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A Social Cognitive Model of Bystander Behavior and the Mediating Role of Self-Efficacy on Bullying Victimization

Samuel Yi Kim
Georgia State University

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ACCEPTANCE

This dissertation, A SOCIAL COGNITIVE MODEL OF BYSTANDER BEHAVIOR AND THE MEDIATING ROLE OF SELF-EFFICACY ON BULLYING VICTIMIZATION, by SAMUEL YI KIM, was prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the College of Education, Georgia State University.

The Dissertation Advisory Committee and the student's Department Chair, as representatives of the faculty, certify that this dissertation has met all the standards of excellence and scholarship as determined by the faculty. The Dean of the College concurs.

Kris Varjas, Psy.D.
Committee Co-Chair

Joel Meyers, Ph.D.
Committee Co-Chair

Christopher Henrich, Ph.D.
Committee Member

Don Davis, Ph.D.
Committee Member

Date

Brian Dew, Ph.D.
Chair, Department of Counseling and Psychological Services

Paul A. Alberto, Ph.D.
Interim Dean
College of Education

AUTHOR'S STATEMENT

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Samuel Yi Kim
8022 Splendor Way
Columbus, GA 31904

The directors of this dissertation are:

Dr. Kris Varjas
Department of Counseling and Psychological Services
College of Education
Georgia State University
Atlanta, GA 30303-3083

Dr. Joel Meyers
Department of Counseling and Psychological Services
College of Education
Georgia State University
Atlanta, GA 30303-3083

CURRICULUM VITAE

Samuel Yi Kim

ADDRESS: 8022 Splendor Way
Columbus, GA 31904

EDUCATION:

Ph.D.	2013	Georgia State University School Psychology
Ed.S.	2011	Georgia State University School Psychology
M.Ed.	2009	Georgia State University School Psychology
B.A.	2006	Emory University Psychology

PROFESSIONAL EXPERIENCE:

2013-Present	Post-Doctoral Teaching Fellow Central Michigan University, Mt. Pleasant, MI
2012-2013	School Psychology Predoctoral Intern Cypress-Fairbanks Independent School District, Cypress, TX
2011-2012	Site Coordinator Center for Research on School Safety, School Climate, and Classroom Management Georgia State University, Atlanta, GA
2010-2011	Data Manager Center for Research on School Safety, School Climate, and Classroom Management Georgia State University, Atlanta, GA
2011	Primary Instructor for CPS 2500: Career Development and Life Planning Georgia State University, Atlanta, GA
2011-2012	Teaching Assistant for Advanced Graduate Courses in School Psychology Georgia State University, Atlanta, GA
2009-2012	Contract Psychometrist The Levin Center, Atlanta, GA
2008-2009	School Psychology Intern Coweta County School District, Newnan, GA
2007-2008	School Psychology Practicum Student Coweta County Schools, Coweta, GA
2006-2010	Graduate Research Assistant Georgia State University, Atlanta, GA

PROFESSIONAL SOCIETIES AND ORGANIZATIONS

2006-Present	National Association of School Psychologists
2006-Present	American Psychological Association
2006-2013	Student Affiliate in School Psychology Georgia State University, Atlanta, GA

PRESENTATIONS AND PUBLICATIONS:

- Meyers, J., Truscott, S., Meyers, A., Varjas, K., & Kim, S. (in press). Qualitative and mixed methods designs in consultation research. In Erchul, P., & Sheridan, S. (Eds.), *Handbook of Research in School Consultation*. New York: Erlbaum.
- Kim, S., Varjas, K., Henrich, C., & Meyers, J. (2010, April). Measuring students' self-efficacy in bullying situations. In S. Swearer, S. Hymel, & P. Gillette (Eds.), *Bullying at School and Online, 2nd edition*. A special issue of Education.com. Retrieved from <http://www.education.com>.
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- Varjas, K., Meyers, J., Henrich, C., Wynne, L., Cadenhead, C., Parris, L., Kiperman, S., Gibbons, C., Kim, S., Lewis, B., Brown, F., Strong, M., Stefanyshyn, M., Smith, J., Woods, A., Briskin, J., Finan, J., Vanegas, G., Davison, C., & Bolling, H. (2012). *Group Bullying Intervention Curriculum*. Atlanta, GA: Center for Research on School Safety, School Climate, and Classroom Management, Georgia State University.
- Kim, S., Varjas, K., Henrich, C., & Meyers, J. (2013, February). *Self-Efficacy as a mediator between bullying victimization and mental health outcomes*. Paper presentation at the National Association of School Psychologists 2013 Annual Convention, Seattle, WA.
- Parris, L., Kim, S., & Harper, C. (2012, February). *Peer-Victimization and School Safety: The Role of Coping Effectiveness*. Paper presentation at the National Association of School Psychologists 2012 Annual Convention, Philadelphia, PA.
- Kim, S., Varjas, K., Henrich, C., & Meyers, J. (2010, March). *The kim bullying self-efficacy scale: A validation study*. Poster presentation at the National Association of School Psychologists 2010 Annual Convention, Chicago, IL.

