizations when they need to talk/text someone for support, a FRIENDit</li> </ul>
Prochaska, J. O., & Velicer, W. F. (1997)	The transtheoretical model of health behavior	Literature review on transtheoretical model and the six stages of change: precontemplation, contemplation,	The most promising outcomes to date have been found with computer-based individualized and interactive interventions. The most promising enhancement to the computer-based programs are personalized counselors.

	change	preparation, action, maintenance, and termination.	One of the most striking results to date for stage-matched programs is the similarity between participants reactively recruited who reached us for help and those proactively recruited who we reached out to help. If results with stage-matched interventions continue to be replicated, health promotion programs will be able to produce unprecedented impacts on entire at-risk populations.
Quick Series Publishing. (2013)	Put an End to Cyberbullying	App to provide resources on how to identify, stop, and prevent cyberbullying.	<ul style="list-style-type: none"> <li>• Using a psychoeducational framework, the app organizes information based on whether the user is a child, parent, educator, or community member.</li> <li>• It provides information on cyberbullying (e.g., defining cyberbullying, types of cyberbullying, risk factors, warning signs), and instructs children and teens on how to avoid and respond to cyberbullying incidents.</li> <li>• Adults are given information on how to deal with a cyberbullying incident and ways to help.</li> </ul>
Ragozzino, K., & Utne O'Brien, M. (2009)	Social and emotional learning and bullying prevention [issue brief]	Literature review on SEL and effectiveness for bullying.	Compared to control groups, not only do students who participate in SEL programs demonstrate significant gains in their social and emotional skills; they show higher levels of prosocial behavior, more favorable attitudes toward school and others, and better academic achievement. They also experience lower levels of conduct problems and emotional distress. In other words, SEL programming is associated with multiple positive benefits. It can foster educational and social conditions that make bullying far less likely.
Reicher, S.D., Spears, R., & Postmes, T. (1995)	A Social Identity Model of Deindividuation Phenomena	Challenge traditional models of deindividuation and present a social identity model of deindividuation (SIDE).	<ul style="list-style-type: none"> <li>• The self can be defined at various different levels including the categorical self as well as the personal self.</li> </ul>
Reid, E. (1998)	The self and the	Provides a perspective on self-identity on the	<ul style="list-style-type: none"> <li>• The freedom to obscure or re-create aspects of the self online allows the</li> </ul>

	internet: variations on the illusion of one self	internet---including anonymity, dehumanization, and deindividuation.	<p>exploration and expression of multiple aspects of human existence.”</p> <ul style="list-style-type: none"> <li>• The projection of the self into the virtual has been talked about as a freedom the self from the confines of the actual.</li> </ul>
Richardson, R. P. (2014)	Bully Proof Assistant Prof	This self-administered app provides a system to record and report bullying incidents.	<ul style="list-style-type: none"> <li>• It is geared towards both children who experience bullying in the school environment and adults who experience it in the workplace.</li> <li>• It instructs the user to select the environment the bullying is taking place (e.g., workplace or school), which triggers a setting-specific template for the user to complete.</li> <li>• The template allows user to upload a photo or video of the bully or incident, provides an area to record a description of the incident, its date/time, the name of the bully, the type of bullying (e.g., mental, physical, cyber), and one's reaction to the incident.</li> <li>• These reports are sent out via email or text message to personal contacts the user inputs such as a teacher, parent, counselor, or human resource dept.</li> </ul>
Rigby, K. (1997)	Bullying in schools and what to do about it	Help understand the nature of bullying and why it so often takes place in schools (empirical studies presented). Examines and evaluates what schools can do to promote more positive peer relationships within the school community and take effective and sustainable action to deal with problems that may arise.	<ul style="list-style-type: none"> <li>• Understanding bullying: current definitions, what is going on in schools, consequences of bullying.</li> <li>• What can be done: school policy on bullying, how to gain student support, where it happens, humanistic approaches to bullying, recent developments.</li> </ul>
Robinson, G., & Maines, B. (2008)	Bullying: A Complete Guide to The	Provide a detailed description of the support group method, the way it started, and how it has been	<ul style="list-style-type: none"> <li>• The program focuses on reducing retaliation that may occur by a bully towards a victim who reports the bullying.</li> <li>• Part1: What is the support group</li> </ul>

	Support Group Method	refined during the years. Also describe supportive evidence, overviews of research, and accounts from other professionals in the UK and overseas.	<p>method: how it began, approach and rationale, step by step, common questions.</p> <ul style="list-style-type: none"> <li>• Presented evidence from selection of practitioners' experiences.</li> <li>• <i>The Support Group Method</i> uses a combination of group and individual delivery formats and is implemented by teachers or adult facilitators to students age 6-18 years.</li> <li>• Although the intervention is implemented with the bully and bystanders (usually in a group of about 8 people), information about the bullying.</li> </ul>
Rodkin, P.C., Espelage, D. L., & Hanish, L. D. (2015)	A relational framework for understanding bullying: Developmental antecedents and outcomes	Review of current research on the relational processes involved in peer bullying, considering developmental antecedents and long-term consequences.	Two types of bullies: bullies and bully victims. The distinction is between socially integrated and socially marginalized bullies, is an informal heuristic, useful for communication the considerable variability in social functioning among youth who display aggressive and bullying tendencies.
Sansone, R.A., & Sansone, L.A. (2008)	Bully Victims: Psychological and Somatic Aftermaths	Review empirical studies on the psychological and somatic effects of bullying.	<ul style="list-style-type: none"> <li>• Bullying leads to increase in social problems.</li> <li>• Repetitive bullying may develop internalizing effects—ANX, DEP, S/I, eating d/o</li> <li>• Increased somatic effects: sore throats, colds, coughs, poor appetites, headaches, sleeping, abdominal pain, etc.</li> </ul>
Shariff, S., & Hoff, D.L. (2007)	Cyber bullying: Clarifying Legal Boundaries for School Supervision in Cyberspace	Reviews the current policy vacuum of the legal obligations and expectations of schools to monitor and supervise online discourse, while balancing student safety, education, and interaction in virtual space. Explore	<ul style="list-style-type: none"> <li>• Cyberbullying most often occurs outside of school hours using home computers and mobile electronic devices.</li> </ul>



		challenges in monitoring.	
Smith, P.K., & Myron-Wilson, R. (1998)	Parenting and School Bullying	Discuss the link between bullying and parenting.	<ul style="list-style-type: none"> <li>• Bullying is described to be an aggressive act.</li> <li>• Bullying behavior has origins in parenting and school environment.</li> <li>• Studies linked violent behavior and harsh discipline in parent s/bullying behavior and overprotectiveness in parents w/victimization.</li> </ul>
Spy Parent. (2011)	Bully Blocker	App incorporates a message-blocking component and a reporting tool.	<ul style="list-style-type: none"> <li>• It aims to provide children who are cybervictims with an easy and accessible medium to report and block cyberbullying messages (including those that may be coming from a private or unknown number).</li> <li>• Specific components of the app include a variety of bully incident recording systems, different forms of message blocking, storage, and instant reporting for both bullying and cyberbullying.</li> <li>• The <i>Bully Capture</i> tool utilizes a stealth audio recorder to capture bullies in the act.</li> <li>• Additionally, audio can be downloaded to the <i>Bully File</i> (see below) to authenticate the bully's voice for legal evidence.</li> <li>• <i>Bully Blacklist</i> feature allows users to block all text messages from a list of numbers that the user selects. When the person on the blacklist calls, he or she will either hear a busy signal or pre-recorded message.</li> <li>• <i>Bully File</i>: All phone calls and text messages from the blocked list are automatically routed to the file. Captures all texts, pictures, and videos that the user copies to the file.</li> <li>• <i>Instant Reporting</i> feature allows the user to forward inappropriate texts, pictures, or videos via text messaging or email.</li> </ul>

Substance Abuse and Mental Health Services Administration. (2014)	KnowBullying	<p>The application is geared towards parents, caretakers, and educators with the goal of increasing communication about bullying and cyberbullying with youth from age 3 through adolescence. The app focuses on psychoeducation on bullying, communication strategies and techniques to help parents to speak to their children about bullying, and providing resources to the caregiver on bullying.</p>	<ul style="list-style-type: none"> <li>• The program recommends the caregiver/adult utilize the application's components with the child/teen for at least 15 minutes a day. Generally, the app is aimed at helping caregivers start a conversation with their children about school, work, relationships, life, and bullying.</li> <li>• This is achieved through the following seven components provided to the adult user: (1) tips about bullying for specific age groups, (2) warning signs to help the adult recognize that their child is bullying, being bullied, or witnessing bullying, (3) information on how to access trustworthy online resources screened for effectiveness by experts, (4) conversation starters to use with the child, (5) daily reminders to talk with the child when the time feels right (e.g., a quiet moment on the way to a game, after dinner, while relaxing outside), (6) conversation starters, successful strategies, and useful advice via social media, email, and text messages, and (7) resources for educators on how to prevent bullying in the classroom and support children who are being bullied.</li> </ul>
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Suler, J. (2004)	The Online Disinhibition Effect	Explore 6 factors that interact with each other creating online disinhibition: dissociative anonymity, invisibility, asynchronicity, solipsistic introjection, dissociative imagination, minimize authority.	<ul style="list-style-type: none"> <li>• Dissociative anonymity: when people have opportunity to separate their actions online from their in-person lifestyle and identity, they feel less vulnerable about self-disclosing, and acting out.</li> <li>• Invisibility: overlaps with anonymity, face to face feel inhibited by possible physical judgment.</li> <li>• Asynchronicity: don't interact with each other in real time—while someone's immediate reaction disinhibits people.</li> <li>• Solipsistic introjection: mind feels merged with the mind of the online companion. Reading another person's message might be experienced as a voice within one's head.</li> <li>• Dissociative imagination: the make-believe dimension separate and apart from the demands and responsibilities of the real world.</li> <li>• Minimization of status and authority</li> <li>• Individual differences and predispositions also determines how much self-disclosure occurs—not just disinhibition.</li> </ul>
Sullivan, K., Clearly, M., & Sullivan, G. (2003)	Bullying in Secondary Schools: What it looks like and how to manage it	Sheds light on understanding bullying in adolescent, but also on designing and implementing interventions that are both developmentally relevant and systemically appropriate.	<ul style="list-style-type: none"> <li>• Provides an overview and understanding of the important social systems that impact on development such as the family, peer group, school, and community.</li> <li>• How certain children may fall prey to the aggressive tendencies of their peers and how their low social status and power in the peer group context place them at risk of ongoing torment through bullying.</li> <li>• Some teens find it socially beneficial to establish and reinforce their social power through bullying vulnerable school mates.</li> </ul>
Walther, J.B., Anderson, J.F., & Park, D.	Interpersonal Effects in Computer-Mediated	Examine the effects of time restriction on social interaction in CMC through a meta-analysis of applicable	<ul style="list-style-type: none"> <li>• Studies supported hypotheses on social communication. Although no effects were found on negative/uninhibited communication, a reexamination of original studies suggest caution</li> </ul>

W. (1994)	Interaction : A Meta-Analysis of Social and Antisocial Communication	research.	regarding previous findings.
Whitted, K., & Dupper, D. (2005)	Best Practices for Preventing or Reducing Bullying in Schools	Discusses various forms of bullying in schools, prevalence rates, and the consequences of bullying for the bully, the victim and the school community.	<ul style="list-style-type: none"> <li>• Bullying can have serious and long-term consequences for the bully, the victim, and the school community.</li> <li>• Victims of bullying can have long-term emotional, academic, and behavioral problems</li> <li>• Children who are victims of bullying tend to have lower self-esteem and report feeling more depressed, lonely, anxious, and insecure than other children</li> <li>• Bullying contributes to a number of school- related problems, including a dislike of school, tru- ancy, and school dropout</li> </ul>
Willard, N.E. (2007)	Cyberbullying and cyberthreats: Responding to the challenge of online social aggression , threats, and distress.	Created a taxonomy to help break down cyberbullying actions.	<ul style="list-style-type: none"> <li>• <i>Flaming</i>: Known as online fights, these interactions begin with an angry, rude, or obscene message being sent privately to the individual. A back and forth exchange of obscenities are exchanged in a “flamewar.”</li> <li>• <i>Harassment</i>: The user sends direct hurtful messages to annoy, harm, degrade, humiliate, or abuse the individual. However, unlike flaming, it does not involve a response from the victim or “flamewar” exchange.</li> <li>• <i>Denigration</i>: Harmful material in the form of texts, pictures, or videos are posted online in public forums or sent to others.</li> <li>• <i>Trickery</i>: The act of tricking a victim into providing damaging digital material, which is then disseminated.</li> <li>• <i>Exclusion</i>: The act of socially isolating an individual or excluding him/her from an online group or online exchange.</li> <li>• <i>Cyberstalking</i>: Repeated harassment</li> </ul>

			online that causes fear in the victim because it is experienced as intrusive of one's privacy and/or intimidating.
Wiszniewski, D., & Coyne, R. (2002)	Mask and Identity: The Hermeneutics of Self-Construction in the Information Age	Provide a basis for thinking about the dynamics of Internet community building.	<ul style="list-style-type: none"> <li>• Online masks &amp; Online masquerades: With this new identity or online mask the person attempts to present a different identity or personality in online communities than in face-to-face interactions.</li> </ul>
Zimbardo, P.G. (1969)	The human choice: Individuation, reason, and order versus deindividuation, impulse, and chaos.	Review evidence on the destruction of others, riots, mob violence, the diminution in the value of life, and the loss of control of behavior; as well as anonymity to aggression, car smashing, vandalism, and other violent acts.	<ul style="list-style-type: none"> <li>• "Releaser cues" are required to initiate destructive vandalism.</li> <li>• Presence or lack of anonymity, deindividuation, dehumanization, and control affect the likelihood of violence.</li> <li>• Deindividuation theory= when a person's identity is anonymous or concealed there is a decrease in one's sense of awareness of their behaviors, which increases the possibility of violating societal norms.</li> </ul>

## Section B – Empirical Literature

Author(s), Year	Title	Sample	Design/Analyses	Findings
Atlas, R. S., & Pepler, D. J. (1998)	Observations of bullying in the classroom	<ul style="list-style-type: none"> <li>• <math>N = 27</math> (19b, 8g)</li> </ul>	Systemic developmental model	<ul style="list-style-type: none"> <li>• 60 bullying episodes observed from 28 hr of video and remote audio recordings of classroom observations.</li> <li>• Peers were involved in some capacity in 85% of the bullying episodes.</li> <li>• Results suggest that bullying unfolds in a peer context in the classroom and is related to the type of classroom activity and</li> </ul>

				individual characteristics of children involved in bullying conflicts.
Ball et al. (2008)	Genetic and environmental influences on victims, bullies and bully-victims in childhood	Mother and teacher reports of victimisation and bullying were collected in a nationally representative cohort of 1,116 families with 10-year-old twins.	Univariate, covariate analysis	<ul style="list-style-type: none"> <li>• genetic influences accounted for over 2/3 of individual differences in children's victimisation, with the remainder due to nonshared environmental influences.</li> <li>• Environmental factors influence children's victimization via experiences that are unique to each twin (nonshared environmental factors) rather than experiences common to both twins.</li> <li>• Bullying was strongly influenced by genetic factors and, to a lesser extent, by nonshared environmental factors.</li> </ul>
Benedict, F. (2012)	Association Between Mental Health Disorders and Bullying In the United States Among Children Aged 6 to 17 Years	<ul style="list-style-type: none"> <li>• Data from 2007 National Survey of Children's</li> </ul>	Bivariate analysis Logistic regression	<ul style="list-style-type: none"> <li>• 15.2% identified as bullies</li> <li>• Children with mental health d/o 3x more likely</li> </ul>
Bijttebier, P., & Vertommen, H. (1998)	Coping with peer arguments in school-age children with bully/victim problems	<ul style="list-style-type: none"> <li>• N = 329 children</li> <li>• Grade 4-6</li> </ul>	Correlational analyses	<ul style="list-style-type: none"> <li>• Both victimization and social neglect related to internalizing coping</li> <li>• Bullying associated with externalizing coping &amp; lack of problem-solving</li> <li>• Positive relationship betw victimization and social support seeking.</li> </ul>

Black, S.A., & Jackson, E. (2007)	Using Bullying Incident Density to Evaluate the Olweus Bullying Prevention Programme	<ul style="list-style-type: none"> <li>• 6 public school elementary/middle</li> <li>• <math>N = 456-1,295</math> school enrollments</li> </ul>	Pre-post test	<ul style="list-style-type: none"> <li>• Fidelity of implementation ranged 64%-100%</li> <li>• Bullying incident density decreased by 45%</li> <li>• Student reported bullying increased by 5%</li> </ul>
Bogart, L.M., et al. (2014)	Peer Victimization in Fifth Grade and Health in Tenth Grade	<ul style="list-style-type: none"> <li>• <math>N = 4297</math></li> <li>• Surveyed at 3 time pts in 3 cities</li> </ul>	Multivariable regressions	<ul style="list-style-type: none"> <li>• Bullying associated w/worse mental &amp; physical health, greater DEP sx's, and lower self-worth over time.</li> <li>• Health worse for children w/both past/present bullying experiences</li> </ul>
Boulton, M.J., & Smith, P.K. (1994)	Bully/victim problems in middle-school children: Stability, self-perceived competence, peer perceptions and peer acceptance	<ul style="list-style-type: none"> <li>• 158 children (83 boys and 75 girls) from three urban middle schools</li> </ul>	ANOVA	<ul style="list-style-type: none"> <li>• 35 per cent involved either as bullies or as victims or as both</li> <li>• more boys classified as being bullies than girls being a</li> <li>• victim was equally evident among the two sexes</li> <li>• Victims (male) scored lower on self-perceived athletic competence than (male) bullies and (male) not-involved children</li> <li>• (male/female) victims scored lower on global self-worth than (male and female) not-involved children</li> <li>• (female) victims scored lower on self-perceived social acceptance than (female) not-involved children.</li> </ul>
Brown, E. C., Low, S., Smith, B. H., &	Outcomes from a School-Randomized	<ul style="list-style-type: none"> <li>• 33 California elementary schools</li> </ul>	Multilevel analysis	<ul style="list-style-type: none"> <li>• Results of this study support the program as an efficacious intervention for the prevention of</li> </ul>

Haggerty, K. P. (2011)	Controlled Trial of Steps to Respect: A Bullying Prevention Program	<ul style="list-style-type: none"> <li>Schools matched</li> </ul>		bullying in schools.
Brown, S., & Taylor, K. (2008)	Bullying, education and earnings: Evidence from the National Child Development Study	<ul style="list-style-type: none"> <li>Children born in Great Britain March 3-9<sup>th</sup> in 1958</li> <li>Interview conducted 7-42yo</li> </ul>	Descriptive, longitudinal	<ul style="list-style-type: none"> <li>Being a school bully larger impact on educational attainment than being bullied.</li> <li>Being a victim impinges on labour market earnings later in life.</li> </ul>
Browning, C.M., Cooker, P.G., & Sullivan, K. (2005)	Help for the Bully/Peer Abuse Problem: Is Bully Busters In-Service Training Effective?	<ul style="list-style-type: none"> <li><math>N = 36</math> trained personnel at rural elementary school</li> <li>Age 24-59</li> </ul>	Pre-post test, ANCOVA	<ul style="list-style-type: none"> <li>Teachers &amp; auxiliary personnel (T/A) believed Bully Busters training was important for increased teacher awareness of the bully/peer abuse problem.</li> <li>T/A believed Bully Busters training effectively increased teacher self-efficacy for implementing interventions to address bullying behaviors and victim behaviors.</li> <li>T/A believed training was critically important for acquiring.</li> </ul>
Bryant, B.K. (1992)	Conflict Resolution Strategies in Relation to Children's Peer Relations	<ul style="list-style-type: none"> <li>2 private Catholic schools in northern CA</li> <li><math>N = 165</math> children</li> <li>10-13yo</li> <li>Grades 4-6 FOLLOW-UP</li> <li><math>N = 67</math></li> </ul>	Correlational, t-test, analysis of variance	<ul style="list-style-type: none"> <li>Children socially preferred more likely to use calm approach to resolve conflicts</li> <li>Girls use calm discussion more than boys.</li> <li>Rejected/controversial children more likely to use anger retaliation strategy</li> <li>Popular children more</li> </ul>



		children		<p>likely use calm discussion</p> <ul style="list-style-type: none"> <li>• Rejected children more likely use withdrawal/avoidance</li> <li>• Perceived self-efficacy in both conflict and nonconflict situation.</li> </ul>
Candelaria, A.M. et al. (2012)	The effects of anger management on children's social and emotional outcomes: A meta-analysis	<ul style="list-style-type: none"> <li>• 60 studies</li> <li>• 1979-2010</li> </ul>	Meta-Analysis	<ul style="list-style-type: none"> <li>• Mean effect size of -0.27 (small to moderate intervention effect) in reducing children's negative emotional and behavioral outcomes.</li> <li>• CBT found to be most effective.</li> <li>• Raters' reports of students' aggressive behs and the students' reported feelings of anger were 2 outcomes most positively affected by anger management.</li> </ul>
Castella, V., et al. (2000)	The influence of familiarity among group members, group atmosphere and assertiveness on uninhibited behavior through three different communication media	<i>N</i> = 140 Assigned to 3 grps: CMC, FTF, videoconference	Chi-square tests Regression	<ul style="list-style-type: none"> <li>• Uninhibited behavior shows a higher rate of occurrence in CMC than Videoconferencing or FTF.</li> <li>• Uninhibited in informal speech happens more often in those groups with higher familiarity among members</li> <li>• <i>flaming</i> occurred 94 times in text-based discussion (4.72% of remarks), compared to 8 times (0.21%) and 16 times (0.39%) in face-to-face and video conferencing conditions, respectively</li> </ul>
Copeland, W. E.,	Impact of Bullying in	• Study three cohorts	Longitudinal Comparison Group	• Bully-victims worst health outcomes in