SCALE:

- Kim, S., Varjas, K., Meyers, J., & Henrich, C. C. (2010). *Bullying Victim Self-Efficacy Scale*. Atlanta, GA: Center for Research on School Safety, School Climate, and Classroom Management, Georgia State University.

ABSTRACT

A SOCIAL COGNITIVE MODEL OF BYSTANDER BEHAVIOR AND THE MEDIATING ROLE OF SELF-EFFICACY ON BULLYING VICTIMIZATION

by
Samuel Yi Kim

This dissertation introduces a social cognitive model of bystander behavior and examines the mediating role of self-efficacy on the relationship between bullying victimization and negative outcomes. Based on Bandura's (1986; 2001) social cognitive theory, this model utilizes two frameworks for understanding bystander behavior in bullying: group process framework (Salmivalli, 2010) and the bystander motivation framework (Thornberg et al., 2012). A research agenda is presented based on the key elements of the proposed model, including bystander agency, bystander self-efficacy, bystander moral disengagement, and bystander collective efficacy. The research study investigated self-efficacy for coping with bullying victimization and its mediating role on the relationship between bullying victimization and the outcomes of depression, anxiety, and perceptions of school safety. The Bullying Victimization Self-Efficacy Scale (BVSES; Kim et al., 2010), the Student Survey of Bullying Behaviors – Revised 2 (SSBB-R2; Varjas et al., 2008) and the Behavior Assessment System for Children, 2nd Edition (BASC-2; Kamphaus & Reynolds, 2004) were administered to 551 elementary and middle school students in a southeastern urban school district. Using structural equation modeling, a measurement model was used to confirm the factor structure of the latent variables used in the study (i.e., victimization, the BVSES scales, depression, anxiety, and school safety). Then, the hypothesized structure model was used to determine the mediating role of self-efficacy on the relationships of bullying victimization with depression, anxiety, and school safety. An alternative model was

tested where depression, anxiety, and school safety were mediators of the relationship between victimization and the BVSES scales as a comparison for the hypothesized model. The measurement model yielded a good model fit, deeming it acceptable for the structure model analysis. The hypothesized and alternative models yielded a good model fit, and significant mediation effects were found in both models. However, the low magnitude suggests that self-efficacy had a relatively weak mediation effect, which may be due to the strength of the relationship between victimization and the outcome variables. This strong direct effect suggests that self-efficacy may not be a substantial mediator influencing the relationship between victimization and the outcome variables. Theoretical implications and directions for future research are discussed.

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TABLE OF CONTENTS

	Page
List of Tables.....	iv
List of Figures.....	v
List of Abbreviations.....	vi
CHAPTER 1: A SOCIAL COGNITIVE MODEL OF BYSTANDER BEHAVIOR.....	1
Bullying Overview.....	2
Bystander Typologies.....	5
Conceptual Frameworks for Understanding Bystander Behavior.....	8
Social Cognitive Model of Bystander Behavior in Bullying.....	11
Research Agenda.....	28
Conclusion.....	38
References.....	40
CHAPTER 2: THE MEDIATING ROLE OF SELF-EFFICACY ON BULLYING VICTIMIZATION.....	49
Self-Efficacy.....	53
Rationale for Study.....	57
Method.....	60
Results.....	70
Discussion.....	78
Limitations and Future Research.....	83
References.....	85

LIST OF TABLES

Table	Page
1 Victimization subscale of the SSBB-2 with bullying types.....	62
2 School safety subscale of the SSBB-R2.....	62
3 BVSES items with subscales.....	64
4 Standardized Factor Loadings of Items.....	71
5 Correlation Matrix of Latent Variables.....	72
6 Indirect Effects from the Hypothesized and Alternative Models.....	77

LIST OF FIGURES

Figure		Page
1	Diagram of bystander reciprocal determinism adapted from Bandura's (1986, 1997) Model.....	12
2	Sources of Bystander Self-Efficacy adapted from Bandura's (1986, 1997) model.....	18
3	Mechanisms of Bystander Moral Disengagement adapted from Bandura (1999).....	22
4	Social Cognitive Model of Bystander Behavior.....	27
5	Hypothesized model for the BVSES subscales mediating the relationship between bullying victimization and mental health and school outcomes.....	60
6	Hypothesized alternative equivalent model.....	69
7	Measurement model with standardized residual variances and correlations.....	73
8	Hypothesized model with standardized direct effects and correlations.....	75
9	Alternative hypothesized equivalent model with standardized direct effects and correlation.....	76

LIST OF ABBREVIATIONS

AIC	Akaike Information Criterion
BIC	Bayesian Information Criterion
BASC-2	Behavior Assessment System for Children, 2 nd Edition
BVSES	Bullying Victimization Self-Efficacy Scale
CFI	Comparative Fit Index
IRB	Institutional Review Board
RMSEA	Root Mean Square Error of Approximation
SCMBB	Social Cognitive Model of Bystander Behavior
SRMR	Standardized Root Mean Square Residual
SSBB-R2	Students Survey of Bullying Behaviors – Revised,

CHAPTER 1

A SOCIAL COGNITIVE MODEL OF BYSTANDER BEHAVIOR

Bullying is a public health concern that is continually given attention by the media's efforts to illustrate its unfortunate consequences. For example in 2012, 12-year old Joel Lewis of New York and 15-year old Lennon Baldwin of New Jersey committed suicide after being bullied by peers. Though these are extreme examples, bullying does occur frequently, and researchers are seeking to understand the phenomenon to enhance efforts to intervene, to reduce its prevalence and to prevent many of the negative effects. The definition of bullying includes three components: an intention to harm another person, an imbalance of power, and repetition over a period of time (Jordan & Austin, 2012; Jose, Kljakovic, Scheib, & Notter, 2011; Olweus, 1994; Stassen Berger, 2007). Researchers have identified four categories of bullying: physical, verbal, relational, and cyberbullying (Stassen Berger, 2007; Wang, Iannotti, & Nansel, 2009). Physical bullying refers to a direct physical attack on a victim through actions such as hitting, kicking, or biting (Jordan & Austin, 2012; Stassen Berger, 2007; Wang et al., 2009). Verbal bullying is the use of language to inflict harm through humiliation and verbal abuse (Jordan & Austin, 2012; Stassen Berger, 2007; Wang et al., 2009). Relational bullying involves purposely ignoring or excluding the victim from a group (Jordan & Austin, 2012; Stassen Berger, 2007; Wang et al., 2009). Cyberbullying involves aggression through the use of electronic devices (Jordan & Austin, 2012; Stassen Berger, 2007; Wang et al., 2009).

Researchers consider bystanders, those who witness bullying, as a key to intervening in bullying, because bystanders have more social resources than victims to intervene in bullying, such as getting help from a teacher or another adult (Flaspohler,

Elfstrom, Vanderzee, Sink, & Birchmeier, 2009). Bystanders can reduce the effect of negative outcomes of bullying on a victim (Salmivalli, 2010), and can contribute to the reduction in the number of bullying incidences in an entire school (Frey, Hirschstein, Edstrom, & Snell, 2009). A model for understanding bystander behavior that incorporates elements of the environment, behavior, and bystander characteristics could facilitate research about bullying as well as the creation of effective interventions designed to reduce bullying in schools. The purpose of this paper is to present a social cognitive model of bystander behavior to enhance understanding of bystanders and to propose a research agenda, that can eventually lead to intervention targeting bystanders and the prevention of bullying. First, an overview of bullying will be presented to provide context to the current research on bullying. Second, research on bystanders and the current methods of categorizing groups of bystanders will be delineated, followed by a discussion of two frameworks for understanding bystander behavior. Third, a comprehensive model of bystander behavior will be proposed based on Social Cognitive Theory (Bandura, 1986; 2001) and the two frameworks of bystander behavior referred to above (i.e., Salmivalli, 2010; Thornberg et al., 2012). Finally, a research agenda will be presented based on the social cognitive model of bystander behavior.