Wolke, D., Angold, A., & Costello, E. J. (2013)	Childhood on Adult Health, Wealth, Crime, and Social Outcomes	<p>children aged 9, 11, 13.</p> <ul style="list-style-type: none"> <li>• <math>N = 1,420</math> (49% female, 51% male)</li> <li>• Annual assessments at 16, 19, 21, and 24 to 26 years (<math>M = 25.0</math> years, <math>SD = 0.79</math>).</li> <li>• 75%–94% interviews</li> </ul>	[multivariable analyses]	<p>adulthood.</p> <ul style="list-style-type: none"> <li>• Bully-victims at most risk for health, risky beh, wealth, social relationships in adulthood.</li> <li>• Victim or bully-victim associated with poor outcomes in adulthood.</li> <li>• 421 victims and bully-victims, 159 (37.8%) were chronically bullied—higher level social/financial probs</li> </ul>
Copeland, W. E., Wolke, D., Lereya, S. T., Shanahan, L., Worthman, C., & Costello, E. J. (2014)	Childhood bullying involvement predicts low-grade systemic inflammation into adulthood	$n = 1,420$ childhood/adolescence (ages 9–16) young adulthood (ages 19 and 21)	Blood samples/correlational. Tested how this adverse social experience is biologically embedded to affect short- or long-term levels of C-reactive protein (CRP), a marker of low-grade systemic inflammation.	During childhood and adolescence, the number of waves at which the child was bullied predicted increasing levels of CRP. Although CRP levels rose for all participants from childhood into adulthood, being bullied predicted greater increases in CRP levels, whereas bullying others predicted lower increases in CRP compared with those uninvolved in bullying.
Dekhane, S., Xu, X., & Tsoi, M. Y. (2013)	Mobile app development to increase student engagement and problem solving skills	Students worked on the mobile app for one semesters.	Pre- Post-test	Pre and post analysis showed significant improvement in students' ability to design solutions when given a problem. Results also showed increased student engagement and high interest.
DeVoe, J. F., Kaffenberger, S., & Chandler, K.	Student Reports of Bullying: Results from the 2001	$N = 24,315,000$	Descriptive	In 2001, approximately 14 percent of students ages 12 through 18 were victims of bullying at school in the 6 months prior to the survey

(2005)	School Crime Supplement to the National Crime Victimization Survey: Statistical Analysis Report			administration
Diener, E., et al. (1980)	Deindividuation: Effects of group size, density, number of observers, and group member similarity on self-consciousness and disinhibited behavior.	Exp 1 • $N = 408$ • Undergraduate students U of I. Exp 2 • $N = 158$	Correlational 2x2x4 Factorial Design  Exp2 Analysis of variance Correlational	<ul style="list-style-type: none"> <li>• As group size increased, participants were less self-conscious</li> <li>• Required more individuals to create the same effect as group size increased.</li> </ul>
Eaton, D.K., et al. (2012)	Youth Risk Behavior Surveillance—United States, 2011	<ul style="list-style-type: none"> <li>• Grade 9-12</li> <li>• <math>N = 1,276</math></li> </ul>	Regression models	<ul style="list-style-type: none"> <li>• 20.1% bullied on school property</li> <li>• 16.2% electronically bullied</li> </ul>
Espelage, D., Bosworth, K., & Simon, T.R. (2000)	Examining the Social Context of Bullying Behaviors in Early Adolescence	$N = 588$ 6-8 grade	Multivariate model	<ul style="list-style-type: none"> <li>• Males bully more than females</li> <li>• 19.5% no bully behavior in past month</li> <li>• Family physical discipline associated w/bullying</li> <li>• Less bullying if spend more time w/nonviolent parents</li> <li>• Teens involved in negative activities also bullied</li> <li>• Neighborhood safety concerns correlated w/bullying [exposure to</li> </ul>

				violence & aggression]
Espelage, D. L., Low, S., Polanin, J. R., & Brown, E. C. (2015)	Clinical trial of Second Step middle-school program: Impact on aggression and victimization	<ul style="list-style-type: none"> <li>• 3,658 6<sup>th</sup> grade students</li> <li>• 36 schools</li> </ul>	Multi-level analysis of 2 year clinical trial	<ul style="list-style-type: none"> <li>• Significant intervention effects: 56% of students in interventions schools were less likely to self-report homophobic name-calling victimization, and 39% less likely to report sexual violence perpetration than students in control schools</li> </ul>
Evers, K. E., Prochaska, J. O., Van Marter, D. F., Johnson, J. L., & Prochaska, J. M. (2007)	Transtheoretical-based bullying prevention effectiveness trials in middle schools and high schools	<p><i>N</i> = 1237</p> <p>6th–8th grade, with 45.1% in the 7th grade; ages 11–14) and 1215 high school (9th–11th grade, with 41.6% in the 9th grade; ages 14–17</p>	Effectiveness trials	Analyses showed significant treatment effects for both intervention groups when compared to control for both the middle and high school programs.
Finkelhor, D., Vanderminden, J., Turner, H., Shattuck, A., & Hamby, S. (2014)	Youth exposure to violence prevention programs in a national sample	<p><i>N</i> = 3391</p> <p>Ages 5-17</p>	<p>Chi-square test</p> <p>Multivariate logistic regression</p>	The findings are consistent with possible benefits from violence prevention education programs. However, they also suggest that too few programs currently include efficacious components.
Forero, R., et al. (1999)	Bullying behavior and psychosocial health among school students in New South Wales, Australia: cross sectional	<ul style="list-style-type: none"> <li>• <i>N</i> = 3918 school children</li> <li>• 11-16yo</li> <li>• 115 schools</li> </ul>	Cross sectional	<ul style="list-style-type: none"> <li>• 23.7% bullied other students</li> <li>• 12.7% were bullied</li> <li>• 21.5% both bullied/bullied others</li> <li>• 42.4% did not experience</li> <li>• More boys reported bullying others and being victims</li> <li>• Bullying beh associated w/increased</li> </ul>

	survey			<p>psychosomatic sxs</p> <ul style="list-style-type: none"> <li>• Bullies tend to be unhappy w/school, students who bullied tended to like school</li> <li>• Bullied and were bullied greatest number of psych/somatic sxs</li> </ul>
Frey, K. S., Hirschstein, M. K., Edstrom, L. V., & Snell, J. L. (2009)	Observed reductions in school bullying, nonbullying aggression, and destructive bystander behavior: A longitudinal evaluation	<ul style="list-style-type: none"> <li>• Grades 3-5</li> <li>• <math>N = 624</math> surveyed</li> <li>• <math>N = 360</math> observed</li> </ul>	Longitudinal extension of a random control trial; pre-post test	<ul style="list-style-type: none"> <li>• Participation in the program for 2 school years was associated with larger declines in problem playground beh than for 1 yr.</li> </ul>
Frey, K. S., Hirschstein, M. K., Snell, J. L., Edstrom, L. V. S., MacKenzie, E. P., & Broderick, C. J. (2005)	Reducing Playground Bullying and Supporting Beliefs: An Experimental Trial of the <i>Steps to Respect</i> Program	<ul style="list-style-type: none"> <li>• Grades 3-6</li> <li>• <math>N = 1,023</math></li> <li>• 6 schools</li> </ul>	Longitudinal design w/control grp at pre-posttest	<ul style="list-style-type: none"> <li>• Decreases in bullying found among those engaged in bullying during the pretest.</li> <li>• Self-reported victimization higher at posttest when lessons rated more highly by observers.</li> <li>• Control-group students became more accepting of bullying and aggression than did intervention-group.</li> </ul>
Gámez-Guadix, M., Orue, I., Smith, P. K., & Calvete, E. (2013)	Longitudinal and Reciprocal Relations of Cyberbullying with Depression, Substance Use, and Problematic Internet Use Among	<ul style="list-style-type: none"> <li>• <math>N = 845</math> adolescents</li> </ul>	Structural equation modeling	<ul style="list-style-type: none"> <li>• Reciprocal relationships between DEP sxs and CB.</li> <li>• Substance use predicted increased CB victimization</li> <li>• CB victimization predicted an increment in PIU</li> </ul>

	Adolescents			
Gini, G., & Pozzoli, T. (2009)	Association Between Bullying and Psychosomatic Problems: A Meta-Analysis	<ul style="list-style-type: none"> <li>• 11 studies</li> <li>• 7-16yo</li> <li>• Victims, bullies, bully-victims</li> </ul>	Meta-analysis	<ul style="list-style-type: none"> <li>• Victimized children higher risk for psychosomatic problems than uninvolved peers</li> <li>• Bullies had higher risk for psychosomatic problems than uninvolved children</li> <li>• Bully-victims significantly higher risk for psychosomatic problems than uninvolved peers</li> </ul>
Hodges, E. V., Boivin, M., Vitaro, F., & Bukowski, W. M. (1999)	The power of friendship: protection against an escalating cycle of peer victimization	<p><math>N = 393</math></p> <p>188 boys and 205 girls) in the 4th and 5th grades</p>	Longitudinal study	Results indicated that teacher-reported internalizing and externalizing behaviors predicted increases in peer-reported victimization, but the relation of internalizing behaviors to increases in victimization was attenuated for children with a protective friendship. Victimization predicted increases in internalizing and externalizing behaviors but only for children without a mutual best friendship. Results highlight the importance of peer friendships in preventing an escalating cycle of peer abuse.
Houston, K.P. (2007)	Are there differences in bullies? An Analysis of bullying and social skills	<ul style="list-style-type: none"> <li>• <math>N = 908</math></li> <li>• 6<sup>th</sup>-7<sup>th</sup> grade</li> <li>• 10-15yrs</li> </ul>	Descriptive; ANOVA; MANOVA; Regression Analysis	<ul style="list-style-type: none"> <li>• Over half of the students (56%) indicated they had bullied another student at least once</li> <li>• 68% of the respondents reported being the victim of bullying at least once</li> </ul>
Iannotti, R.J. (2008)	Health Behavior in	<ul style="list-style-type: none"> <li>• 227 Schools</li> </ul>	Longitudinal	<ul style="list-style-type: none"> <li>• 7.2% bullied everyday</li> <li>• 12.6% bullied every week</li> </ul>

	School-Aged Children (HBSC), 2005-2006	<ul style="list-style-type: none"> <li>• 9,227 participants</li> <li>• Grades 6-10</li> </ul>		<ul style="list-style-type: none"> <li>• 10.3% bullied more than once a wk</li> <li>• 28% bullied every month</li> <li>• 41.9% bullied rarely/never</li> </ul>
Idsoe, T., Dyregrov, A., & Idsoe, E.C. (2012)	Bullying and PTSD Symptoms	<ul style="list-style-type: none"> <li>• <math>N = 963</math></li> <li>• Grades 5-9</li> </ul>	Logistic regressions	<ul style="list-style-type: none"> <li>• Bullied girls higher level of sx's</li> <li>• 1/3 of students who reported being bullied had scores within the clinical range of PTSD sx's</li> </ul>
Joinson, A. (1999)	Social desirability, anonymity, and Internet-based questionnaires	$N = 82$ students Univ of Glamorgan	2x2 betw subjects factorial design	<ul style="list-style-type: none"> <li>• Those who used WWW scored lower on measures of social desirability and social anxiety; higher on self-esteem.</li> </ul>
Kann, L. et al. (2013)	Youth Risk Behavior Surveillance—United States, 2013	Grade 9-12, 50 States and District of Columbia	Regression models	<ul style="list-style-type: none"> <li>• 19.6% bullied on school property (higher females)</li> </ul>
Kärnä, A., Voeten, M., Little, T., Alanen, E., Poskiparta, E., & Salmivalli, C. (2011)	Going to scale: A nonrandomized nationwide trial of the KiVa antibullying program for comprehensive schools	$N = 150,000$  Grades 1–9 (8–16 years of age; 51% boys and 49% girls	cohort-longitudinal design	During the first 9 months of implementation, the KiVa program reduced both victimization and bullying, with a control/intervention group odds ratio of 1.22 (95% CI [1.19, 1.24]) for victimization and 1.18 (95% CI [1.15, 1.21]) for bullying. Generalized to the Finnish population of 500,000 students, this would mean a reduction of approximately 7,500 bullies and 12,500 victims.
Kärnä, A., Voeten, M., Little, T., Alanen, E., Poskiparta, E., &	Effectiveness of the KiVa antibullying program: Grades 1-3 and 7-9	Grades 1–3 (7–9 years old, $N = 6,927$ ) Grades 7–9 (13–15	Multilevel regression analyses	After 9 months of implementation, the intervention had beneficial effects in Grades 1–3 on self-reported victimization and bullying. In Grades 7–

Salmivalli, C. (2013)		years old, $N = 16, 503$ )		9, statistically significant positive results were obtained on 5 of 7 criterion variables, but results often depended on gender and sometimes age. Overall, the findings from the present study and from a previous study for Grades 4–6 (Kärnä, Voeten, Little, Poskiparta, Kaljonen, et al., 2011) indicate that the KiVa program is effective in reducing bullying and victimization in Grades 1–6, but the results are more mixed in Grades 7–9.
Kiesler, S., & Sproull, L. (1992)	Group decision making and communication technology	<ul style="list-style-type: none"> <li>• Not reported</li> </ul>	<ul style="list-style-type: none"> <li>• Not reported</li> </ul>	<ul style="list-style-type: none"> <li>• Compared with a face-to-face meeting, a computer-mediated discussion</li> </ul>
Kiesler, S., Zubrow, D., & Moses, A.M. (1985)	Affect in Computer-Mediated Communication: An Experiment in Synchronous Terminal-to-Terminal Discussion	<ul style="list-style-type: none"> <li>• Not reported</li> </ul>	ANOVA	<ul style="list-style-type: none"> <li>• Communicating by computer did not influence physiological arousal, and it did not change emotions or self evaluations.</li> <li>• People who communicated via comp evaluated less favorably than did people communicated face-to-face, felt &amp; acted as though setting was more impersonal, and their behavior was more uninhibited.</li> </ul>
Klomek, A.B. et al. (2009)	Childhood Bullying Behaviors as a Risk for Suicide Attempts and Completed	<ul style="list-style-type: none"> <li>• 5,302 Finnish children born in 1981</li> </ul>	Regression analysis	<ul style="list-style-type: none"> <li>• Males: 47.2% bully sometimes, 9% bully frequently.</li> <li>• Females: 23.2% bully sometimes, 0.9% bully frequently.</li> <li>• 24 deaths total: 13 male</li> </ul>



	Suicides: A Population-Based Birth Cohort Study			<p>suicides, 2 female suicides</p> <ul style="list-style-type: none"> <li>• 42 subjects admitted to hospital for tx suicide attempt</li> <li>• Boys frequently both bullies and victims at age 8 highest percentage later SI</li> </ul>
Kulig, J.C., Hall, B.L, & Kalischuk, R.G. (2008)	Bullying perspectives among rural youth: a mixed methods approach	<ul style="list-style-type: none"> <li>• Phase 1 (<math>N = 52</math>)</li> <li>• Phase 2 (<math>N = 180</math>)</li> <li>• Grade 10 average</li> </ul>	Mixed Method Descriptive	<ul style="list-style-type: none"> <li>• Support the notion that bullying is about power &amp; schools are prime areas where bullying occurs.</li> <li>• Youth who are different are perceived to be targets of bullying.</li> </ul>
Laghi, F. et al. (2011)	Development and Validation of the Efficacious Self-Presentation Scale	<ul style="list-style-type: none"> <li>• <math>N = 760</math></li> <li>• 16-19yo</li> </ul>	Factor analysis	<ul style="list-style-type: none"> <li>• Supported 6 identifiable factors reflecting different concepts, theoretically discussed, related to self-presentation: <ul style="list-style-type: none"> <li>○ Ability to regulate self-image</li> <li>○ Social sensitivity</li> <li>○ Body self-confidence</li> <li>○ Social self-confidence</li> <li>○ Social openness</li> <li>○ Social desirability</li> </ul> </li> <li>• Good convergent validity and internal consistency</li> <li>• Assertive tactics predicted through ability to regulate self-image, social self-confidence, social openness, whereas defensive tactics were predicted through social openness and social sensitivity.</li> </ul>

Lea, M., & Spears, R. (1991)	Computer-mediated communication, deindividuation and group decision-making	<ul style="list-style-type: none"> <li>Not reported</li> </ul>	Experimental manipulation	<ul style="list-style-type: none"> <li>Deindividuation can only be understood in a social context, the SI model</li> </ul>
Lee, E. (2007)	Deindividuation Effects on Group Polarization in Computer-Mediated Communication: The Role of Group Identification, Public-Self-Awareness, Perceived Argument Quality	$N = 104$ undergraduate students	Correlation ANOVA	<ul style="list-style-type: none"> <li>Deindividuated participants exhibited stronger identification w/anonymous partners than did their individuated counterparts; more likely to polarize their opinions.</li> <li>Group identification amplified individuals' concerns about public evaluations &amp; prompted the adoption of more extreme positions.</li> </ul>
Lenhart, A., Madden, M., Smith, A., Purcell, K., Zickuhr, K., & Rainie, L. (2011)	Teens, kindness and cruelty on social network sites: How American teens navigate the new world of 'digital citizenship'	$N = 799$ Ages 12-17 years.	Descriptive (three-part, multi-modal study)	<ul style="list-style-type: none"> <li>69% mostly kind; 20% unkind</li> <li>88% witnessed others cruelty online</li> <li>More report positive vs negative experiences</li> <li>19% bullied on past yr online</li> <li>More often ignore cruelty</li> <li>2/3 witness others joining in on cruelty</li> <li>rely most on parents &amp; peers for advice</li> </ul>
Lereya, S.T., Samara, M., & Wolke, D. (2013)	Parenting behavior and the risk of becoming a victim and a bully/victim: A meta-	<ul style="list-style-type: none"> <li>70 studies</li> <li><math>N = 119</math> samples of victims</li> <li><math>N = 55</math> samples</li> </ul>	Meta-analysis	<ul style="list-style-type: none"> <li>Both victims &amp; bully/victims more likely to be exposed to negative parenting.</li> <li>Abuse &amp; neglect best predictors of victim or bully/victim status</li> </ul>

	analysis study	for bully/victims • 208,778 children • 4-25yo		<ul style="list-style-type: none"> <li>• High parental involvement, support, warm, affectionate relationships more likely to protect against peer victimization</li> </ul>
Lessne, D., & Harmalkar, S. (2013)	Student Reports of Bullying and Cyber-Bullying: Results from the 2011 School Crime Supplement to the National Crime Victimization Survey. Web Tables. NCES 2013-329	$N = 24,456,000$	Descriptive	6,809,000 bullied and 2,198,000 were cyberbullied.
McDougall, P., & Vaillancourt, T. (2015)	Long-term adult outcomes of peer victimization in childhood and adolescence: Pathways to adjustment and maladjustment	Findings from prospective studies tracking children and adolescents into young adulthood are presented and synthesized.	Multi-finality	Using the construct of “multifinality” as our framework, we explore why it might be that early peer victimization does not have the same impact on all young people by considering factors that place individuals at greater risk or appear to protect them from more lasting harm. In addition to a need for carefully planned prospective studies, the field would benefit from the use of qualitative studies aimed at elucidating possible causal, concurrent, and resultant mechanisms involved with victimization.
Meyer-	School	grades 6-8	Structural	<ul style="list-style-type: none"> <li>• victimization by bullying</li> </ul>

Adams, N., & Conner, B.T. (2008)	violence: Bullying behaviors and the psychosocial school environment in middle schools	ages 11-14 years. $N = 7,583$ surveys	Equations Models (SEM)	behaviors and contributing to bullying behaviors were significant negative predictors of the psychosocial environment of the school.
Nakamoto, J., & Schwartz, D., (2010)	Is Peer Victimization Associated with Academic Achievement ? A meta-analytic Review	<ul style="list-style-type: none"> <li>• 33 Studies</li> <li>• <math>N = 29,552</math></li> </ul>	Variance, Regression, Central Tendency	<ul style="list-style-type: none"> <li>• Negative association between victimization and achievement.</li> <li>• Heterogeneity in effect sizes</li> <li>• Multiple informants and peer reports better than self-report</li> <li>• Effect of gender not significant.</li> </ul>

National Crime Prevention Council. (2007)	Teens and Cyberbullying	<ul style="list-style-type: none"> <li>• <math>N = 824</math></li> <li>• Age = 13-17</li> </ul>	Descriptive	<ul style="list-style-type: none"> <li>• Ninety-six percent of teens have an email account.</li> <li>• On average, teens have 2.2 email addresses</li> <li>• HS students more likely than MS report having more than three separate email addresses (17% vs. 9%)</li> <li>• Many schools provide Internet to conduct research</li> <li>• 42% use Internet at a friend's house, 33% use Internet in other</li> <li>• 97% use Internet at home.</li> <li>• 93% send and receive email from home, surf the web, and use the</li> <li>• Internet for research for school at home.</li> <li>• Teens also engage in other online activities at home: 75 percent send Instant Messages (IMs), 60 percent read or post messages on blogs or similar websites, and 23 percent visit online chat rooms.</li> </ul>
Nickerson, A. B., Aloe, A. M., Livingston, J. A., & Feeley, T. H. (2014)	Measurement of the bystander intervention model for bullying and sexual harassment	$N = 562$ secondary schools	Structural equation modeling	All the steps were influenced by the previous step in the model, as the theory proposed. In addition, the bystander intervention measure was positively correlated with empathy, attitudes toward bullying and sexual harassment, and awareness of bullying and sexual harassment facts. This

				measure can be used for future research and to inform intervention efforts related to the process of bystander intervention for bullying and sexual harassment.
Olweus, D., (1978)	Aggression in the schools: Bullies and whipping boys	<ul style="list-style-type: none"> <li>• <math>N = 1000</math></li> <li>• 12-16yo</li> </ul>	Descriptive (5 empirical studies)	<ul style="list-style-type: none"> <li>• Factors that determine predisposition to</li> </ul>
Olweus, D. (1991)	Bully/Victim Problems at School: Facts and Effective Interventions	<ul style="list-style-type: none"> <li>• <math>N = 2500</math></li> <li>• Grades 4-7</li> <li>• 11-14yo</li> <li>• 42 schools in Bergen, Norway</li> </ul>	Longitudinal	<ul style="list-style-type: none"> <li>• Reductions of 50% or more in bully/victim programs</li> <li>• Reductions in general antisocial behavior (vandalism, fighting, pilfering, drunkenness, truancy)</li> <li>• Improvement in social climate of the classroom: order/discipline, positive social relationships</li> </ul>
Orpinas, P., & Frankowski, R. (2001)	The Aggression Scale: A Self-Report Measure of Aggressive Behavior for Young Adolescents	<ul style="list-style-type: none"> <li>• Evaluated in 2 independent samples</li> <li>• <math>N = 253</math></li> <li>• <math>N = 8,695</math></li> </ul>	Univariate Analysis	<ul style="list-style-type: none"> <li>• 11 items designed to measure self-reported aggressive behaviors among middle school students.</li> <li>• Reliability scores were high in both samples and did not vary significantly by gender, ethnicity, or grade level.</li> <li>• Aggression scores were stable in a 2 yr follow-up.</li> <li>• Mean scores on aggression scale were associated positively with teachers' independent rating of student aggression,</li> </ul>

				other measures of aggression, and known predictors of aggression.
Orpinas, P., Horne, A. M., & Staniszewski, D. (2003)	School Bullying: Changing the Problem by Changing the School	<ul style="list-style-type: none"> <li>• (1998) <math>N = 541</math></li> <li>• (1999) <math>N = 520</math></li> <li>• <math>M</math> age = 7</li> </ul>	ANOVA	<ul style="list-style-type: none"> <li>• 40% reduction in the mean self-reported aggression</li> <li>• 19% reduction in mean self-reported victimization</li> </ul>
Pasceri, V., Willerson, J. T., & Yeh, E. T. (2000)	Direct Proinflammatory Effect of C-Reactive Protein on Human Endothelial Cells	<ul style="list-style-type: none"> <li>• Performed on human umbilical vein endothelial cells and in human coronary artery endothelial cells.</li> </ul>	Intercellular experimentation	<ul style="list-style-type: none"> <li>• CRP induces adhesion molecule expression in human endothelial cells in the presence of serum.</li> </ul>
Patrick, D. L., Bell, J. F., Huang, J. Y., Lazarakis, N. C., & Edwards, T. C. (2013)	Bullying and Quality of Life in Youths Perceived as Gay, Lesbian, or Bisexual in Washington State, 2010	<p>Data from 2010 Washington State Healthy Youth Survey</p> <ul style="list-style-type: none"> <li>• <math>N = 27,752</math></li> <li>• Grade 8,10,12 public schools</li> </ul>	Regression	<ul style="list-style-type: none"> <li>• Male students bullied because of PSO: <ul style="list-style-type: none"> <li>○ 14% - 8<sup>th</sup></li> <li>○ 11% - 10<sup>th</sup></li> <li>○ 9% - 12<sup>th</sup></li> </ul> </li> <li>• Female students bullied because of PSO <ul style="list-style-type: none"> <li>○ 11% - 8<sup>th</sup></li> <li>○ 10% - 10<sup>th</sup></li> <li>○ 6% - 12<sup>th</sup></li> </ul> </li> <li>• PSO associated w/lower QOL scores</li> </ul>
Postmes, T., Spears, R., Sakhel, K., & De Groot, D. (2001)	Social Influence in Computer-Mediated Communication: The effects of Anonymity on Group Behavior	<p>Study 1</p> <ul style="list-style-type: none"> <li>• <math>N = 75</math> undergraduate students</li> </ul> <p>Study 2</p> <ul style="list-style-type: none"> <li>• <math>N = 64</math> undergraduate students</li> </ul>	2x2 ANOVA T-tests Regression analysis	<ul style="list-style-type: none"> <li>• Anonymity in a grp can promote normative beh.</li> <li>• Anonymous group members conform to the standards set by a prime, whereas identifiable group members do not.</li> </ul>
Prentice-Dunn, S., &	Effects of Public and	<ul style="list-style-type: none"> <li>• <math>N = 48</math> male</li> </ul>	2x2 Factorial design	<ul style="list-style-type: none"> <li>• Decreased focus on thoughts and bodily</li> </ul>

Rogers, R.W. (1982)	Private Self-Awareness on Deindividuation and Aggression	students enrolled in introductory psychology courses. • 12 subjects assigned to each cell		states entailed in a reduction of private self-awareness does not automatically alter public self-awareness. • Both accountability and attentional
Reijntjes, A., Kamphuis, J. H., Prinzie, P., & Telch, M. J. (2010)	Peer victimization and internalizing problems in children: A meta-analysis of longitudinal studies	• 6-14yo • 18 studies	Meta-analysis	• Peer victimization associated w/higher levels of internalizing problems • Internalizing problems constitute a risk factor for changes in peer victimization over time • Internalizing problems are equally strong causes as well as consequences of peer victimization
Robers, S., Kemp, J., Truman, J., et al. (2013)	Indicators of School Crime and Safety: 2012	*Drawn from multiple independent surveys 1992-2011: NCVS, SAVD, SCS, SSOCS,	T-tests, ANOVA	• 28% of 12- to 18-year-old students reported being bullied at school during the school year • In 2011, approximately 9% of students ages 12–18 reported being
Russell, S. T., Sinclair, K. O., Poteat, V. P., & Koenig, B. W. (2012)	Adolescent Health and Harassment Based on Discriminatory Bias	2008-2009 Dane County Youth Assessment • N = 24,000 • Grade 7-12 • 14 public schools in Dane County California Healthy Kids Survey	Logistic regression	• 35.8% (DCYA); 40.3% (CHKS) reported bias-related harassment • 15.5% GLB-based harassment • 15.8% race-based harassment • 10% religion/gender harassment • 6.5% disability-related harassment • Bias-based harassment worse mental health and substance use
Salmivalli, C.,	Bullying as a Group	• N = 573 Finnish 6 <sup>th</sup>	Multivariate	• Boys more actively involved in bullying



Lagerspetz, K., Björkqvist, K., Österman, K., & Kaukiainen, A. (1996)	Process: Participant Roles and Their Relations to Social Status Within the Group	grade children • Age 12-13yo		process (reinforce and assistant) • For boys—physical aggressive ways of being together more common/approved. • For girls—expected to behave more prosocial, caretaking and helping ways. • Children moderately aware of their participant roles.
Salmivalli, C., & Poskiparta, E. (2012)	Making bullying prevention a priority in Finnish schools: The KiVa antibullying program	234 Finnish schools	Randomized control trial	As for Generalization of the program to multiple forms of victimization has also been shown to be effective
Salmivalli, C., Voeten, M., & Poskiparta, E. (2011)	Bystanders matter: Associations between defending, reinforcing, and the frequency of bullying in classrooms	$N = 6,764$ Grades 3 to 5 (9–11 years of age)	Multilevel models	Defending the victim was negatively associated with the frequency of bullying in a classroom, whereas the effect of reinforcing the bully was positive and strong. The results suggest that bystander responses influence the frequency of bullying, which makes them suitable targets for antibullying interventions.
Shieh, B. (2008)	The Effects of Awareness and Empathy on Adolescents' Morals, Personality, and Behavior on Computer-Mediated Communicati	• $N = 57$ • 13-19yo	Pre-post test	• The results show that overall, significant changes occurred between the pre-test and post-test for offline and online personality,

	ons (Unpublished master's thesis)			
Smith, J. D., Schneider, B. H., Smith, P. K., & Ananiadou, K. (2004)	The Effectiveness of Whole-School Antibullying Programs: A Synthesis of Evaluation Research	<ul style="list-style-type: none"> <li>• 14 reviewed studies</li> </ul>	Meta-analysis	<ul style="list-style-type: none"> <li>• Olweus bullying program is shown to be effective by the whole-school approach.</li> </ul>
Sourander, A., Klomek, A. B., Ikonen, M., Lindroos, J., Luntamo, T., Koskelainen, M., ... & Helenius, H. (2010)	Psychosocial Risk Factors Associated with Cyberbullying Among Adolescents	<ul style="list-style-type: none"> <li>• <math>N = 2215</math> Finnish students</li> <li>• Age = 13-16 years</li> </ul>	Logistic regression analysis	<ul style="list-style-type: none"> <li>• 7.4% of adolescents have cyberbullied others but have not been targets of cyberaggression, while 4.8% have been targets only and another 5.4% have been both cyberbullies and cybervictims</li> <li>• Adolescents who were cybervictims only were more likely to be from families with other than 2 biological parents, have psychosomatic problems (headaches, recurring abdominal pain, and sleeping problems), have high levels of perceived difficulties, have emotional and peer problems, and feel unsafe at school and uncared about by teachers. These results indicate that the cybervictims have mainly emotional and peer problems.</li> </ul>

Sourander, A. (2011)	Bullying at age eight and criminality in adulthood: findings from the Finnish Nationwide 1981 Birth Cohort Study	<ul style="list-style-type: none"> <li>• <math>N = 5,351</math> Finnish children</li> </ul>	Multivariate analysis	<ul style="list-style-type: none"> <li>• Bullying at age 8 is a stronger predictor of adult criminality among males, but bullying in childhood does not predict adult criminality among females.</li> <li>• Being victimized did not predict adult violence or criminality unless there was other childhood psychopathology.</li> <li>• Teachers reports of bullying among boys were the strongest predictor of adult crime.</li> </ul>
Stuart-Cassel, V., Bell, A., & Springer, J. F. (2011)	Analysis of State Bullying Laws and Policies	20 local school districts grade K-12	Descriptive	<ul style="list-style-type: none"> <li>• 1999-2010 &gt;120 bills</li> <li>• Key components: development/implementation of district policies, scope of jurisdiction, definitions, consequences.</li> <li>• 36 states include cyberbullying</li> </ul>
Topcu, C., & Erdur-Baker, O. (2012)	Affective and cognitive empathy as mediators of gender differences in cyber and traditional bullying	<ul style="list-style-type: none"> <li>• <math>N = 795</math> Turkish adolescents</li> <li>• 13-18yo</li> </ul>	Multiple mediation analyses	<ul style="list-style-type: none"> <li>• Total effect of cognitive and affective empathy mediated the gender differences in traditional bullying in addition to the unique effect of affective empathy.</li> <li>• Only the combined effect of affective and cognitive empathy mediated the gender differences in cyberbullying.</li> </ul>
Ttofi, M. M., Farrington, D. P., Lösel,	The predictive efficiency of school	<ul style="list-style-type: none"> <li>• 28 longitudinal studies</li> <li>• school-</li> </ul>	Meta-analytic review	<ul style="list-style-type: none"> <li>• The number of covariates controlled for was not significantly related to the adjusted</li> </ul>

F., & Loeber, R. (2011)	bullying versus later offending: A systematic/meta-analytic review of longitudinal studies	aged children		<p>effect size.</p> <ul style="list-style-type: none"> <li>Importance of intervening to save high-risk youth</li> </ul>
Williford, A., Elledge, L., Boulton, A., DePaolis, K., Little, T., & Salmivalli, C. (2013).	Effects of the KiVa Antibullying Program on Cyberbullying and Cybervictimization Frequency among Finnish Youth	$N = 9,914$ (intervention) $N = 8,498$ (Control)	multilevel ordinal regression analyses	<p>Results revealed a significant intervention effect on the frequency of cybervictimization</p> <p>KiVa students reported lower frequencies of cybervictimization at posttest than students in a control condition.</p> <p>When student age was below the sample mean, KiVa students reported lower frequencies of cyberbullying than students in the control condition.</p> <p>KiVa appears to be an efficacious program to address cyber forms of bullying and victimization. Results suggest that KiVa is an intervention option for schools concerned with reducing cyberbullying behavior and its deleterious effects on children's adjustment.</p>

Winsper, C., Lereya, T., Zanarini, M., & Wolke, D. (2012)	Involvement in Bullying and Suicide-Related Behavior at 11 Years: A Prospective Birth Cohort Study	<ul style="list-style-type: none"> <li>• <math>N = 6,043</math></li> <li>• Avon Longitudinal Study of Parents and Children 4-11.7yo</li> </ul>	Longitudinal, Logistical Regression	<ul style="list-style-type: none"> <li>• Victims or bully/victims more likely to engage in SI &amp; beh.</li> <li>• Overt &amp; relational victimization associated with future SI</li> <li>• Indirect victimization may lead to feelings of social exclusion.</li> <li>• Chronic victims heightened risk of SI</li> <li>• Pure bullies more likely to engage in SI—more likely exposed to family adversity</li> </ul>
Wolke, D. et al. (2001)	Bullying involvement in primary school and common health problems	<ul style="list-style-type: none"> <li>• <math>N = 1982</math> children and their parents</li> <li>• 78 classes/31 primary schools</li> <li>• 6-9yo</li> </ul>	Variance, regression	<ul style="list-style-type: none"> <li>• Victims had more physical health problems than bullies</li> <li>• Children involved in both direct and relational bullying had more psychosomatic health problems than neutral children</li> <li>• Girls, direct bully/victims, and victims most likely to have high physical health probs.</li> </ul>
Woods, S., Wolke, D., Nowicki, S., & Hall, L. (2009)	Emotion recognition ability and empathy of victims of bullying	<ul style="list-style-type: none"> <li>• 373 primary schools, UK</li> <li>• 9-11yo</li> </ul>	ANCOVA	<ul style="list-style-type: none"> <li>• Relational victims not as adept as others at recognizing emotions overall.</li> <li>• Poor emotion abilities contributors to why they are repeated targets of victimization</li> <li>• Affective empathy depend on seriousness of the bullying</li> </ul>

Ybarra, M.L., & Mitchell, K.J. (2004)	Online aggressor/targets, aggressors, and targets: A comparison of associated youth characteristics	<i>N</i> = 1501 10-17yo	Descriptive	<ul style="list-style-type: none"> <li>• Poor caregiver-child emotional bond more likely cited by Internet harassers (44%) vs nonharassers (19%)</li> <li>• Harassers: substance use (32%), property damage (37%).</li> <li>• Online harassers just as likely to be male or female.</li> <li>• Increased internet use = increased odds of harassment</li> </ul>
Ybarra, M.L., Mitchell, K.J., & Espelage, D.L. (2012)	Comparisons of Bully and Unwanted Sexual Experiences Online and Offline Among a National Sample of Youth	<ul style="list-style-type: none"> <li>• Wave1 (<i>N</i> = 1,577)</li> <li>• Wave2 (<i>N</i> = 1,189)</li> <li>• Wave3 (<i>N</i> = 1,149)</li> <li>• Age 12-17years</li> </ul>	Longitudinal	<ul style="list-style-type: none"> <li>• 40% report being bullied, 18% report bullying, and 25% report being victims of unwanted sexual experiences at least one environment.</li> <li>• 31% bullied at school vs. 15% online.</li> <li>• 38% indicate feel upset compared to 15%</li> <li>• 11% bullied on the way to/from school, 14% elsewhere, 4% &amp; 6% perpetration in environments.</li> <li>• victims of unwanted sexual experiences likely to report being targeted both online and at school (42%)</li> </ul>
Yeager, D. S., Fong, C. J., Lee, H. Y., & Espelage, D. L. (2015)	Declines in efficacy of anti-bullying programs among older adolescents: Theory and a three-level meta-analysis	23 studies for meta-analysis	Meta-Analysis	Indicated a negative relation between program effectiveness, more specifically for older teens. This was found to be consistent with non-experimental evidence (Finkelhor, Vanderinden, Turner, Shattuck, & Hamby, 2014), which reported through a national

				<p>probability sample survey that students in high school experienced a non-significant trend towards an increase in bullying when exposed to an anti-bullying program. Therefore the research suggests that existing anti-bullying programs that include an “age-up” portion for older adolescents may not be sufficient in reducing bullying.</p>
Young, S. (1998)	The Support Group Approach to Bullying in Schools	<ul style="list-style-type: none"> <li>• <math>N = 55</math> cases</li> <li>• Primary Schools</li> </ul>	Longitudinal (2 yr period) pre post test.	<ul style="list-style-type: none"> <li>• 80% Immediate success</li> <li>• 14% success delayed</li> <li>• 6% limited success</li> </ul>

## APPENDIX B

### Non-Human Subjects Determination Notice





Pepperdine University  
24255 Pacific Coast Highway  
Malibu, CA 90263  
TEL: 310-506-4000

## NOTICE OF APPROVAL FOR HUMAN RESEARCH

Date: March 31, 2016

Protocol Investigator Name: Beverly Shieh

Protocol #: 16-03-224

Project Title: CyberPAL: A Mobile Resource for Cyberbullying

School: Graduate School of Education and Psychology

Dear Beverly Shieh:

Thank you for submitting your application for exempt review to Pepperdine University's Institutional Review Board (IRB). We appreciate the work you have done on your proposal. The IRB has reviewed your submitted IRB application and all ancillary materials. Upon review, the IRB has determined that the above entitled project meets the requirements for exemption under the federal regulations 45 CFR 46.101 that govern the protections of human subjects.

Your research must be conducted according to the proposal that was submitted to the IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For any proposed changes in your research protocol, please submit an amendment to the IRB. Since your study falls under exemption, there is no requirement for continuing IRB review of your project. Please be aware that changes to your protocol may prevent the research from qualifying for exemption from 45 CFR 46.101 and require submission of a new IRB application or other materials to the IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite the best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the IRB as soon as possible. We will ask for a complete written explanation of the event and your written response. Other actions also may be required depending on the nature of the event. Details regarding the timeframe in which adverse events must be reported to the IRB and documenting the adverse event can be found in the *Pepperdine University Protection of Human Participants in Research: Policies and Procedures Manual* at [community.pepperdine.edu/irb](http://community.pepperdine.edu/irb).

Please refer to the protocol number denoted above in all communication or correspondence related to your application and this approval. Should you have additional questions or require clarification of the contents of this letter, please contact the IRB Office. On behalf of the IRB, I wish you success in this scholarly pursuit.

Sincerely,

Judy Ho, Ph.D., IRB Chairperson

cc: Dr. Lee Kats, Vice Provost for Research and Strategic Initiatives

**Mr. Brett Leach, Regulatory Affairs Specialist**

Page: 1

## Appendix C

### Mobile Application Modules



## APPENDIX D

### Cyberbully Role Questionnaire

Please indicate whether or not each of the following occurred over the past 7 days:	YES	NO
1. Someone teased you online in a hostile manner?		
2. Someone intentionally embarrassed, frightened, or threatened you online?		
3. Someone called you a bad name online?		
4. Someone online threatened to physically harm you?		
5. You were intentionally excluded and made to feel like an outcast online by one or more of your peers?		
6. Someone online made up something negative about you so that others would no longer like you?		
7. How many times did you tease someone online in a hostile manner?		
8. You intentionally embarrassed, frightened, or threatened someone online?		
9. You called someone a bad name online?		
10. You threatened someone online that you would physically harm him/her?		
11. You intentionally excluded someone online and made him/her feel like an outcast online by one or more of their peers?		
12. You made up something something negative about someone online so that others would no longer like them?		

Adapted by Beverly Shieh from the Reduced Aggression/Victimization Scale: Orpinas & Horne, 2006.

### Subscale Scoring Instructions

Point value are assigned as follows:

Yes = 1

No = 0

Cybervictim Subscale: Items 1-6

Cyberbully Subscale: Items 7-12

Subscale scores are computed by summing the respective items. The range for each subscale is 0 to 6, with higher scores indicating more experience as a cybervictim or cyberbully respectively.

### Cyberbullying Role Categorization Scoring Instructions

If one or more items are endorsed in only one subscale, then the user will be assigned that respective cyberbullying role. If one or more items are endorsed in both subscales, then the user will be assigned the Cyberbully/victim role.

## APPENDIX E

### Daily Log

1. Today's date: [This will be automatically inputed]
2. I spent approximately this many hours and/or minutes online today.
  - o Hours\_\_\_\_\_ Minutes\_\_\_\_\_
3. I engaged in the following forms of online communication today (Please select all that apply):
  - o Email
  - o Instant Message
  - o Text message (mobile)
  - o Chatroom
  - o Message board
  - o Youtube
  - o Facebook
  - o Instagram
  - o Twitter
  - o Blog
  - o Other\_\_\_\_\_
4. I intentionally hurt, upset, distressed, or threatened someone during my online communications today.
  - o True
  - o False
5. I used the following online communication(s) to intentionally to hurt, upset, distress, or threaten someone online (Please select all that apply):
  - o Email
  - o Instant Message
  - o Text message (mobile)
  - o Chatroom
  - o Message board
  - o Youtube
  - o Facebook
  - o Instagram
  - o Twitter
  - o Blog
  - o Other\_\_\_\_\_
6. Someone tried to hurt, upset, distress, or threaten me online today.
  - o True
  - o False

7. Someone used the following online communication(s) to hurt, upset, distress, or threaten me online today (Please select all that apply):

- ☐ Email
- ☐ Instant Message
- ☐ Text message (mobile)
- ☐ Chatroom
- ☐ Message board
- ☐ Youtube
- ☐ Facebook
- ☐ Instagram
- ☐ Twitter
- ☐ Blog
- ☐ Other \_\_\_\_\_



## APPENDIX F

### *CyberPAL*: A Mobile Resource for Cyberbullying



## CyberPAL - A Mobile Resource for Cyberbullying

### Feature Overview and Wireframing

Beverly S. Shieh, M.A.

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## Chapter 1: Introduction to CyberPAL

### What is CyberPAL?

CyberPAL is a mobile app focused on increasing adolescents' awareness of their potential involvement in cyberbullying and its potential negative impacts, while also providing resources to help both victims and perpetrators. The mobile app is tailored to each user's experience with online bullying based on his or her<sup>1</sup> cyberbullying role (e.g., cyberbully, cybervictim, or cyberbully/cybervictim). CyberPAL includes the following features:

- An assessment module to determine the user's cyberbully role.
- Self-monitoring of online behaviors through a Daily Log to increase awareness of online behavior.
- Tailored psychoeducation on cyberbullying based on the users' cyberbully role(s).
- Tailored resources on coping strategies, reporting, and bullying programs based on the users' cyberbully role(s).

### Who is this mobile-app for?

CyberPAL is a resource for teenagers age 12-18 involved in cyberbullying either as cybervictims, cyberbullies, or both. Although intended primarily for use by individual teens as a self-help tool, the app's design also enables it to be implemented as part of a hybrid approach in conjunction with therapy or school-based programs.

### What does CyberPal aim to do?

CyberPAL is designed to provide teens with an accessible tool that will help decrease cyberbullying by increasing their awareness of online behaviors and connecting them with cyberbullying resources (providing psychoeducation and coping strategies). The mobile-app is tailored to each user's role in cyberbullying to achieve the following specific goals:

- The goals for cybervictims are to increase their awareness of cyberbullying and its impact, connect them with resources selected to help them cope with bullying-related stressors, and, ideally, decrease their victimization. Coping resources include reporting bullying, avoidance and defense strategies, and social support.<sup>2</sup>
- The goal for cyberbullies is to decrease future bullying by increasing awareness of both their behaviors online and the adverse impact of such behaviors. The

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<sup>1</sup>The app is intended for both male and female adolescents, thus male and female pronouns will both be used throughout the manual.