Bullying Overview

Four groups of participants in bullying have been identified in the bullying literature: bullies, victims, bully-victims, and bystanders (Jordan & Austin, 2012; Jose et al., 2011; Stassen Berger, 2007). Researchers also often refer to uninvolved students, who do not witness nor get involved in bullying, and they are typically used as comparison groups (e.g., Delfabbro et al., 2006; Fisher, Moffitt, Houts, Belsky, Arseneault, & Caspi,

2012; Menesini, Modena, & Tani, 2009; O'Brennan, Bradshaw, & Sawyer, 2008; Undheim & Sund, 2010). Bullies comprise 4.6% - 9.0% of school-aged children (Cunningham, 2007; Nation et al., 2008; Peskin et al., 2006; Solberg, Olweus, & Endresen, 2007; Unheim & Sund, 2010). In a Norwegian study (Undheim & Sund, 2010), bullies were found to have a lower sense of self-worth, greater depressive symptoms, and greater social problems than students who were not involved in bullying. They also reported lower levels of school safety and belongingness than their uninvolved peers (O'Brennan et al., 2008). However, in some research, adolescent bullies were found to feel powerful, respected, and popular (Jordan & Austin, 2012; Stassen Berger, 2007).

Prevalence of victims of bullying was reported to be between 7.0% and 19.0% of school-aged students (Cunningham, 2007; Nation et al., 2008; Peskin et al., 2006; Solberg et al., 2007; Unheim & Sund, 2010). A range of difficulties has been reported by student victims of bullying. These difficulties included social problems (i.e., perception of meaninglessness in society and low number of friends) and a lower sense of self-worth when compared with uninvolved students (Delfabbro et al., 2006; Unheim & Sund, 2010). Victims of bullying also reported greater depressive symptoms (Perren, Gutzwiller-Helfenfinger, Malti, & Hymel, 2012; Undheim & Sund, 2010) and were more likely to engage in behaviors of self-harm than students who were uninvolved in bullying (Fisher et al., 2012). Victims of bullying also were likely to report lower feelings of safety and belongingness in their school environments than uninvolved students (O'Brennan et al., 2008).

A third group, called bully-victims, includes students who bully others and are also victims of bullying. These students are estimated to represent 1.9% - 6% of school-

aged students (Cunningham, 2007; Nation et al., 2008; Peskin et al., 2006; Solberg et al., 2007; Unheim & Sund, 2010). Bully-victims reported greater levels of internalizing (e.g., depression and anxiety) as well as externalizing problems (e.g., rule-breaking, aggression) than their uninvolved peers (Menesini, Modena, & Tani, 2009). In addition to these problems, bully-victims reported a lower sense of school safety and belongingness in school than students not involved in bullying (O'Brennan et al., 2008).

The fourth group of participants connected to bullying consists of bystanders, which has been found to include 30.4% - 71.0% of school-aged students depending on the research study (Flaspohler et al., 2009; Obermann, 2011; Raynor & Wylie, 2012; Rivers & Noret, 2010; Salmivalli et al., 1996). Though bystander prevalence data varies, mainly due to the range of definitions and measurement methods, bystanders are the largest group compared to bullies, victims, and bully-victims. In addition to being the largest group, bystanders can influence outcomes of victims of bullying (Salmivalli, 2010) and can affect the school environment (Polanin, Espelage, & Pigott, 2012). A study of 6,764 primary school children in 385 classrooms found that classrooms where students were likely to defend victims had fewer incidents of bullying whereas classrooms with greater likelihood of bystanders reinforcing the bully had more incidents of bullying (Salmivalli, Voeten, & Poskiparta, 2011). In another investigation of elementary school classrooms, students at-risk for bullying (i.e., socially anxious and peer rejected) were less likely to be bullied in classrooms where bystanders were likely to defend victims as opposed to classrooms where bystanders were likely to reinforce bullying behaviors (Kärnä, Voeten, Poskiparta, & Salmivalli, 2010).