<sup>2</sup>Šleglova, V., & Cerna, A. (2011). Cyberbullying in Adolescent Victims: Perception and Coping. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 5(2), article 1. Retrieved from <http://cyberpsychology.eu/view.php?cisloclanku=2011121901&article=1>

resources selected for cyberbullies aim to help them cope with anger and aggression,<sup>3</sup> reduce vengeful feelings,<sup>4</sup> and improve emotional regulation.<sup>5</sup>

- All the above goals apply to those users who are both victims and bullies, with the overall objective being to decrease both victimization and bullying behavior.

### **Why does CyberPAL focus on cyberbullying?**

Bullying continues to be a prevalent problem with adverse short- and long-term physical and psychological consequences for both victims and perpetrators. The use of computer-mediated communications (CMCs) (e.g., Facebook, instant messaging, email) among adolescents has led to the emergence of cyberbullying, a new form of bullying that involves threatening and/or harassing another person through the use of texts, pictures, or other forms of online media or communication. As the use of computer-mediated communications (CMC) among teenagers increases,<sup>6</sup> so does the prevalence of cyberbullying along with its adverse effects for both perpetrators and victims<sup>7</sup>. In light of the limited number of current intervention programs focused specifically on cyberbullying, an accessible and easy-to-use clinical resource for cyberbullying is needed.

Despite significant advances in programs aimed at preventing or decreasing the frequency of traditional bullying, few resources to date have targeted cyberbullying and those that do have focused largely on reporting functions, monitoring and restricting online usage, and blocking certain types of messages (e.g., those that contain vulgarity) or specific online users (e.g., those that the child or parent identifies as a cyberbully). Lacking are cyberbullying resources that tailor their content to users' cyberbullying roles or that focus on increasing users' awareness of their involvement in cyberbullying and its possible impact. In contrast to other cyberbullying resources, CyberPAL focuses on increasing the individual bully or victim's awareness of his or her own involvement in cyberbullying through psychoeducation, self-monitoring, and tailored resources.

### **Why was this resource developed as a mobile-app?**

Since cyberbullying most often occurs outside of school hours using home computers and mobile electronic devices,<sup>8</sup> providing the resource in a form applicable to these contexts may enhance its use and effectiveness. Implementing the resource via a mobile application may

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<sup>3</sup> Candelaria, A. M., Fedewa, A. L., & Ahn, S. (2012). The effects of anger management on children's social and emotional outcomes: A meta-analysis. *School Psychology International*, 33(6), 596-614. doi:10.1177/0143034312454360

<sup>4</sup> Topcu, C., & Erdur-Baker, O. (2012). Affective and cognitive empathy as mediators of gender differences in cyber and traditional bullying. *School Psychology International*, 33(5), 550-561. doi:10.1177/0143034312446882

<sup>5</sup> Laghi, F., Pallini, S., D'Alessio, M., & Baiocco, R. (2011). Development and Validation of the Efficacious Self-Presentation Scale. *The Journal of Genetic Psychology*, 172(2), 209-219. doi:10.1080/00221325.2010.526975

<sup>6</sup> Lenhart, A., et al. (2011, November 9). Teens, kindness and cruelty on social network sites: How American teens navigate the new world of digital citizenship. *Pew Research Center, Internet, Science & Tech*. Retrieved from <http://www.pewinternet.org/2011/11/09/teens-kindness-and-cruelty-on-social-network-sites/>

<sup>7</sup> Patchin, J. W. (2013, November 20). Cyberbullying Research: 2013 Update. *Cyberbullying Research Center*. Retrieved from <http://cyberbullying.us/cyberbullying-research-2013-update/>

<sup>8</sup> Shariff, S., & Hoff, D. L. (2007). Cyber bullying: Clarifying legal boundaries for school supervision in cyberspace. *International Journal of Cyber Criminology*, 1(1), 76-118.

also remove roadblocks that can impede efforts to address bullying through traditional delivery methods. For instance, one of the most common obstacles to proactive action for victims of bullying is fear. Many targeted adolescents fear that if they tell someone or ask for help it will make the bullying worse and/or lead to their online privileges being taken away. Victims of bullying often do not share their experiences with parents or school counselors because they are embarrassed and do not want others to know they are experiencing peer rejection. Because resources delivered via mobile applications may provide users with anonymity, a disinhibiting effect may lead teens to engage more with the resource and be more self-disclosing. As a result, they may be more likely to report bullying or ask for help via an app as opposed to through face-to-face interactions. Additionally, the 24/7 accessibility of a mobile app for adolescents provides the potential for greater engagement with and benefits from the tools it provides. This is based on the near ubiquity of access to CMCs for teens, as well as their familiarity and comfort level with the medium.

### **How should CyberPAL be used?**

CyberPAL is meant to be used as a resource for teens to learn more about cyberbullying, their cyberbullying role, and additional resources. As mentioned previously, it is intended primarily for use by individual teens as a self-help tool. However the app's design will also enable it to be implemented as part of a hybrid approach in conjunction with therapy or school-based programs. It may also be used as a resource for parents, adults, and school personnel to increase awareness and knowledge of cyberbullying.

The app was designed as a continuously available resource to be used as needed to address the users' current needs (e.g., resources, support, awareness). It was designed foremost for those who experience cyberbullying as either a cyberbully, cybervictim, or both. Engaging those in a cyberbully role presents a challenge, given the reinforcing feelings of power that may accompany their bullying and the consequent lack of desire to change current aggressive behaviors. However, if an adolescent is unsure whether or not he is engaging in cyberbullying, and/or is feeling some remorse after cyberbullying, the app can serve to increase his awareness of what constitutes cyberbullying and provide ways for him to decrease cyberbullying behavior. Those in a cybervictim role may also be unaware of whether or not they are being cyberbullied, and may be disinclined to seek support or other resources due to the possibility of shame, guilt, and/or retaliation from peers. In such instances, the app may not only help the user determine that she is being cyberbullied, but also provide a private support system through online communities, personal contacts, and/or guidance on ways to speak to an adult about the problem. Finally, teens and adults who are interested in learning more about cyberbullying may benefit from the app as well, as might school-based programs who use the app in conjunction with the services they are providing.

Although adolescents who are experiencing negative effects (e.g., depression, anger, anxiety) related to cyberbullying (in any role) may benefit from the app, the activities, tools, and information found in CyberPAL in no way substitute for care provided by a trained professional. Therefore additional help should be sought from a licensed mental health professional if the

user is experiencing signs of depression or another mental health disorder. If the user is unsure whether CyberPAL is an appropriate resource for him or her, or if additional guidance is needed on how to best implement its content, he or she should direct such concerns to a licensed mental health professional.

## **Conclusions**

Although CyberPAL provides information, resources, and activities to identify and understand cyberbullying, numerous materials relevant to the topic are beyond the scope of this mobile-app. Therefore, users seeking to fully understand cyberbullying and how to address it should be encouraged to look beyond the information provided in this mobile-app. The 'Resources Module' in CyberPal provides useful sites and programs to help direct the user to such information.

Although the CyberPAL app is intended to be used by teenagers involved in cyberbullying, this manual was developed for adults (e.g., parents, teachers, therapists) who are interested in learning more about cyberbullying and the app. A simulation of CyberPAL was created using a mobile-app development program called *JustinMind*, and screen shots of the simulation are included in this manual. Therefore, it is recommended that the reader view the presentation of the CyberPAL simulation in addition to reading this manual.

## Chapter 2: Overview of CyberPAL Modules

The mobile-app is comprised of several modules: an Assessment Module, Psychoeducation Module, Self-Monitoring Module (consisting of a daily log of online activities), and a Resources Module. Although all modules will be available to users from all three cyberbullying roles, their contents will be tailored to the user's role (e.g., psychoeducation will differ for victims and bullies).

### Assessment Module

The Assessment Module is administered to all users and determines each user's cyberbullying role. It includes a modified version of the Reduced Aggression/Victimization Questionnaire,<sup>9</sup> which is among the measures included in the Center for Disease Control (CDC) Bullying Compendium.<sup>10</sup> Although all items from the original questionnaire are used, the language has been altered to address aggression and victimization through cyberbullying instead of physical bullying (see Appendix A).

### Psychoeducation Module

The Psychoeducation Module includes information on how to recognize different forms of cyberbullying behavior, cyberbullying roles, adverse effects of being a victim and/or bully, and what signs/symptoms might be suggestive of those effects. The psychoeducation content presented to the user is based on his or her cyberbullying role determined by the Assessment Module. However, all topics are accessible to all users to help increase overall awareness and knowledge of cyberbullying.

### Daily Log Module

The Daily Log Module comprises a self-monitoring tool for computer-mediated communications (CMC), cyberbullying experiences (e.g., bullying and victimization online), and online mediums used to bully.<sup>11</sup> In addition to increasing users' awareness of behaviors associated with their initial cyberbullying role, the daily log is also used to identify behaviors that might signify a change in users' cyberbullying role. To help monitor possible changes in cyberbullying roles and increase overall awareness of online behavior, this module will be administered to all users (instead of only to those in specific cyberbullying roles). Users will be prompted to complete The Daily Log once a day, at a specific time designated by the user (see Appendix B).

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<sup>9</sup>Orpinas, P., & Horne, A. M. (2006). *Bullying prevention: Creating a positive school climate and developing social competence*. Washington, DC: American Psychological Association.

<sup>10</sup>Hamburger, M. E., Basile, K. C., & Vivolo, A. M. (2011). *Measuring bullying victimization, perpetration, and bystander experiences a compendium of assessment tools*. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, Division of Violence Prevention.

<sup>11</sup>Shieh, B. (2008). The Effects of Awareness and Empathy on Adolescents' Morals, Personality and Behavior on Computer-Mediated Communications.

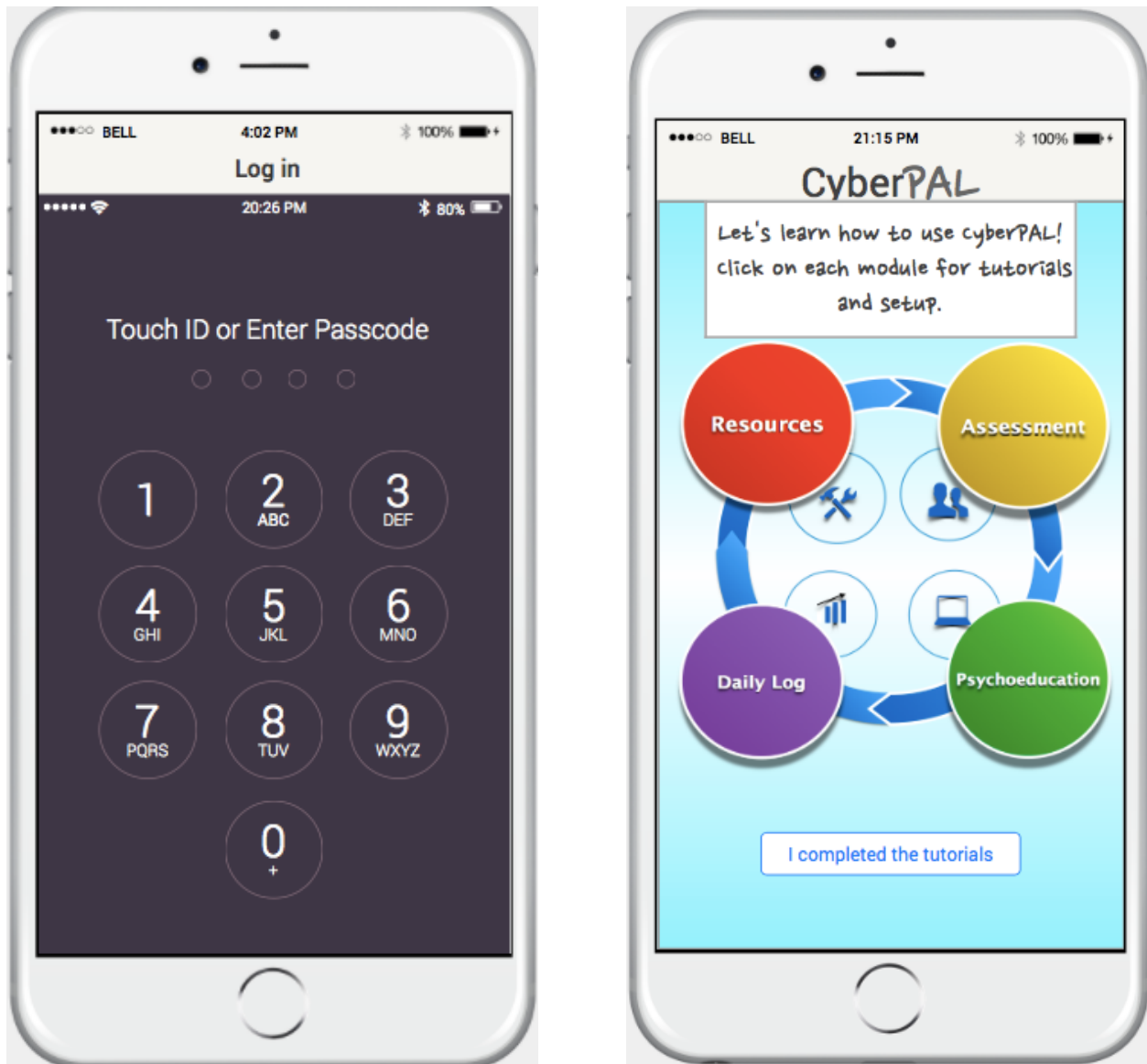


## **Resources Module**

The Resources Module provides links to relevant adjunctive resources including other anti-bullying programs, hotlines, coping skills for bullies and victims depending on assigned role (e.g., anger management for bullies), online communities, and personal contacts representing potential sources of support. The resources provided in the mobile-app are tailored to the user's cyberbullying role as determined by the results from the Assessment Module.

## Chapter 3: Orientation and Administration

### Log-in and Welcome



**LEFT:** Upon downloading CyberPAL, the user is directed to set a 4-digit security PIN for privacy protection. A Touch ID option may also be set to bypass entering the PIN when opening the app.

**RIGHT:** Upon initially opening CyberPAL, the user is oriented to the app through a tutorial that walks him through each module. The tutorial also directs users as to how to input information necessary to tailor the content of certain modules to their specific needs.

## Assessment Module



**LEFT:** CyberPAL tailors the content of the app to users' specific needs. To identify these needs, users are asked to complete a brief questionnaire about their online behaviors. This questionnaire is a modified version of the Reduced Aggression/Victimization Scale (see Appendix A).<sup>12</sup> The results of the questionnaire will be used to determine the user's cyberbullying role (if applicable), based on an algorithm developed by the app's designer. The app will administer the questionnaire at initial download and once a year, in order to tailor the app to the user's current cyberbullying role.

**RIGHT:** Upon completing the questionnaire, the user is informed of how the app will be tailored to his specific needs based on his assigned cyberbullying role (e.g., cyberbully, cybervictim, cyberbully/victim). The results are focused on goals versus explicit feedback on role assignment.

<sup>12</sup> Orpinas, P., & Horne, A. M. (2006). *Bullying prevention: Creating a positive school climate and developing social competence*. Washington, DC: American Psychological Association.

## Psychoeducation Module

### General Content on Cyberbullying



**Above:** Psychoeducation module home screen that contains general content on cyberbullying. This content is available across all cyberbullying roles. Tapping on each icon connects the user to additional resources to learn more about the following topics (descriptions of each topic are provided on the following pages):

- What is cyberbullying?
- What are some examples of cyberbullying?
- What are the different types of cyberbullying?
- How is cyberbullying different?
- Why do people cyberbully?
- How can I prevent cyberbullying?

## Psychoeducation Module: General Content on Cyberbullying (Continued)



**Left:** The “What is Cyberbullying?” button directs the user to a screen that provides a basic definition of cyberbullying. The “Watch Video” button directs the user to a video that explains what cyberbullying is.<sup>13</sup> The “More Information” button directs the user to additional descriptions of cyberbullying.<sup>14</sup>

**Right:** The “What are some examples of cyberbullying?” button directs the user to a screen that provides some examples of behaviors that would be considered cyberbullying. These includes sending cruel/threatening messages, posting negative things about others online, and using a fake identity to conceal one’s true identity while cyberbullying. The “Watch Video” button directs the user to a video that gives visual examples of cyberbullying.<sup>15</sup>

<sup>13</sup> The Federal Commission. (2010, October 8). *Stand Up to Cyberbullying* [Video File]. Retrieved from <https://www.youtube.com/watch?v=IN2fuKPDzHA>

<sup>14</sup> StopBullying.gov (n.d.). What is cyberbullying? Retrieved from <http://www.stopbullying.gov/cyberbullying/what-is-it/index.html>

<sup>15</sup> Against Cyberbullying. (2011, November 1). *Recognising Cyberbullying - Seven Examples* [Video File]. Retrieved from [https://www.youtube.com/watch?v=\\_QgbPPfibU0](https://www.youtube.com/watch?v=_QgbPPfibU0)

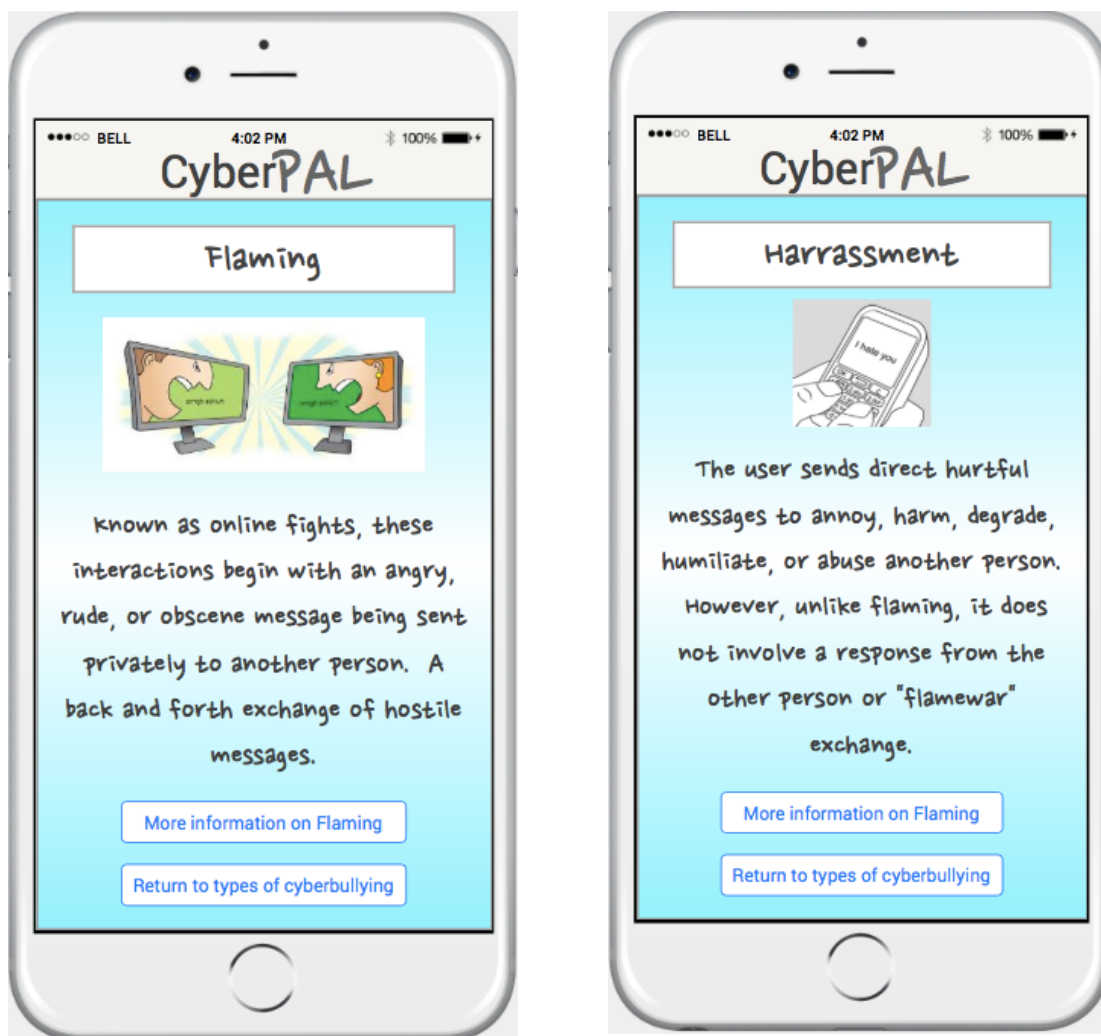
## Psychoeducation Module: General Content on Cyberbullying (Continued)



**Above:** The “What are the different types of cyberbullying?” button directs the user to a screen that identifies the common types of cyberbullying (Note: “masquerading” and “cyberstalking” are available as options after scrolling down on the screen). Each button directs the user to more information and resources for each type (descriptions of each type are provided on the following pages):

- Flaming
- Harassment
- Denigration
- Trickery
- Exclusion

## Psychoeducation Module: General Content on Cyberbullying (Continued)



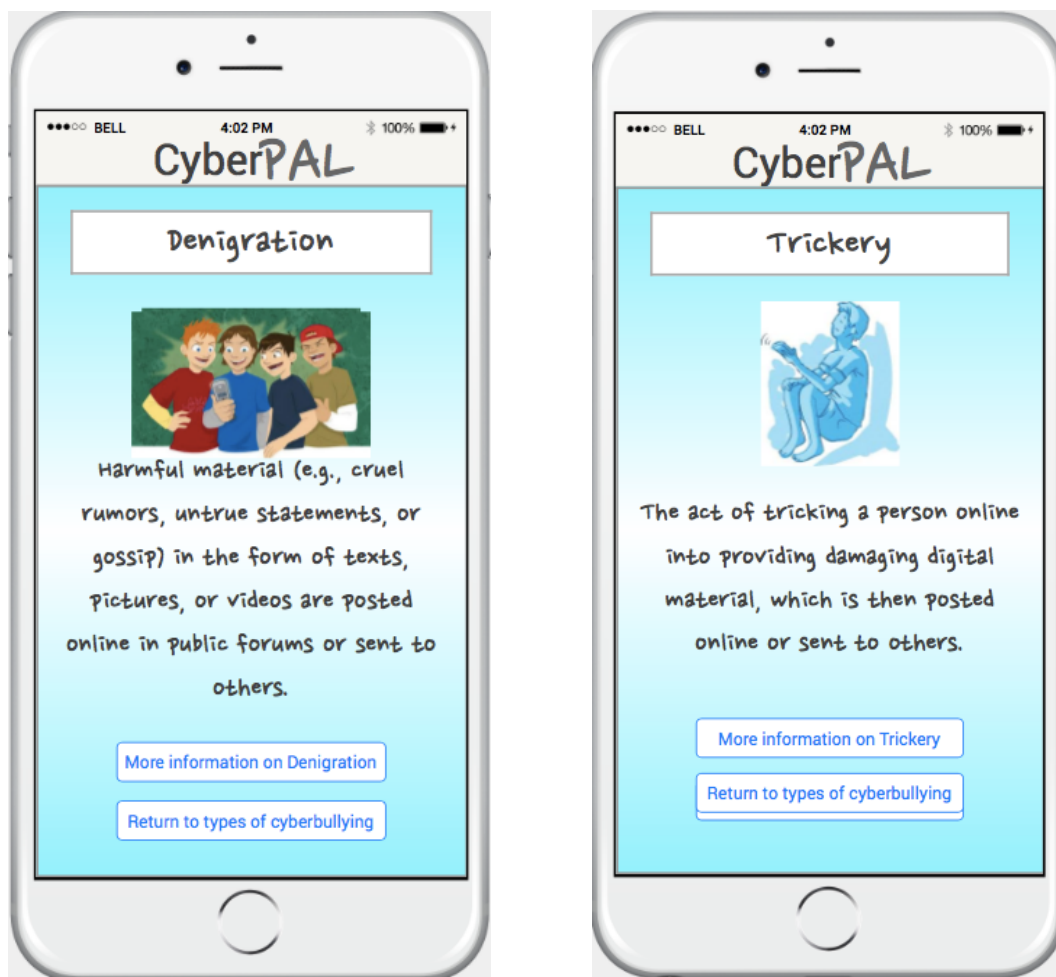
**Left:** The “Flaming” button directs the user to a screen that provides a basic definition of online flaming. The “More Information” button directs the user to an additional description of flaming from the organization [NoBullying.com](http://nobullying.com).<sup>16</sup>

**Right:** The “Harassment” button directs the user to a screen that provides a basic definition of online harassment. The “More Information” button directs the user to an additional description of harassment from the organization [WiredSafety.org](https://www.wiredsafety.org/subjects/cyberbullying.php).<sup>17</sup>

<sup>16</sup> [NoBullying.com](http://nobullying.com/what-is-flaming/), A Movement Against Bullying (2015). Retrieved from <http://nobullying.com/what-is-flaming/>.

<sup>17</sup> [WiredSafety.org](https://www.wiredsafety.org/subjects/cyberbullying.php) (2012). Retrieved from <https://www.wiredsafety.org/subjects/cyberbullying.php>.

## Psychoeducation Module: General Content on Cyberbullying (Continued)



**Left:** The “Denigration” button directs the user to a screen that provides a basic definition of online denigration. The “More Information” button directs the user to an additional description of denigration from the organization *Violence Prevention Works*.<sup>18</sup>

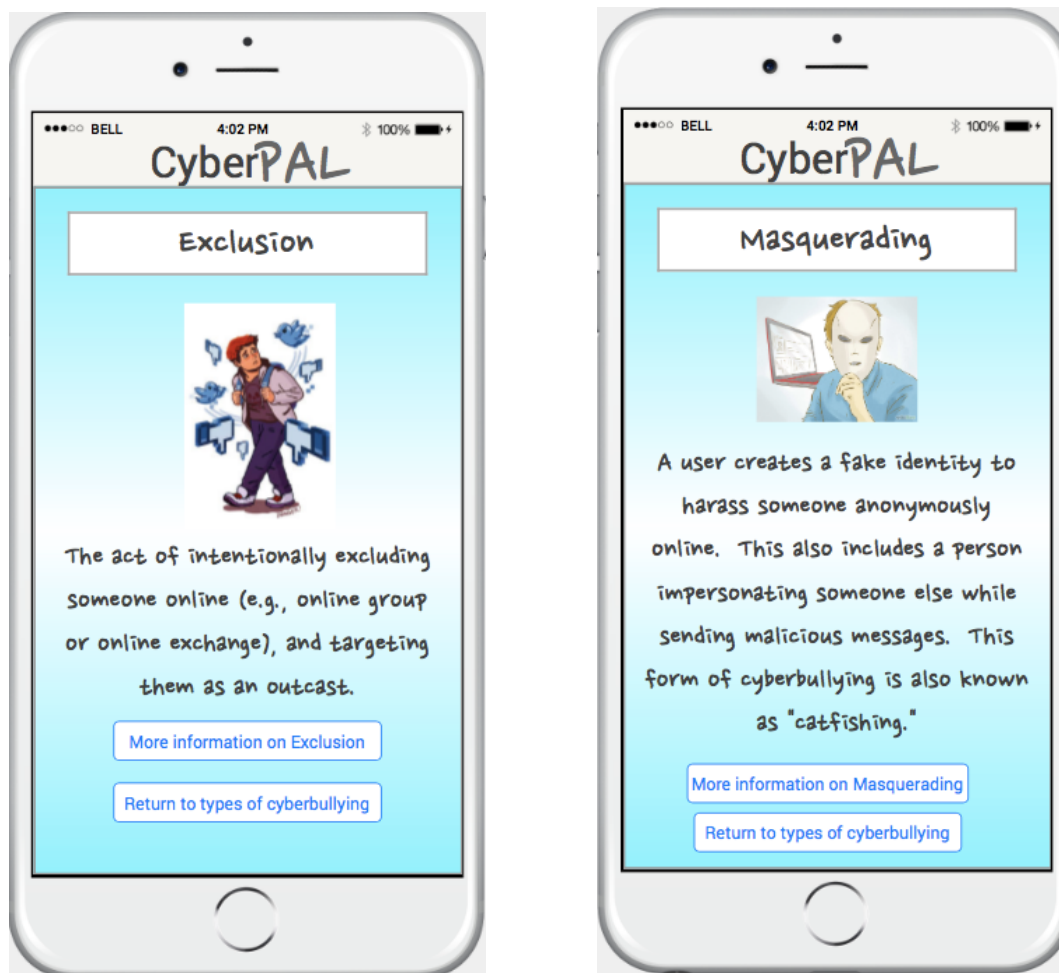
**Right:** The “Trickery” button directs the user to a screen that provides a basic definition of online trickery. The “More Information” button directs the user to an additional description of trickery from the organization *WirdeSafety.org*.<sup>19</sup>

<sup>18</sup>Violence Prevention Works (2015). Retrieved from [http://www.violencepreventionworks.org/public/cyber\\_bullying.page](http://www.violencepreventionworks.org/public/cyber_bullying.page).

<sup>19</sup>WiredSafety.org (2012). Retrieved from <https://www.wiredsafety.org/subjects/cyberbullying.php>.



## Psychoeducation Module: General Content on Cyberbullying (Continued)



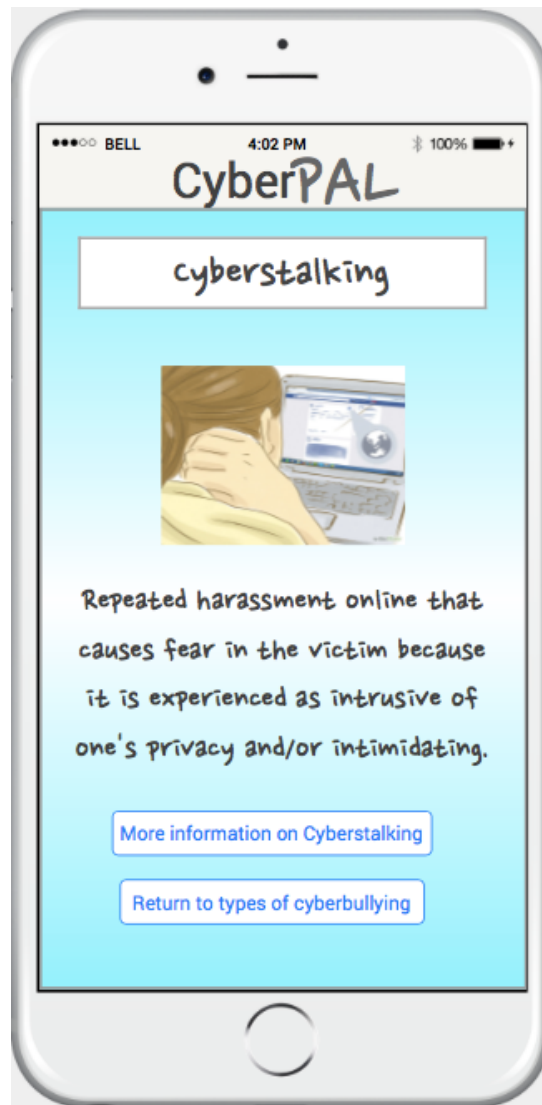
**Left:** The “Exclusion” button directs the user to a screen that provides a basic definition of online exclusion. The “More Information” button directs the user to an additional description of exclusion from the *Cyberbullying Research Center*.<sup>20</sup>

**Right:** The “Masquerading” button directs the user to a screen that provides a basic definition of online masquerading. The “More Information” button directs the user to an additional description of masquerading from the *End to Cyber Bullying Organization*.<sup>21</sup>

<sup>20</sup> Cyberbullying Research Center (n.d.). Retrieved from <http://cyberbullying.org/social-exclusion-and-bullying/>.

<sup>21</sup> End to Cyber Bullying Organization (2015). Retrieved from <http://www.endcyberbullying.org/5-different-types-of-cyberbullying/>.

## Psychoeducation Module: General Content on Cyberbullying (Continued)



**Above:** The “Cyberstalking” button directs the user to a screen that provides a basic definition of cyberstalking online. The “More Information” button directs the user to an additional description of cyberstalking from the organization *WiredSafety.org*.<sup>22</sup>

<sup>22</sup> *WiredSafety.org* (2015). Retrieved from <https://www.wiredsafety.org/subjects/cyberbullying.php>.

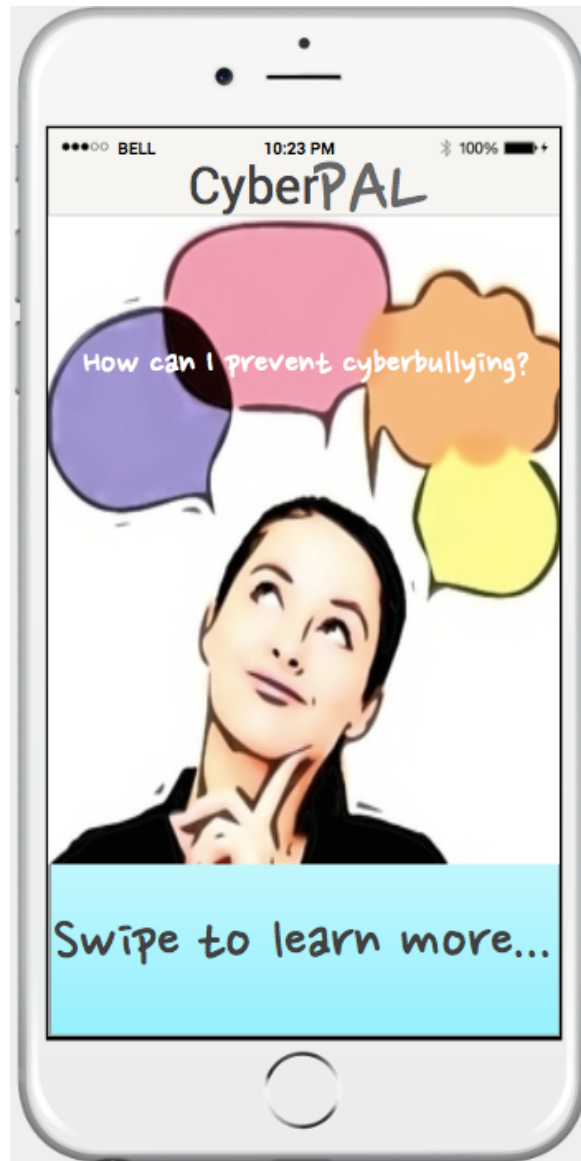
## Psychoeducation Module: General Content on Cyberbullying (Continued)



**Left:** The “How is cyberbullying different” button directs the user to a screen that explains three main factors that differentiate cyberbullying from traditional bullying. These include the dissemination of harmful messages to a larger audience, online anonymity, and 24/7 access to computer-mediated communications.

**Right:** The “Why do people cyberbully?” button directs the user to a screen that explains common reasons why teens may cyberbully others. Becoming familiar with possible reasons why one may engage in this behavior will help those who are cyberbullied understand that the bullying was not their fault, and also help those who cyberbully become more aware of their behaviors.

## Psychoeducation Module: General Content on Cyberbullying (Continued)



**Above:** The “How can I prevent cyberbullying?” button (swipe) identifies various cyberbullying prevention strategies as well as resources related to those strategies. These resources are provided under overarching recommendations which the user can access by swiping the initial screen (pictured above).

## Psychoeducation Module: General Content on Cyberbullying (Continued)



**Left:** The user is directed to the first screen which advises her to “refuse to pass along cyberbullying messages.” Additional information is provided on possible steps to take (e.g., report it to an adult instead). Swiping the bottom of the screen (pictured above) directs the user to the next tip on how to prevent cyberbullying.

**Right:** The user is directed to the second screen which advises him to “tell a friend to stop cyberbullying.” Additional information is provided on specific points to tell a friend to stop cyberbullying (e.g., refuse to be a part of cyberbullying, say it is wrong and can hurt someone, say you can get into trouble). Swiping the bottom of the screen (pictured above) directs the user to the next tip on how to prevent cyberbullying.

## Psychoeducation Module: General Content on Cyberbullying (Continued)



**Left:** The user is directed to the third screen which provides information on signing an anti-bullying pledge. Clicking on the CLICK HERE button directs the user to *The Megan Pledge* at *Tween Angels* from *WiredSafety.org*.<sup>23</sup> Here the user may download a pledge kit with information on how to also start up a pledge at his school. Swiping the bottom of the screen (pictured above) directs the user to the next tip on how to prevent cyberbullying.

**Right:** The user is directed to the fourth screen which advises the user to “report cyberbullying.” Clicking on the CLICK HERE button directs the user to the organization *StopCyberbullying.org*,<sup>24</sup> where he can find additional information on how to report cyberbullying to an adult or online reporting system. Swiping the bottom of the screen (pictured above) directs the user to the next tip on how to prevent cyberbullying.

<sup>23</sup> Tween Angels, *WiredSafety.org* : The Megan Pledge (n.d.) Retrieved from [http://www.teenangels.org/the\\_megan\\_pledge/](http://www.teenangels.org/the_megan_pledge/).

<sup>24</sup> *StopCyberbullying.org* (2015). Retrieved from <http://www.stopbullying.gov/cyberbullying/how-to-report/index.html>.

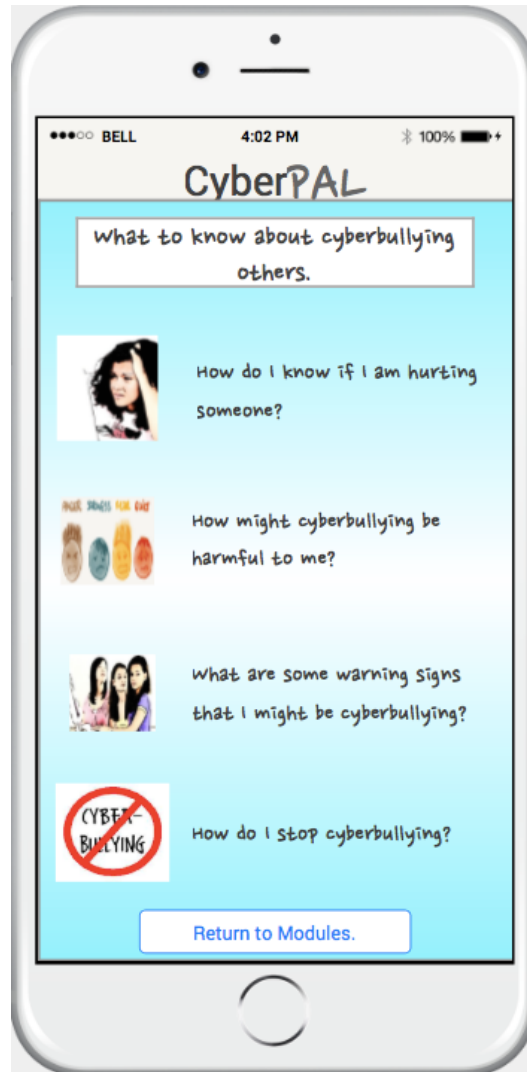
## Psychoeducation Module: General Content on Cyberbullying (Continued)



**Above:** The user is directed to the fifth screen which provides information intended to “raise awareness about cyberbullying.” Clicking on the CLICK HERE button directs the user to the organization [StopCyberbullying.org](http://www.stopbullying.org),<sup>25</sup> where he can find additional information on how to raise awareness at school and/or in the community.

<sup>25</sup> [StopCyberbullying.org](http://www.stopbullying.org) (2015). Retrieved from <http://www.stopbullying.gov/what-you-can-do/teens/index.html>

## Cyberbully Role Content



**Above:** Psychoeducation module home screen that contains content for those classified in the cyberbully role. Tapping on each icon connects the user to additional resources to learn more about the following topics (descriptions of each topic are provided on the following pages):

- How do I know if I am hurting someone?
- How might cyberbullying be harmful to me?
- What are some warning signs that I might be cyberbullying?
- How do I stop cyberbullying?



## Psychoeducation Module: Cyberbully Role Content (Continued)

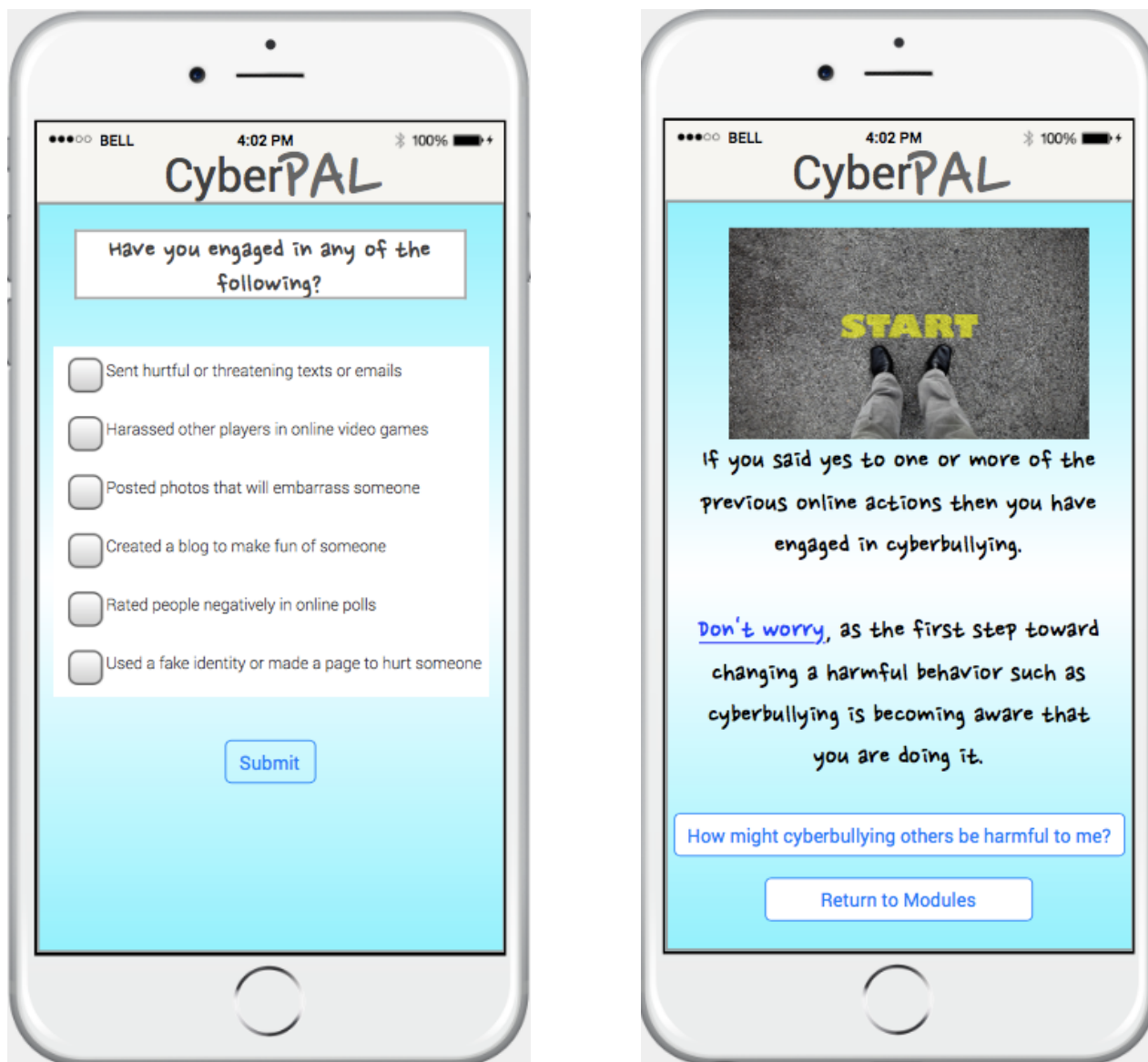


**Left:** The “How do I know if I am cyberbullying?” button directs the user to multiple resources designed to promote self-awareness of harmful on-line behavior. Swiping the bottom of the screen (pictured above) allows the user to access examples of cyberbullying, a self-assessment for cyberbullying behavior, and more information tailored to those who engage in cyberbullying.