Bystander behavior also has been found to affect how other students perceive victims of bullying. In one investigation, elementary and middle school students were presented with two bullying scenarios, one where a bystander intervened and another where the bully was being reinforced (Gini, Pozzoli, Borghi, & Franzoni, 2008). In the story with the bystander intervention, students reported liking the victim. In contrast, for the story where bystanders reinforced the bully, students did not report liking the victim. Further support for bystanders being able to affect other students can be found in studies that examine the role of social support in students who are victimized by bullying. For example, victims who have strong peer social support were more likely to report better quality of life than those who did not have strong peer social support (Flaspohler et al., 2009). This finding was further sustained by a large-scale study where victims of bullying were more likely to have poorer academic performance than those who were not victimized, but victims who had high levels of social support from friends were likely to perform better academically than victims who did not have social support (Rothson, Head, Klineberg, & Stansfield, 2011).

Bystander Typologies

Bystanders of bullying do not all behave in a similar fashion as some bystanders can have positive effects on other students in the school environment, while other bystanders can have a negative effect on others through behaviors such as reinforcing bullying (Gini et al., 2008; Kärnä et al., 2010; Salmivalli et al., 2011). Studying groups of bystanders can provide insight into the range of bystander behaviors while enhancing understanding of the characteristics that may help to determine which bystanders will intervene and which will not. Knowledge about these typologies and the characteristics of

these groups may also lead to interventions to modify the behaviors of bystanders who do not aid victims of bullying. Two major typologies will be discussed in the following sections. The first is the Participant Roles typology (Salmivalli et al., 1996), which identifies the various roles students can play in a bullying situation, and the second is based on Bandura's (1999) conception of Moral Disengagement, and groups bystanders based on their moral beliefs about bullying and feelings of guilt (Obermann, 2011).

Participant Roles Typology of Bystanders

The Participant Roles typology derives from the influence children may have on a bullying incident and identifies the various roles bystanders can take to influence bullying (Salmivalli et al., 1996). In order to understand the behaviors of bystanders, researchers must understand the various roles students may take and what characteristics students within these roles possess. The researchers identified three types of bystander roles: reinforcer of the bully (a bystander who encourages the actions of the bully), assistant of the bully (a bystander who helps a bully), and defender of the victim (a bystander who intervenes on behalf of the victim).

Reinforcer of the bully and assistant of the bully are typically collapsed into a single group referred to as reinforcers (e.g., Gini et al., 2008; Salmivalli et al., 2011; Pöyhönen, Juvonen, & Salmivalli, 2012), who encourage bullying behaviors in the bully. Reinforcers have been known to increase instances of bullying in a classroom (Salmivalli et al., 2011). Elementary school students, in the third through fifth grade, were surveyed, and those who reported reinforcing the bully did not believe defending the victim was important or that it is desirable to decrease bullying in their school environment (Pöyhönen et al., 2012).

Defenders of the victim (i.e., defenders) are students who intervene in bullying incidences to help the victim (Salmivalli et al., 1996). Researchers have found defending behavior is likely to decrease the instances of bullying in a classroom environment (Salmivalli et al., 2011). In another study of 6,397 elementary school students, those who reported to be defenders were likely to have greater self-efficacy for defending and believed it was important to decrease bullying in their schools (Pöyhönen et al., 2012). Defenders also reported having empathy for the victim of bullying and a significantly higher level of social self-efficacy than students who were uninvolved in bullying (Gini et al., 2008).

Moral Disengagement Typology of Bystanders

Moral disengagement is the mechanism used to selectively disengage one's moral standards when taking part in inhumane conduct (Bandura, 1999). Obermann (2011) proposed a typology of bystanders using Bandura's (1999) conception of moral disengagement. This typology suggests bystanders intentionally make decisions to intervene, reinforce, or be passive in a bullying incident based on their decision to morally engage or disengage from a situation. Using a combination of the Moral Disengagement Scale (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996) and questions used from Olweus Bully/Victim questionnaire (Olweus, 1996), Obermann (2011) was able to describe three types of bystanders: defenders (i.e., who help the victims), guilty bystanders (i.e., those who experience guilt after witnessing bullying without taking any action), and unconcerned bystanders (i.e., those who experience no guilt even after taking no action in a bullying situation). Defenders and guilty bystanders were found to show lower levels of moral disengagement than unconcerned bystanders.