**Right:** A basic definition of a “cyberbully” or “cyberbullying” behavior is provided. Swiping the bottom of the screen (pictured above) directs the user to additional resources on how to identify if the he is cyberbullying.

## Psychoeducation Module: Cyberbully Role Content (Continued)



**Left:** Cyberbullying behaviors are broken down into a checklist for the user to complete in order to identify which (if any) forms of cyberbullying she has engaged in.

**Right:** After submitting online behaviors checklist, the user will be directed to a results page that indicates whether he is engaging in cyberbullying. Regardless of whether the user endorses any of the items, she will be directed to content reviewing possible negative correlates of cyberbullying others. Clicking on the “How might cyberbullying others be harmful to me?” directs the user to the next available resource.

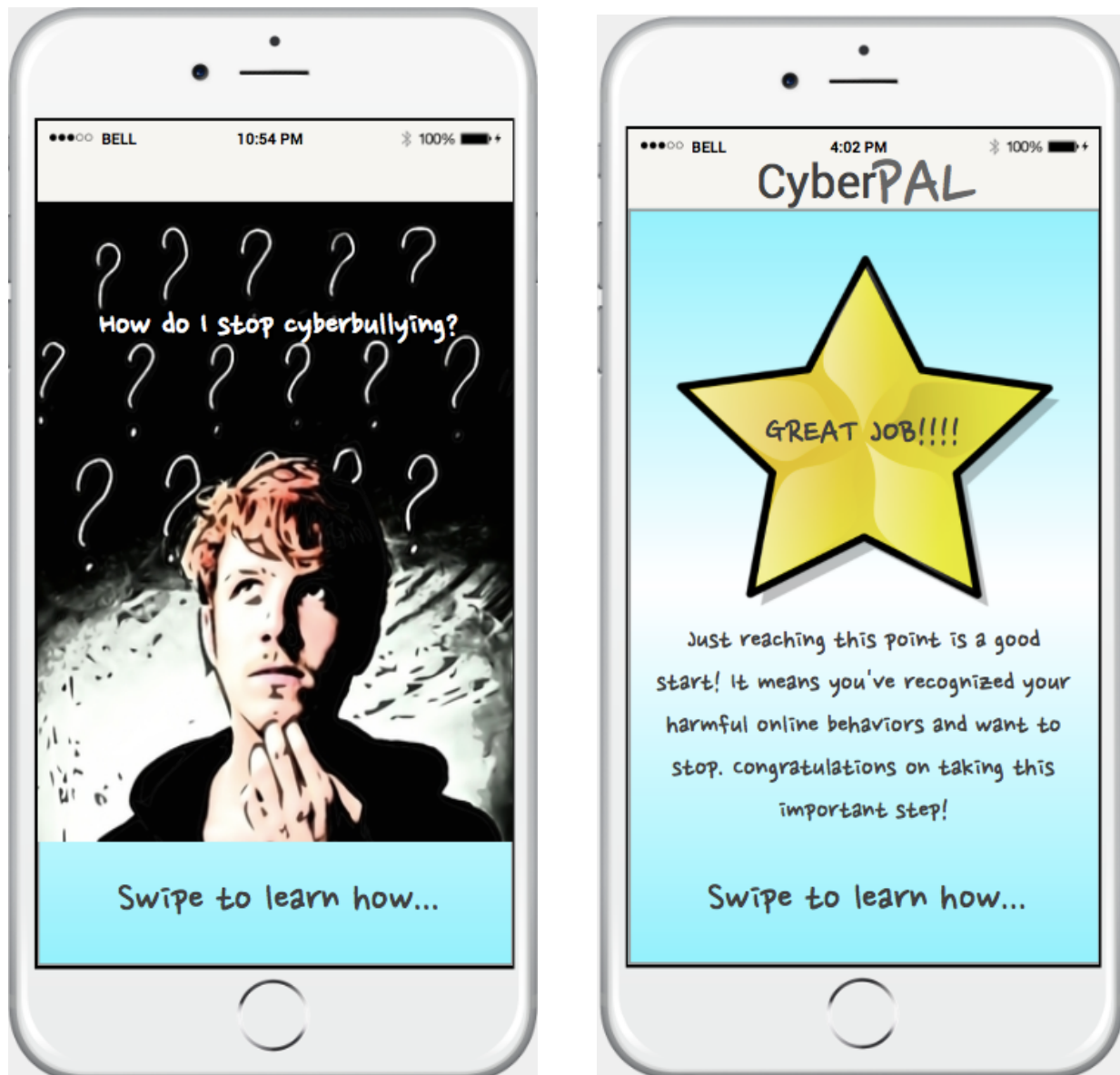
## Psychoeducation Module: Cyberbully Role Content (Continued)



**Left:** These are some difficulties often experienced by those who cyberbully others. They include difficulties with managing emotions, concentration, and headaches, as well as additional antisocial behavior. Clicking on the “What are some cyberbullying warning signs?” directs the user to the next available resource.

**Right:** The “What are some possible cyberbullying warning signs?” button provides the user with five known warning signs that may alert her to possible cyberbullying behavior occurring. These include cessation of computer use when others approach, nervousness or anxiousness when online, and excessive time spent online. Clicking on the “How do I stop cyberbullying?” directs the user to the next available resource.

## Psychoeducation Module: Cyberbully Role Content (Continued)



**Left:** The “How do I stop cyberbullying?” button (swipe) directs the user to additional information on how to stop cyberbullying behavior and supportive resources.

**Right:** Before accessing this information the user is praised for wanting to stop his cyberbullying behavior.

## Psychoeducation Module: Cyberbully Role Content (Continued)



**Above:** Multiple strategies to stop cyberbullying are provided. These include letting an adult know, changing the environment in which computer-mediated communications are used, and other activities such as the 1-minute rule (taking a minute after writing, but before sending something, to consider whether it's hurtful and how you'd feel if someone sent it to you). Tapping on each of these techniques directs the user to additional resources that guide their implementation.

## Cybervictim Role Content



**Above:** Psychoeducation module home screen that contains content for those classified in the cybervictim role. Tapping on each icon connects the user to additional resources to learn more about the following topics (descriptions of each topic are provided on the following pages):

- How do I know if I am being cyberbullied?
- How might being cyberbullies harm me?
- What can I do if I am being cyberbullied?
- How do I stay cybersafe?
- What are some warning signs that I may have been cyberbullied?



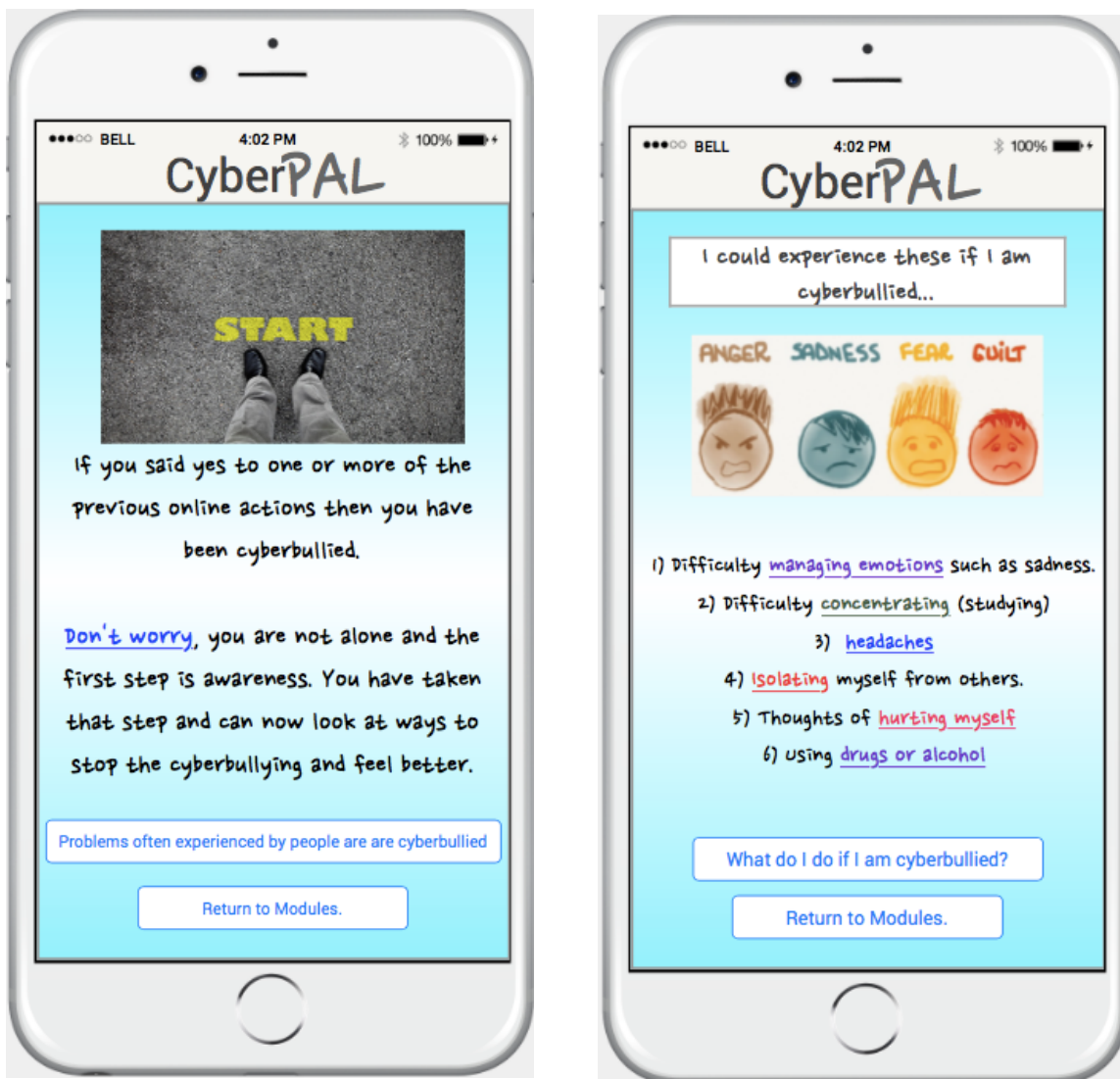
## Psychoeducation Module: Cybervictim Role Content (Continued)



**Left:** The “How do I know if I am being cyberbullied?” button directs the user to multiple resources designed to promote awareness of harmful on-line behavior. Swiping the bottom of the screen (pictured above) leads the user to a self-assessment for cyberbullying behavior, and more information tailored to those who are cyberbullied.

**Right:** Cyberbullying experiences are broken down into a checklist for the user to assess if he has ever been cyberbullied.

## Psychoeducation Module: Cybervictim Role Content (Continued)

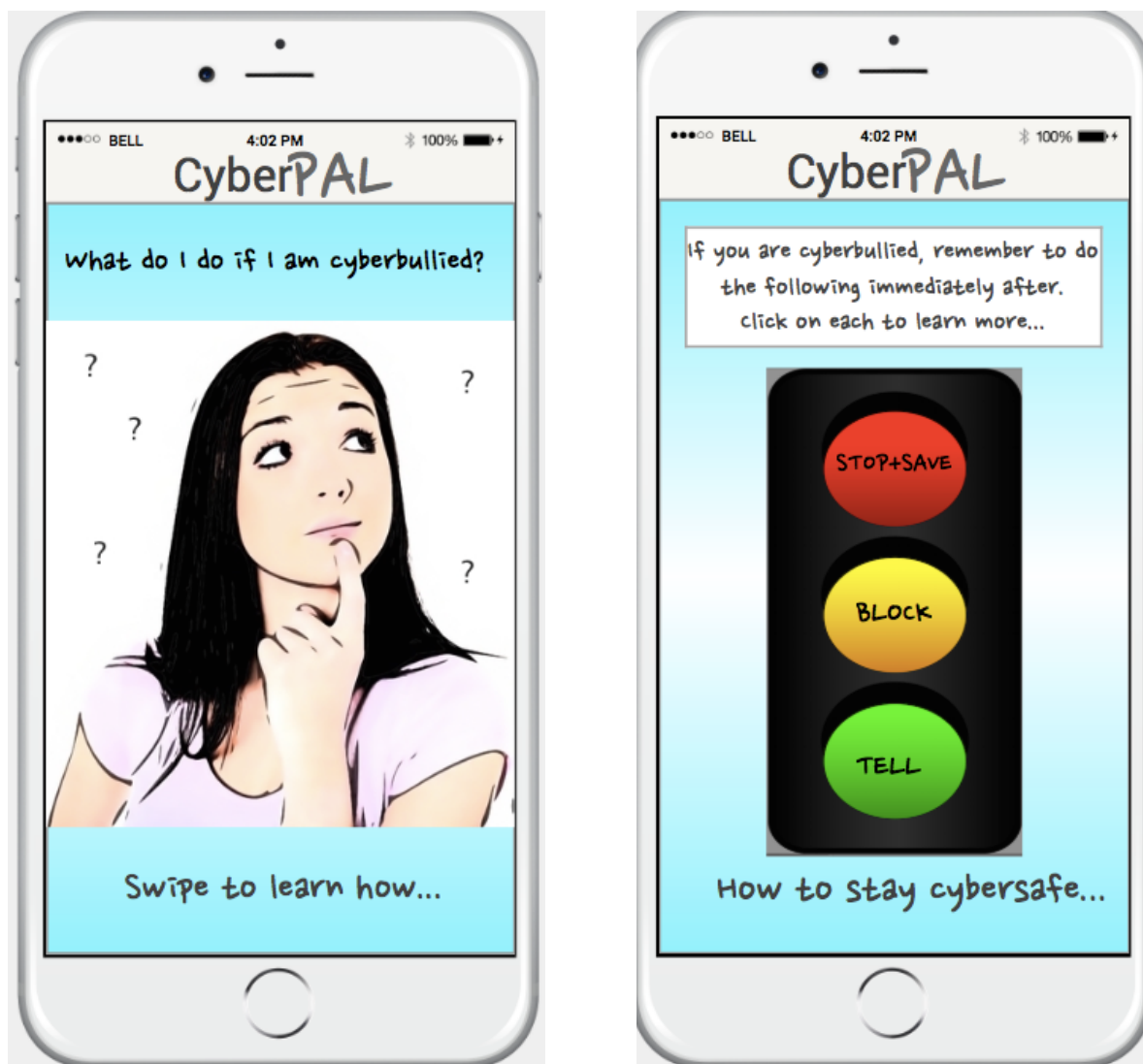


**Left:** After submitting the completed checklist of cyberbullying experiences, users are directed to a results page that indicates whether they have been cyberbullied. Regardless of whether the user endorses any of the items, she will be directed to content reviewing possible negative correlates of being cyberbullied. Clicking on the “Problems often experienced by people who are cyberbullied” directs the user to the next available resource.

**Right:** These are some possible difficulties the users who are being cyberbullied may experience. They include difficulties with managing emotions, concentration, and headaches. Clicking on the “What do I do if I am cyberbullied?” directs the user to the next available resource.



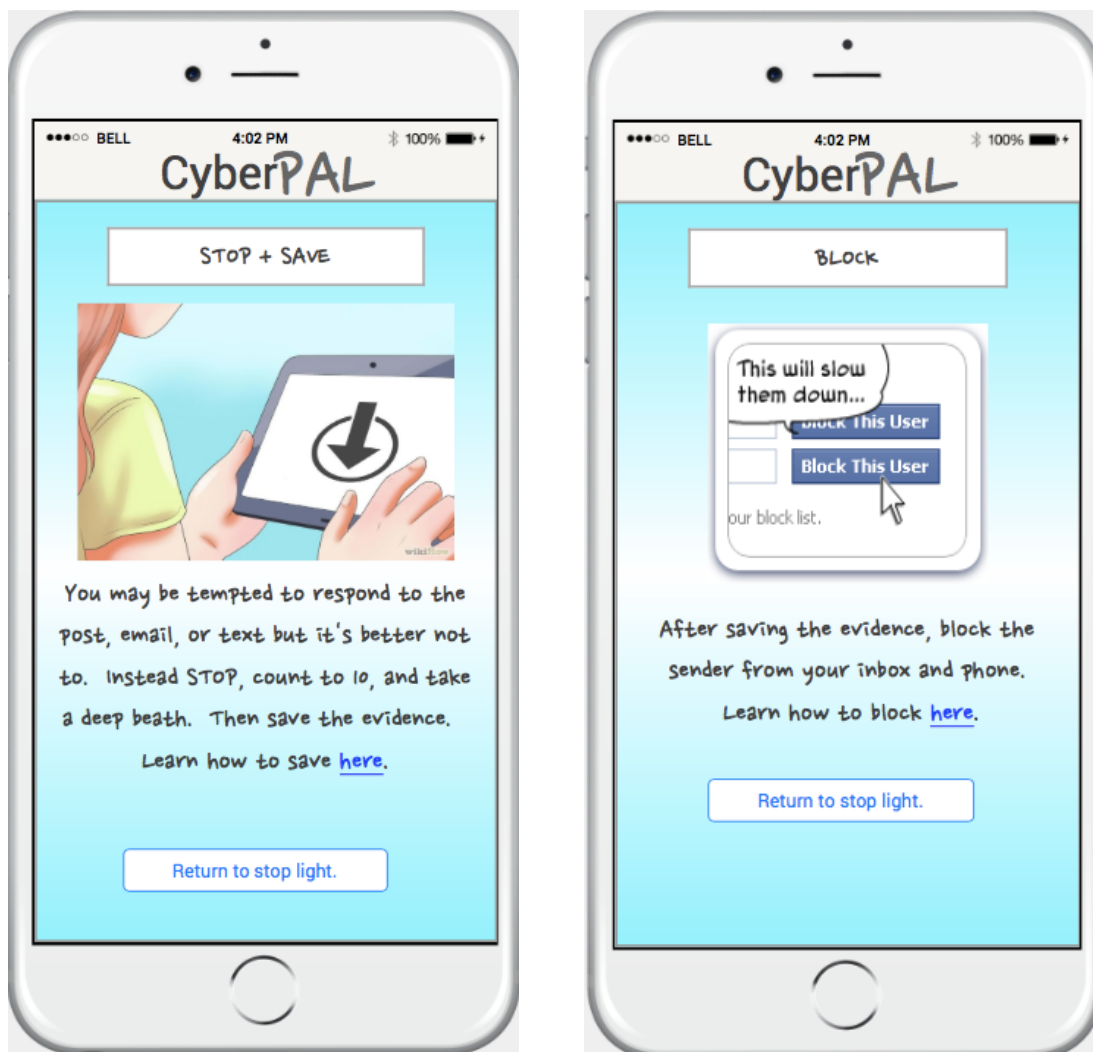
## Psychoeducation Module: Cybervictim Role Content (Continued)



**Left:** The “What do I do if I am cyberbullied?” button (swipe) directs the user to additional information on steps that may be taken after being cyberbullied.

**Right:** The three basic recommendations for what do after being cyberbullied are to “Stop + Save”, “Block”, and “Tell”. These steps are presented in a visual stop light format for the user to remember. Clicking on each light directs the user to more information on that step. Swiping the “How to stay cybersafe” section directs the user to the next available resource.

## Psychoeducation Module: Cybervictim Role Content (Continued)



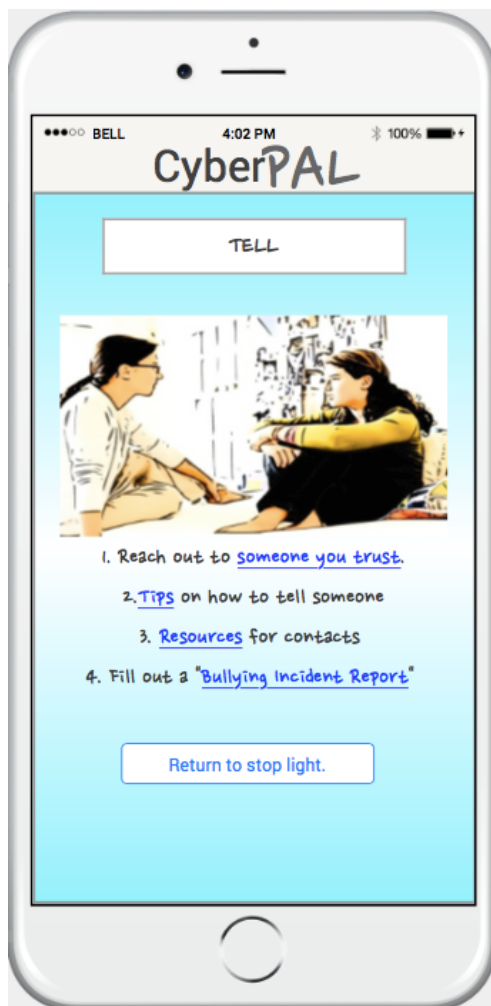
**Left:** Clicking on the “Stop + Save” button on the spotlight directs the user to a screen that explains an immediate step to take when he is cyberbullied (viz., stop, count to 10, take a deep breath, and then save the evidence). Clicking “here” on the screen directs the user to *Kids Help Phone*<sup>26</sup> for more information on how to save evidence of being cyberbullied (e.g., screenshots).

**Right:** Clicking on the “Block” button on the spotlight directs the user to a screen that explains the next step to take when he is cyberbullied (viz., block sender from your inbox and phone). Clicking “here” on the screen directs the user to *Kids Help Phone*<sup>27</sup> for more information on how to save block cyberbullies.

<sup>26</sup> KidsHelpPhone.ca (n.d.). How to take a screen shot. Retrieved from <https://www.kidshelpphone.ca/Teens/InfoBooth/Bullying/Cyberbullying/How-to-take-a-screen-shot.aspx>

<sup>27</sup> KidsHelpPhone.ca (n.d.). How to block cyberbullies. Retrieved from <https://www.kidshelpphone.ca/Teens/InfoBooth/Bullying/Cyberbullying/How-to-block-unwanted-messages.aspx>

## Psychoeducation Module: Cybervictim Role Content (Continued)



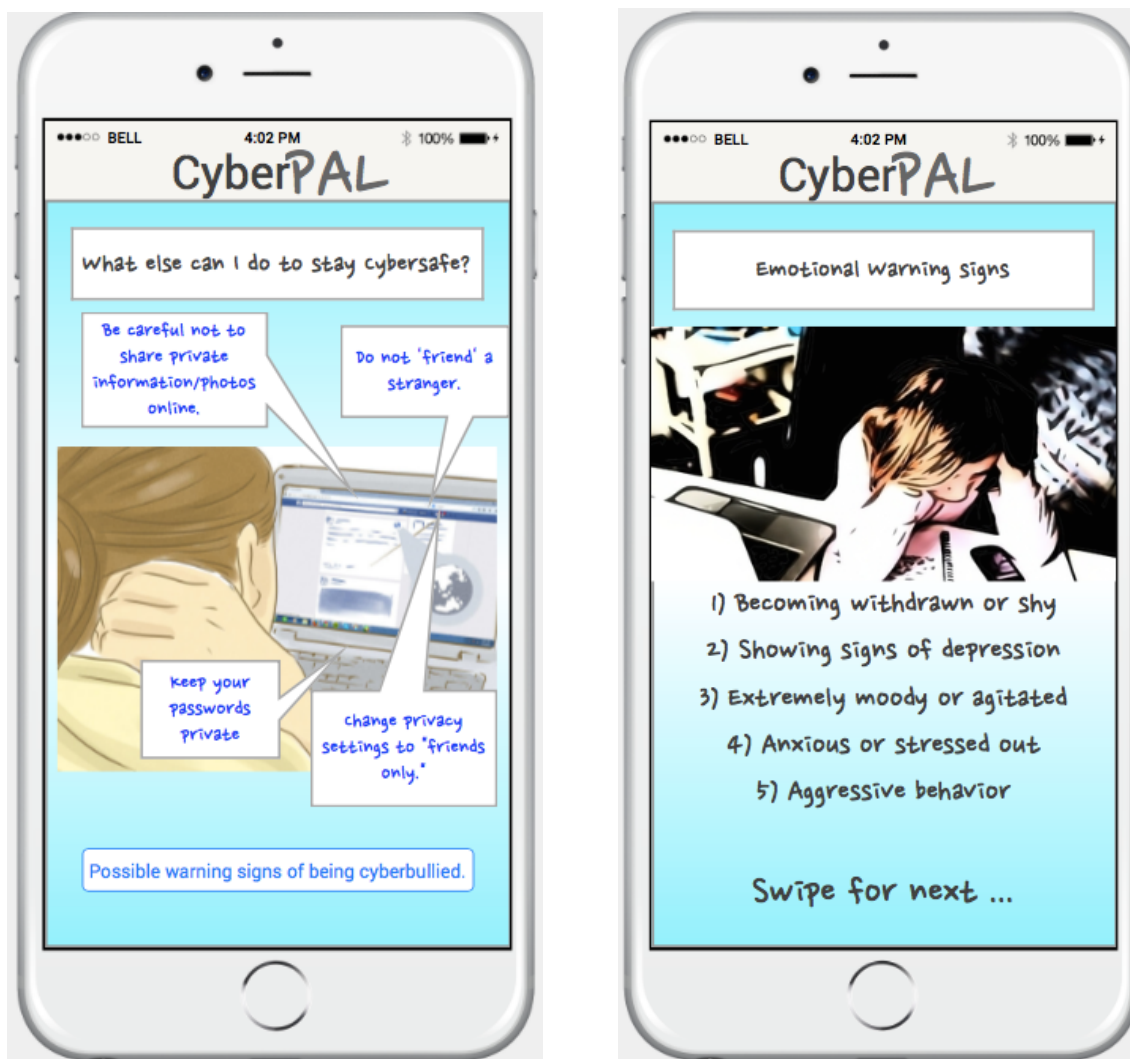
**Above:** Clicking on the “Tell” button on the spotlight directs the user to a screen that explains the next step to take when he is cyberbullied (viz., telling someone about being cyberbullied). Clicking “someone you trust” on the screen directs the user to the personal contacts entered into the app (refer to Resources section). Clicking on “Tips” on the screen directs the user to *StompOutBullying.org*<sup>28</sup> for tips on how to tell an adult he was cyberbullied. Clicking on “Resources” on the screen directs the user to information from *StopBullying.gov*<sup>29</sup> on who to report cyberbullying to. Clicking on “Bullying Incident Report” directs the user to an online bullying report system to report a cyberbullying incident anonymously.<sup>30</sup>

<sup>28</sup> STOMP Out Bullying (2015). Retrieved from <http://www.stompoutbullying.org/index.php/information-and-resources/about-bullying-and-cyberbullying/are-you-being-bullied/>.

<sup>29</sup> StopBullying.gov (n.d.). Report Cyberbullying. Retrieved from <http://www.stopbullying.gov/cyberbullying/how-to-report/index.html#Report%20Cyberbullying%20to%20Online%20Service%20Providers>

<sup>30</sup> Bully Report Online (2015). Report Bullying. Retrieved from <http://www.bullyreportonline.com/Bullying/Report.aspx>

## Psychoeducation Module: Cybervictim Role Content (Continued)



**Left:** Knowing how to stay safe online is an important step in making sure cyberbullying does not continue. Clicking on the “Possible warning signs of being cyberbullied?” button directs the user to resources on common emotional, academic, and social/behavioral warning signs of being cyberbullied (refer to following screens)

**Right:** The user is provided with information on possible emotional warning signs he may experience if cyberbullied (e.g., withdrawal, depression, anxiety). Swiping the screen at the bottom of the page directs the user to possible social/behavioral warning signs of being cyberbullied.

## Psychoeducation Module: Cybervictim Role Content (Continued)



**Left:** The user is provided with information on possible social/behavioral warning signs he may experience if cyberbullied (e.g., loss of interest, loss of friends, stop computer use). Swiping the screen at the bottom of the page directs the user to possible academic warning signs of being cyberbullied.

**Right:** The user is provided with information on possible academic warning signs he may experience if cyberbullied (e.g., skipping school, drop in grades, getting into trouble at school). The “Cyberbully/victim Content” button directs the user to the psychoeducation content for the cyberbully/victim role. This button will only be present at the bottom of the screen during the app simulation.

## Cyberbully/victim Role Content



**Above:** The psychoeducation module home screen that contains content for those classified in the cyberbully/victim role. The content combines material tailored for the cyberbully role and the cybervictim role. Please review the previous Psychoeducation Module sections for the cyberbully and cybervictim roles (pp. 23-36) for descriptions of the content available for those classified in the cyberbully/victim role.

## Daily Log Module



**Above:** The user will be asked to set a time for the app to alert him daily to complete the Daily Log. The app recommends that the user sets a time later in the day or evening so that most or all of the relevant activity for that day can be logged.



## Daily Log Module (Continued)

**CyberPAL**

### Daily Log

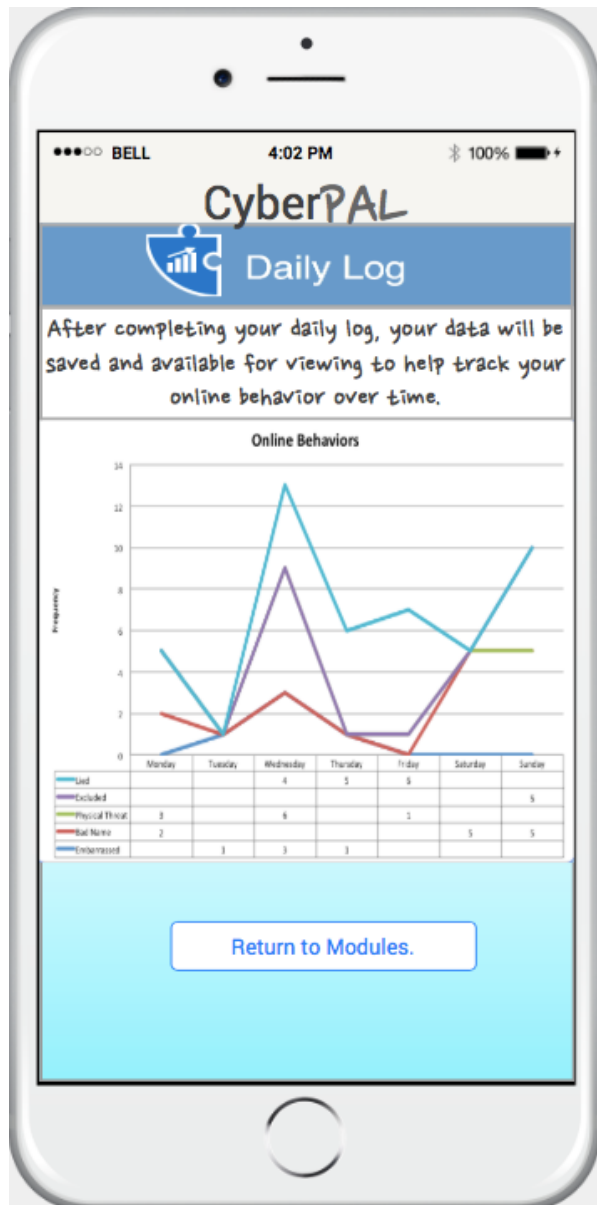
Throughout the day:

1) I spent approximately this many hours and/or minutes online today.

HOURS  MINS

2) I engaged in the following forms of online communication today (Please select all that apply):

- ☐ Email
- ☐ Instant Message
- ☐ Text Message (mobile)
- ☐ Chatroom
- ☐ Message Board
- ☐ YouTube
- ☐ Facebook
- ☐ Instagram
- ☐ Twitter



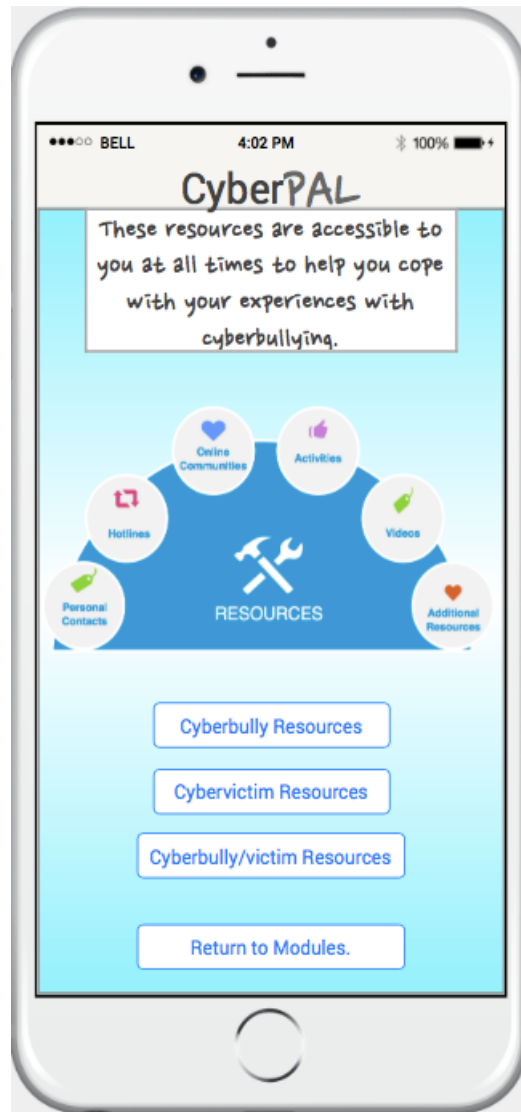
**Left:** When the user completes the Daily Log, she will be asked to rate the number of times that day that she received and/or perpetrated a cyberbullying act (1 - 6 times).

**Right:** After completing the daily log, the user's data are saved and available for viewing in chart/graph form. This will provide the user with a visual representation of his daily online behavior. The chart will be scrollable so that users (or other relevant parties, such as therapists) can view the graph of their self-reported data for different time periods.



## Resources Module

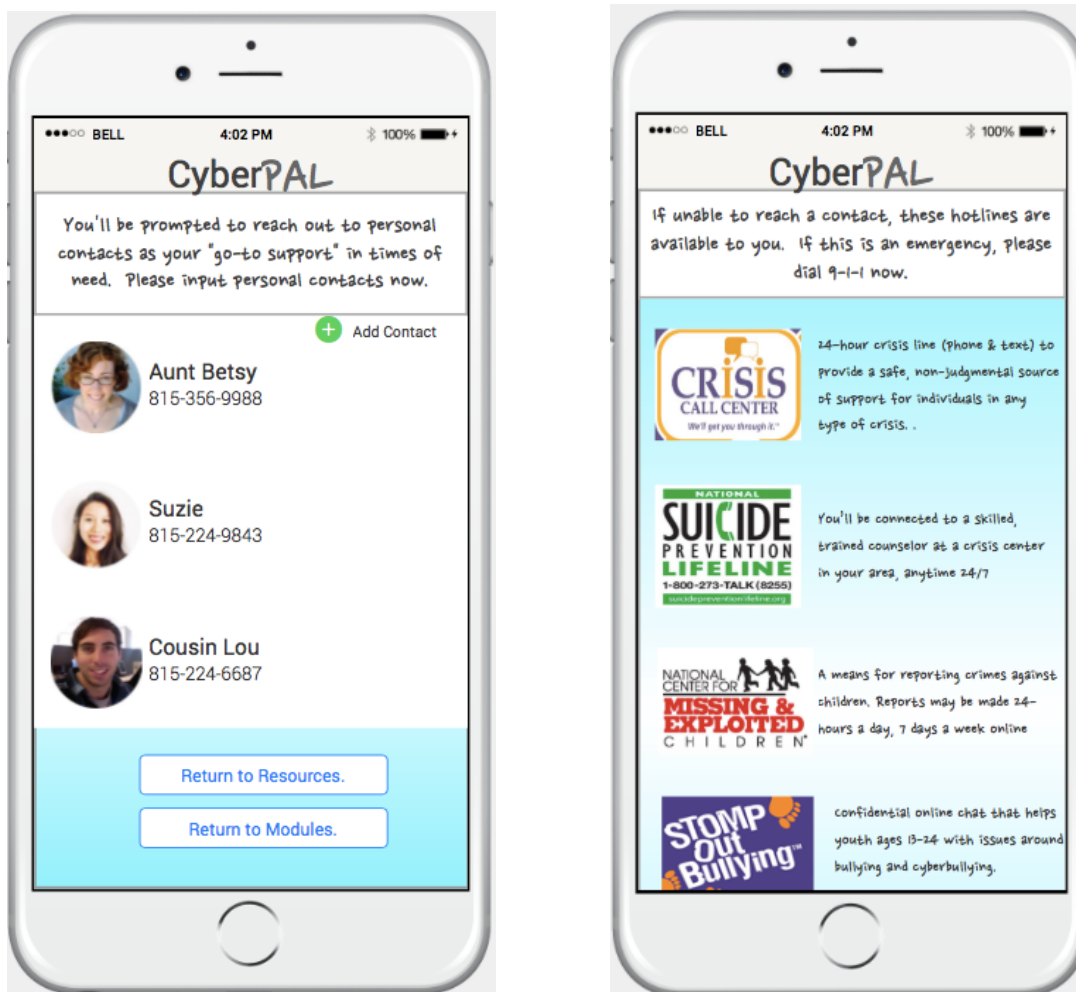
### General Resources on Cyberbullying



**Above:** Resources module home screen that contains general resources on cyberbullying. These resources are available across all cyberbullying roles. Tapping each icon connects the user to additional resources (descriptions of each are provided on the following pages):

- Personal Contacts
- Hotlines
- Online Communities
- Activities
- Videos
- Additional Resources

## Resources Module: General Resources on Cyberbullying (Continued)



**Left:** A user who self-reports any experience with cyberbullying on his Daily Log will be prompted to reach out to a predesignated trusted personal contact, in order to access the type of social support that is likely to be beneficial to those feeling the acute negative effects of cyberbullying (e.g., isolation, sadness).

**Right:** Hotlines are available for the user to contact in times of need. By tapping on the corresponding icons, the user will be directed to the Crisis Call Center,<sup>31</sup> Cybertipline,<sup>32</sup> 7 Cups of Tea,<sup>33</sup> Suicide Prevention Lifeline,<sup>34</sup> or STOMP Out Cyberbullying, HelpChat Line.<sup>35</sup>

<sup>31</sup> Crisis Call Center (n.d.). 24-Hour Crisis Hotline. Retrieved from <http://crisiscallcenter.org/crisisservices.html>

<sup>32</sup> National Center for Missing & Exploited Children (n.d.). CyberTipline. Retrieved from <http://www.missingkids.com/cybertipline/>

<sup>33</sup> 7 Cups of Tea (n.d.). Retrieved from <https://www.7cupsoftea.com/member/>

<sup>34</sup> National Suicide Prevention Lifeline (n.d.). Retrieved from <http://www.suicidepreventionlifeline.org>

<sup>35</sup> STOMP Out Bullying (n.d.). HelpChat Line. Retrieved from <http://www.stompoutbullying.org/index.php/information-and-resources/helpchat-line/>

## Resources Module: General Resources on Cyberbullying (Continued)

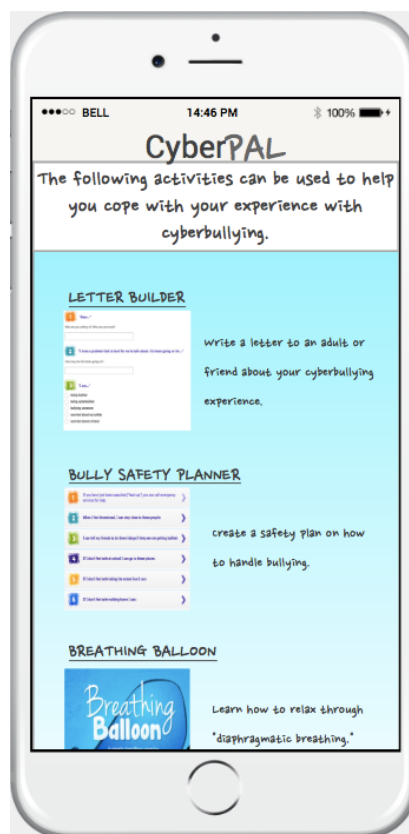


**Above:** Online communities are also available for users to speak with supportive others about their experiences. By tapping on the corresponding icons, the user is directed to kidshelpphone.ca<sup>36</sup> or The AntiBullying Forum.<sup>37</sup>

<sup>36</sup> Kidshelpphone.ca (n.d.). Forum: Bullying. Retrieved from <http://forumskids.kidshelpphone.ca/ViewForum.aspx?FORUMID=47>

<sup>37</sup> Facebook (n.d.). The Anti-Bullying Forum. Retrieved from <https://www.facebook.com/TheAntiBullyingForum/timeline>

## Resources Module: General Resources on Cyberbullying (Continued)



**Above:** The following activities are available to help the user cope with cyberbullying experiences:

- **Letter Builder.**<sup>38</sup> User writes a letter to an adult/friend about her cyberbullying experience.
- **Bullying Safety Planner.**<sup>39</sup> User creates a safety plan on how to handle bullying.
- **Breathing Balloon.**<sup>40</sup> User learns how to engage in proper “diaphragmatic breathing.”
- **Worry Rockets.**<sup>41</sup> User imagines his worries and emotions *blasting* away in a worry rocket.
- **My Guided Journal.**<sup>42</sup> User journals about her cyberbullying experience.
- **The Peace Garden.**<sup>43</sup> A form of meditation that helps the user relax.
- **Reframing.**<sup>44</sup> User “Reframes” the situation from a different, more helpful perspective.