Bystanders are not a singular group of students who have the same characteristics or behaviors (Obermann, 2011; Salmivalli et al., 1996). Instead, they represent diverse groups of students who react differently to bullying incidences. Due to the diversity of bystanders, the typologies provide a method to begin the investigation of bystander characteristics and behaviors. A commonality among these diverse typologies is that they all distinguish between those who take action to aid a victim of bullying and those who do not aid the victim. These typologies provide guidance for future research seeking to understand the characteristics of the different types of bystanders. However, an important research goal that extends beyond distinguishing between types of bystanders is to learn about the motivations for students' decisions about whether to intervene when they witness bullying. For systematic research in this area, a conceptual framework for understanding students' motivations and behaviors in bullying situations is needed.

Conceptual Frameworks for Understanding Bystander Behavior

The previous section provided a method distinguishing the different types of bystanders, and the following section will discuss frameworks that address the motivations of the various bystander behaviors. Two frameworks for understanding bystander behaviors have emerged that help to address the motivations of bystander behavior. The first is a Group Process framework proposed by Salmivalli (2010) that explains bystander behaviors based on the characteristics of the individual bystander and how the individual behaves in a collective. The second is the Bystander Motivation framework suggested by Thornberg et al. (2012) that describes five components of the motivation of bystanders to intervene or not intervene. Each framework will be described below in greater detail.

Group Process Framework

Salmivalli (2010) conducted a review of bullying literature and concluded that there are several factors that determine how a bystander reacts in a bullying situation based on the group's processes. For example, one of the group processes is the "bystander effect" where bystanders are less likely to intervene in larger groups because of a diffusion of responsibility (Darley & Latane, 1968). Bystanders are also affected by observing the reactions of other students and may develop a negative bias towards victims of bullying (Gini et al., 2008). Other group processes include a desire to avoid upsetting the bully who may be perceived as popular and powerful as well as a desire to feel accepted by a group (Garandean & Cillessen, 2006).

These group processes are influenced by three levels: individual, peer cluster, and classroom. The individual level includes characteristics of individual bystanders such as self-efficacy for defending (Pöyhönen et al., 2012), empathy and social self-efficacy (Gini et al., 2008). The peer cluster level refers to the characteristics of the social groups with whom the students associate, such as friends and cliques. The classroom level is similar to peer clusters, but this is a specific type of clustering that is involuntary as students are assigned to classrooms by school administration. Characteristics of the classrooms can affect the group processes and bullying as well. For example, classrooms where defending behaviors are likely to occur have reduced risk of bullying vulnerable students (Kärnä et al., 2010).

Bystander Motivation Framework

Thornberg and colleagues (2012) conducted a series of qualitative interviews with 30 students in grades four through eight in a U.S. school district. The researchers

developed a framework of bystander behavior by analyzing student responses to an open-ended semi-structured interview. Five components of bystander motivation were identified including interpretation of harm, emotional reaction, social evaluating, moral evaluating, and intervention self-efficacy. Interpretation of harm is the bystander's perception of harm experienced by a victim of bullying. Emotional reaction to bullying includes a bystander's empathy towards another student, fear of becoming a victim, and positive reaction to the excitement of the crowd that may encourage bullying behavior. Some students reported wanting to intervene depending on the relationship the bystander had with the victim, which was labeled as social evaluating. Social evaluating can include a determination about whether the bystander was friends with the victim, liked the victim, or the level of popularity and respect of the victim. An important facet of bystander motivation includes moral evaluating to determine whether or not the act of bullying is wrong. Finally, intervention self-efficacy is a bystander's appraisal of the potential success of their intervention.

In summary, several aspects of bystanders and their behaviors in bullying have been discussed. The range of possible bystander behaviors has resulted in typologies of bystanders rather than conceptualizing all bystanders as a single group (Obermann, 2011; Salmivalli, 1996). Conceptual frameworks have increased knowledge about the motivations of bystander behaviors, including group level factors (Salmivalli, 2010) and a range of individual factors (Thornberg et al., 2012). However, there is a need for a model to facilitate understanding of bystander behavior that can account for the various types of behaviors and motivations for behaviors at the group and individual levels, as well as how these levels affect one another. Having this model would provide direction

for future inquiry and intervention while enhancing understanding bullying. A social cognitive model of bystander behaviors, based upon Bandura's (1986) social cognitive theory, can encompass these individual and social factors providing a coherent model to explain bystander behavior.