<sup>38</sup> KidsHelpPhone.ca (n.d.). Letter Builder. Retrieved from <http://www.kidshelpphone.ca/Teens/YourSpace/Letter-Builder.aspx>

<sup>39</sup> KidsHelpPhone.ca (n.d.). Bullying Safety Planner. Retrieved from <http://www.kidshelpphone.ca/Teens/InfoBooth/Bullying/Bullying-Safety-Planner.aspx>

<sup>40</sup> KidsHelpPhone.ca (n.d.). Breathing Balloon. Retrieved from <http://www.kidshelpphone.ca/Teens/YourSpace/Breathing-Balloon.aspx>

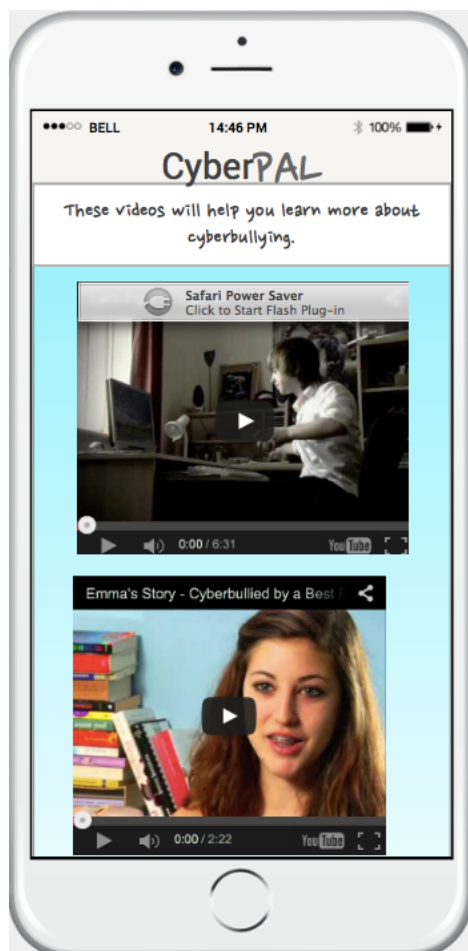
<sup>41</sup> KidsHelpPhone.ca (n.d.). Worry Rockets. Retrieved from <http://www.kidshelpphone.ca/Teens/YourSpace/Worry-Rockets.aspx>

<sup>42</sup> KidsHelpPhone.ca (n.d.). My Guided Journal. Retrieved from <http://www.kidshelpphone.ca/Teens/YourSpace/Guided-Journal.aspx>

<sup>43</sup> KidsHelpPhone.ca (n.d.). The Peace Garden. Retrieved from <http://www.kidshelpphone.ca/Teens/YourSpace/Peace-Garden.aspx>

<sup>44</sup> KidsHelpPhone.ca (n.d.). My Space. Retrieved from <http://www.kidshelpphone.ca/Teens/YourSpace.aspx>

## Resources Module: General Resources on Cyberbullying (Continued)



**Above:** Users can play videos to learn more about cyberbullying. The available videos include:

- **Let's Fight it Together**<sup>45</sup>
- **Emma's Story – Cyberbullied by a Best Friend**<sup>46</sup>
- **Cyber Bullying: Public Health Promotion Video**<sup>47</sup>
- **Stand Up to Cyberbullying**<sup>48</sup>
- **Netsmartz Cyberbullying**<sup>49</sup>

<sup>45</sup> [digizen.org](http://old.digizen.org/cyberbullying/fullFilm.aspx) (2007). *Let's Fight it Together: Cyberbullying Film* [Video File]. Retrieved from <http://old.digizen.org/cyberbullying/fullFilm.aspx>

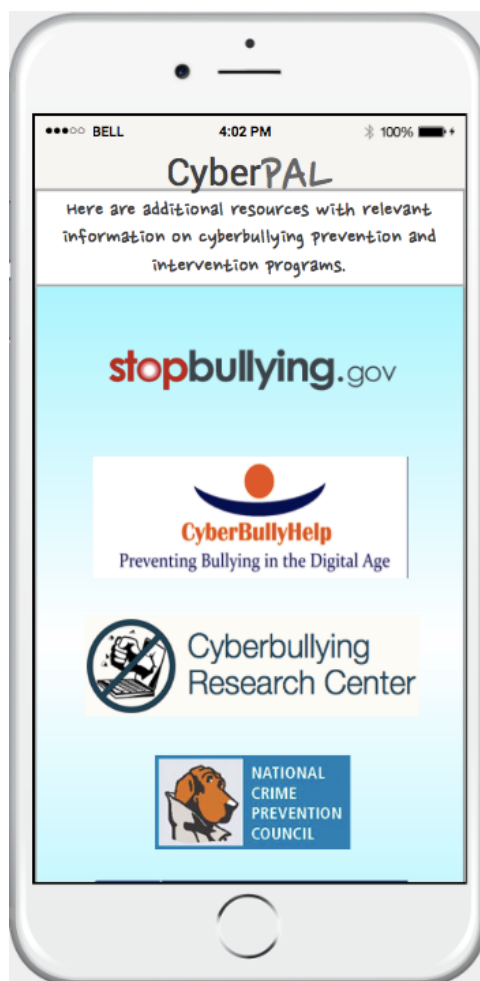
<sup>46</sup> Common Sense Media (n.d.). *Emma's Story - Cyberbullied by a Best Friend* [Video File]. Retrieved from <https://www.common Sense Media.org/videos/emmas-story-cyberbullied-by-a-best-friend>

<sup>47</sup> The University of Ontario Institute of Technology (2013, November 19). *Cyberbullying Public Health Promotion Video* [Video File]. Retrieved from <https://www.youtube.com/watch?v=jNdBmjUvzEU>

<sup>48</sup> The Federal Commission. (2010, October 8). *Stand Up to Cyberbullying* [Video File]. Retrieved from <https://www.youtube.com/watch?v=IN2fuKPDzHA>

<sup>49</sup> Netsmartz Workshop (n.d.). *Cyberbullying* [Video File]. Retrieved from <http://www.netsmartz.org/TeensTalkBack/Cyberbullying>

## Resources Module: General Resources on Cyberbullying (Continued)



**Above:** The user is provided with links to descriptive information about a host of resources pertaining to reporting strategies, cyberbullying prevention programs, and cyberbullying intervention programs. Such information may also be relevant for school administrators or other officials. Icon-based links are provided for the following resources:

- **Stopbullying.gov**<sup>50</sup>
- **CyberBullyHelp**<sup>51</sup>
- **Cyberbullying Research Center**<sup>52</sup>
- **National Crime Prevention Council**<sup>53</sup>
- **Facebook**<sup>54</sup>

<sup>50</sup> [stopbullying.gov](http://www.stopbullying.gov) (n.d.). Retrieved from <http://www.stopbullying.gov>

<sup>51</sup> CyberBullyHelp: Preventing Bullying in the Digital Age (n.d.). Retrieved from <http://cyberbullyhelp.com>

<sup>52</sup> Cyberbullying Research Center (2015). Retrieved from <http://cyberbullying.us>

<sup>53</sup> National Crime Prevention Council (n.d.). What is Cyberbullying? Retrieved from <http://www.ncpc.org/topics/cyberbullying/what-is-cyberbullying>

<sup>54</sup> Facebook (2015). Put a Stop to Bullying. Retrieved from <https://www.facebook.com/safety/bullying/>

## Cyberbully Role Resources



**Left:** Presents a list of cues to help the user identify when she is becoming angry: physical, behavioral, emotional, and cognitive. Users need to be able to identify their anger before engaging in strategies to help manage it.

**Right:** Provides some activities and guidelines to help users control their anger before they engage in cyberbullying. Tapping on each icon directs the user to additional information on anger cues, the Take5! technique, and online etiquette.

## Resources Module: Resources for Cyberbully Role (Continued)



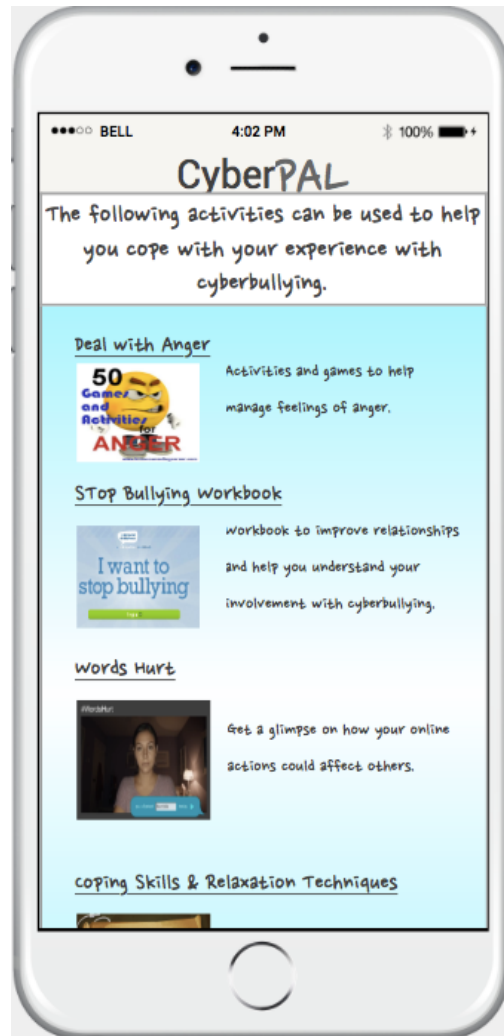
**Left:** Presents a 3 step instructional on how to use the Take 5! technique to calm down. If the user notices any of the anger cues, especially while online, she is instructed to take 5 minutes to walk away from the computer to calm down. During those 5 minutes, the user is advised to engage in another activity to help calm herself.

**Right:** Following online etiquette is a good strategy to prevent cyberbullying. This includes the user checking what he wrote before posting or sending it to someone online. Tapping on the "Learn safe online etiquette" button directs the user to an external site to learn more.<sup>55</sup>

<sup>55</sup> StopCyberbullying.org (n.d.). Practice the Internet Golden Rule. Retrieved from [http://www.stopcyberbullying.org/take\\_action/msparrysguidetonetiquette.html](http://www.stopcyberbullying.org/take_action/msparrysguidetonetiquette.html)



## Resources Module: Resources for Cyberbully Role (Continued)



**Above:** The following activities can be used to help the user cope with his cyberbullying experiences. Strategies to report cyberbullying incidents are also provided:

- **50 Activities and Games Dealing with Anger.**<sup>56</sup> Activities and games to manage anger.
- **I want to stop bullying workbook.**<sup>57</sup> To improve the user's relationships with others and understanding of his involvement in cyberbullying.
- **Words Hurt.**<sup>58</sup> A glimpse at how the user's online actions could affect others.
- **Coping Skills & Relaxation Techniques.** Directs the user back to the Activities section found under General Resources on Cyberbullying.

<sup>56</sup> Peterson, Kim (2012, September 16). 50 Activities and Games Dealing with Anger. Retrieved from <http://www.kimscounselingcorner.com/2012/09/16/50-activities-and-games-dealing-with-anger/>

<sup>57</sup> KidsHelpPhone.ca (n.d.). I Want to Stop Bullying Workbook. Retrieved from <http://www.kidshelpphone.ca/Teens/InfoBooth/Bullying/I-want-to-stop-bullying.aspx>

<sup>58</sup> Get Cyber Safe (2015, February 23). #WordsHurt [Interactive Video File]. Retrieved from <http://www.getcybersafe.gc.ca/wrdshrt/index-en.aspx>

## Cybervictim Role Resources



**Left:** The user is encouraged to report cyberbullying to an adult, as this is one of the most effective ways to stop cyberbullying. Clicking on any of the icons directs the user to corresponding resources on how to take a screenshot<sup>59</sup>, export a message to pdf to save, and complete a cyberbullying incident form for personal records.<sup>60</sup>

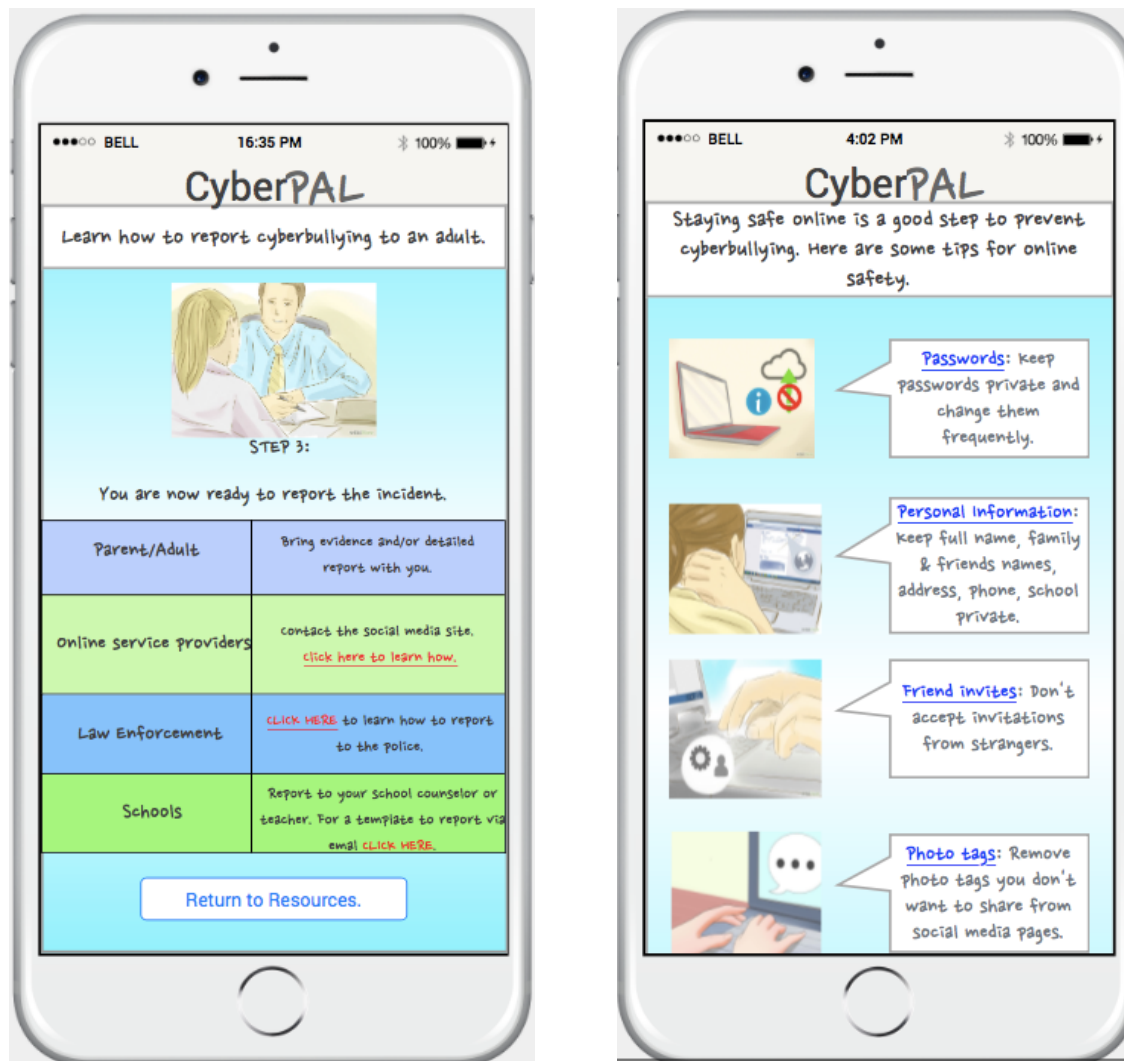
**Right:** The user is encouraged to block a user who is cyberbullying. Tapping the “Block a user” button directs the user to an external source providing steps on how to block in multiple CMCs.<sup>61</sup>

<sup>59</sup> KidsHelpPhone.ca (n.d.). How to Take a Screen Shot. Retrieved from: <http://www.kidshelpphone.ca/Teens/InfoBooth/Bullying/Cyberbullying/How-to-take-a-screen-shot.aspx>

<sup>60</sup> KidsHelpPhone.ca (n.d.). Bullying Incident Report. Retrieved from <http://www.kidshelpphone.ca/KHP/media/TeensMediaLibrary/PDFs/bullyingIncidentReport.pdf>

<sup>61</sup> KidsHelpPhone.ca (n.d.). How to block cyberbullies. Retrieved from <http://www.kidshelpphone.ca/Teens/InfoBooth/Bullying/Cyberbullying/How-to-block-unwanted-messages.aspx>

## Resources Module: Resources for Cybervictim Role (Continued)



**Left:** When the user is ready to report the incident to an adult, she is instructed to follow this chart for additional information on how to do so. Tapping on the highlighted “CLICK HERE” links directs the user to external resources that explain how to report to service providers,<sup>62</sup> law enforcement,<sup>63</sup> and schools.<sup>64</sup>

**Right:** Provides a list of tips for the user to stay safe online, including protection of passwords and personal information, how to respond to friend invites online, use of photo tags online, activating privacy settings, and how to respond to unknown emails.

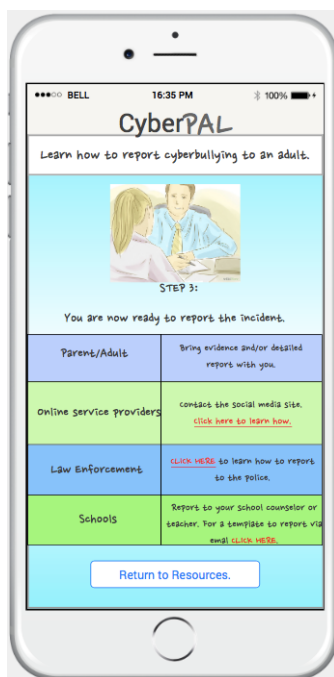
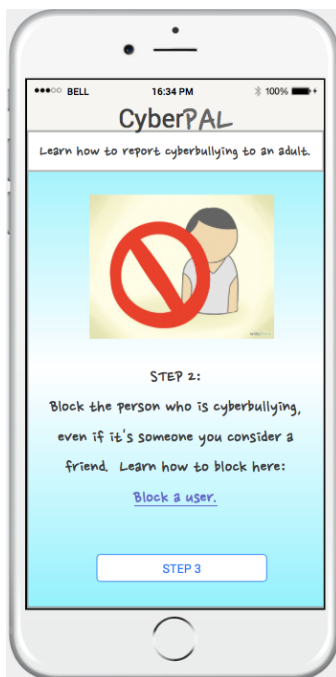
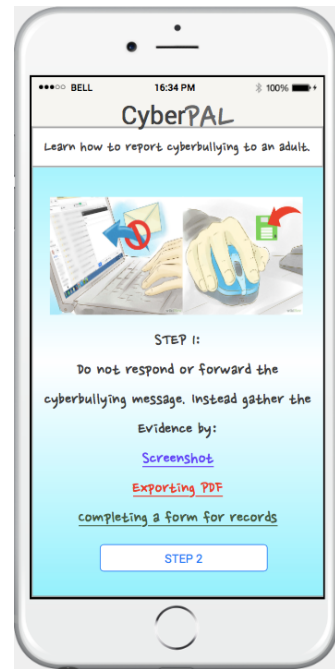
<sup>62</sup> Cyberbullying Research Center (n.d.). Report Cyberbullying. Retrieved from <http://cyberbullying.us/report/>

<sup>63</sup> National Center for Missing & Exploited Children (n.d.). CyberTipline. Retrieved from <http://www.missingkids.com/cybertipline/>

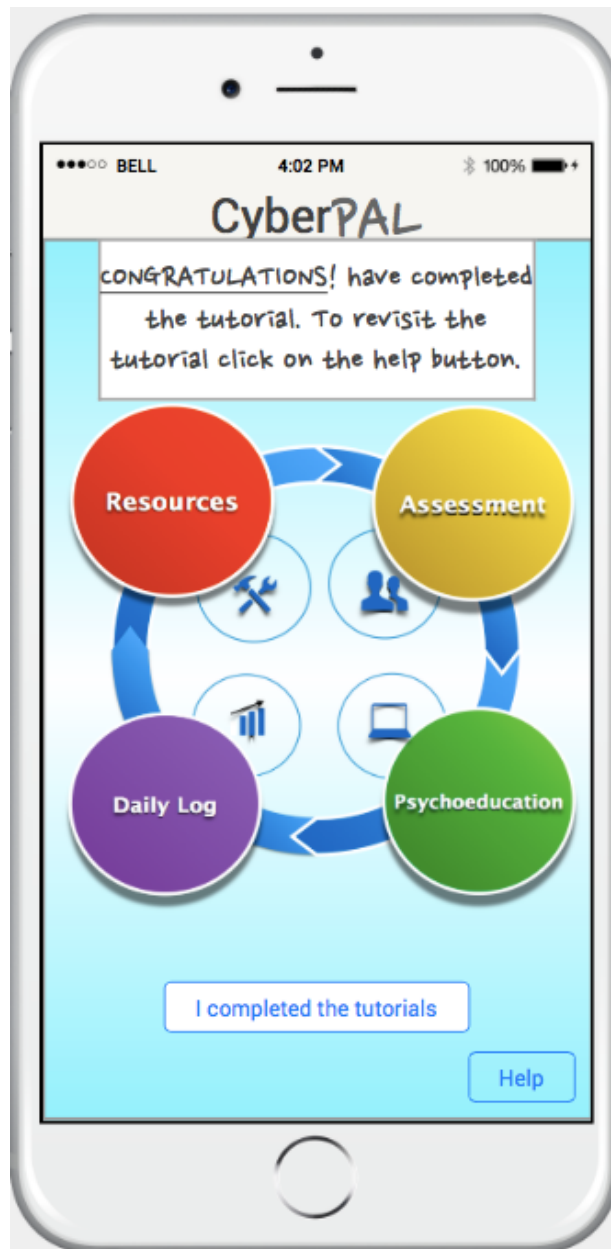
<sup>64</sup> Sprigeo, Inc. (n.d.). Retrieved from <http://report.sprigeo.com>

## Cyberbully/victim Role Resources

The resources provided to those classified in the cyberbully/victim role combine those tailored for the cyberbully and cybervictim roles. Please review the previous Resources Module sections for the cyberbully and cybervictim roles (pp.46-50) of this manual for descriptions of the resources available for those classified in the cyberbully/victim role.



## Completion of Tutorial



**Above:** At the end of the tutorial the user is directed back to the module homepage. The user may revisit this tutorial or access the help page by clicking the “Help” button on the bottom of the screen.

## Appendix A

### Cyberbullying Role Questionnaire

Please indicate whether or not each of the following occurred over the past 7 days:	YES	NO
1. Someone teased you online in a hostile manner?		
2. Someone intentionally embarrassed, frightened, or threatened you online?		
3. Someone called you a bad name online?		
4. Someone online threatened to physically harm you?		
5. You were intentionally excluded and made to feel like an outcast online by one or more of your peers?		
6. Someone online made up something negative about you so that others would no longer like you?		
7. How many times did you tease someone online in a hostile manner?		
8. You intentionally embarrassed, frightened, or threatened someone online?		
9. You called someone a bad name online?		
10. You threatened someone online that you would physically harm him/her?		
11. You intentionally excluded someone online and made him/her feel like an outcast online by one or more of their peers?		
12. You made up something negative about someone online so that others would no longer like them?		

Adapted by Beverly Shieh from the Reduced Aggression/Victimization Scale: Orpinas & Horne, 2006.

### **Subscale Scoring Instructions**

Point value are assigned as follows:

Yes = 1

No = 0

Cybervictim Subscale: Items 1-6

Cyberbully Subscale: Items 7-12

Subscale scores are computed by summing the respective items. The range for each subscale is 0 to 6, with higher scores indicating more experience as a cybervictim or cyberbully respectively.

### **Cyberbullying Role Categorization Scoring Instructions**

If one or more items are endorsed in only one subscale, then the user will be assigned that respective cyberbullying role.

If one or more items are endorsed in both subscales, then the user will be assigned the Cyberbully/victim role.

## Appendix B

### Daily Log

1. Today's date: [This will be automatically inputed]
2. I spent approximately this many hours and/or minutes online today.
  - o Hours\_\_\_\_\_ Minutes\_\_\_\_\_
3. I engaged in the following forms of online communication today (Please select all that apply):
  - o Email
  - o Instant Message
  - o Text message (mobile)
  - o Chatroom
  - o Message board
  - o Youtube
  - o Facebook
  - o Instagram
  - o Twitter
  - o Blog
  - o Other\_\_\_\_\_
4. I intentionally hurt, upset, distressed, or threatened someone during my online communications today.
  - o True
  - o False
5. I used the following online communication(s) to intentionally to hurt, upset, distress, or threaten someone online (Please select all that apply):
  - o Email
  - o Instant Message
  - o Text message (mobile)
  - o Chatroom
  - o Message board
  - o Youtube
  - o Facebook
  - o Instagram
  - o Twitter
  - o Blog



- ☐ Other \_\_\_\_\_
- 6. Someone tried to hurt, upset, distress, or threaten me online today.
  - ☐ True
  - ☐ False
- 7. Someone used the following online communication(s) to hurt, upset, distress, or threaten me online today (Please select all that apply):
  - ☐ Email
  - ☐ Instant Message
  - ☐ Text message (mobile)
  - ☐ Chatroom
  - ☐ Message board
  - ☐ Youtube
  - ☐ Facebook
  - ☐ Instagram
  - ☐ Twitter
  - ☐ Blog
  - ☐ Other \_\_\_\_\_