Social Cognitive Model of Bystander Behavior in Bullying

Social Cognitive Theory (Bandura, 1986) proposed that humans were as much a product of the environment as they were influencers of it. Humans can change the environment based on their behavior, and this can change their cognition. This interplay among the personal factors, behavior, and environment, has been referred to as reciprocal determinism (Bandura 1986, 1997, 2001). Reciprocal determinism suggests that these three factors (i.e., personal factors, behavior, and environment) affect one another rather than one factor being the sole cause of behavior in isolation from the others.

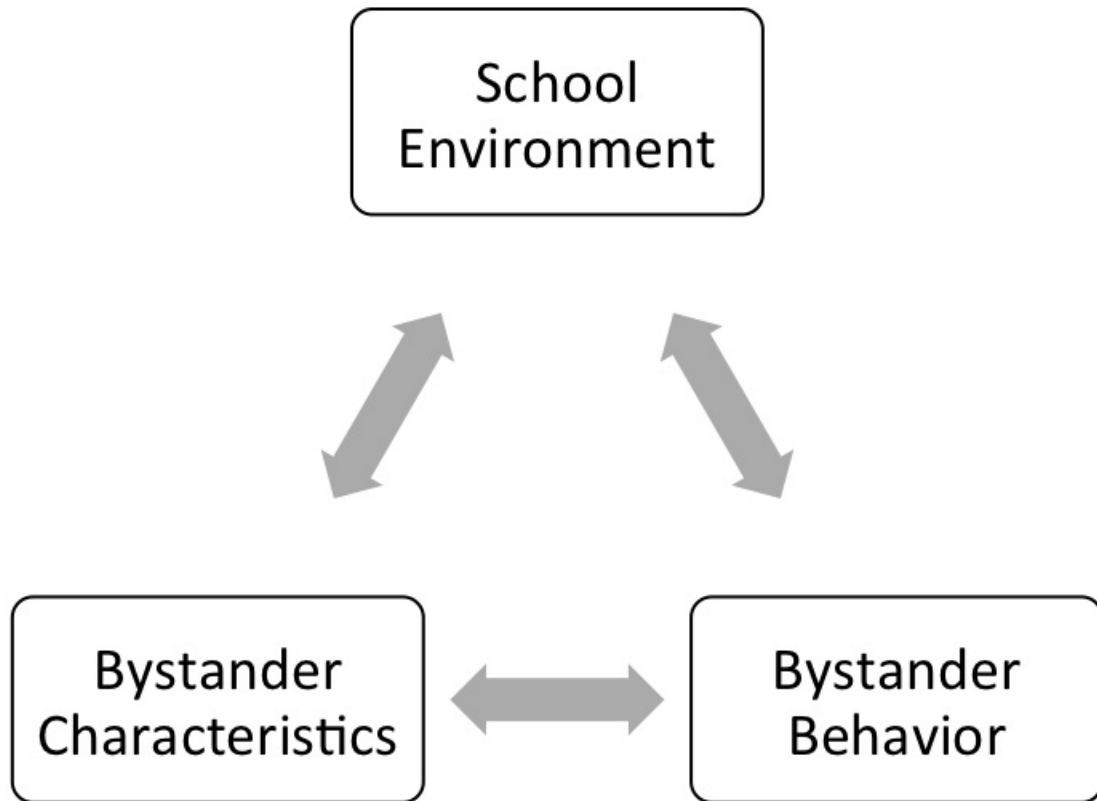


Figure 1. Diagram of bystander reciprocal determinism adapted from Bandura's (1986, 1997) model.

It is proposed that social cognitive theory be used to understand bystander behavior. Through reciprocal determinism, Bandura (2001) proposed that humans were able to intentionally act to influence their lives and environment, referred to as human agency. Applying Social Cognitive Theory to bystanders suggests that bystanders are able to exercise intention with their actions when they witness bullying. Though the environment can certainly influence the bystander, it is also possible that bystanders can influence the environment, hence a reciprocal relationship rather than a linear relationship (see Figure 1). This ability to exercise influence upon the environment through one's

actions when witnessing bullying is referred to as bystander agency. Though similar to Bandura's (1986, 2001) conception of human agency, bystander agency is specific to bystanders who witness bullying. Bystander agency is the result of the reciprocal determinism of the school environment, bystander characteristics, and bystander behavior. The following section will discuss the school environment, bystander characteristics, and bystander behavior and describe how these components interact with one another, followed by a discussion of bystander agency, bystander self-efficacy, bystander moral disengagement, and collective bystander agency.

School Environment

For bystanders of school-based bullying, the environment includes the classroom, playground, restroom, cafeteria and so forth. Studies have demonstrated that the school environment can affect bystanders and their behavior (Frey et al., 2009; Polanin et al., 2012; Raskauskas, Gregory, Harvey, Rifshana, & Evans, 2010). For example, a study of 1,168 students, ages 8-13, found that when students had a greater sense of connectedness to the classroom, they reported greater prosocial behavior, which in turn was related to less victimization (Raskauskas et al., 2010). Researchers have enacted changes to the school environment through interventions designed to decrease bullying. For example, a meta-analysis of 11 studies examining bullying prevention programs over a thirty-year span (i.e., 1980-2010) examined the programs' impact on bystander behavior (Polanin et al., 2012). The results of the study indicated bystanders in the intervention condition were more likely to intervene than bystanders who were in the control group. These findings indicated that students can be taught to defend victims of bullying and potentially contribute to a safer school environment when they are

bystanders. Frey and colleagues (2009) investigated the efficacy of a school wide anti-bullying intervention program that focused on creating supports through the adults in the school as well as changing student attitudes towards bullying and teaching skills necessary to counter bullying. Through this intervention program, the students reported an increase in their ability to respond assertively to bullying (e.g., calmly telling a bullying a to stop bullying), and it was concluded that this led to a reduction of bullying.

Bystander Characteristics

The individual characteristics of bystanders have been the focus of several studies such as those that gave rise to the bystander typologies (e.g., Barhight et al., 2013; Obermann, 2011; Salmivalli et al., 1996). A study with 294 Italian students, between the ages of 12-14 years, administered surveys to students about bystander behavior, empathy, and social self-efficacy, which is a person's perceived competence in social situations, such as making new friends and expressing opinions in a group (Gini, Albiero, Benelli, & Altoè, 2008). It was found that empathy was related to both passive bystander behaviors and active defending behaviors; however, social self-efficacy predicted defending behavior and had a negative relationship with passive bystander behaviors. This study suggested that bystanders who display high levels of empathy and have high levels of social self-efficacy are likely to intervene and defend victims of bullying (Gini et al., 2008).

Bystander Behavior

Finally, the third component of reciprocal determinism includes the behavior itself, which refers to the bystander's actions during a bullying situation. These behaviors can in turn affect the environment and those within it. Gini and colleagues (2008)

conducted two studies investigating students' reactions to bullying scenarios and their perceived sense of safety at school. The first study used a sample of 217 middle school students who were presented with a bullying scenario. The students reported that they would behave like defending bystanders but not like those who assist bullies or stand-by and watch. These students also reported a greater sense of safety in the scenarios where a bystander defended the victim. The second study expanded the design to include primary and middle school students as well as including scenarios that involved direct (i.e., threatening, insulting, and stealing) and indirect (i.e., spreading rumors and excluding a peer) bullying. Comparable to Study 1, the results of Study 2 indicated that the students reported they would behave like a defender. Another example of bystander behavior influencing the environment was demonstrated by findings from a survey of 6,764 students between the ages of 9-11 years that found the level of bullying affected by bystander behaviors in classroom settings (Salmivalli et al., 2011). The frequency of bullying was found to be negatively associated with frequency of defending behaviors, while higher frequency of bystanders assisting bullies was positively associated with greater incidences of bullying in the classroom. Another study examined 6,980 students in grades 3-5 through self-report questionnaires asking about bullying, victimization, bystander behavior, and measures of risk factors (i.e., social anxiety and peer rejection) (Kärnä et al., 2010). In classrooms where bystanders typically defended victims, students at risk for victimization were less likely to have social anxiety and peer rejection. However, in classrooms where bystanders were likely to assist the bully, at risk students were more likely to have elevated risk factors. While behaviors can influence personal factors, personal factors can also influence behaviors.

A social cognitive model of bystander behavior was proposed which is comprised of bystander characteristics, school environment, and bystander behaviors. Though these three components are crucial for understanding bystanders, it is also important to understand how these components interact with one another since these components do not have an exclusively linear relationship. An important result of the reciprocal determinism of these components is bystander agency. The implication of bystander agency is that bystanders are not merely products of the environment, but they can affect the environment and choose how to behave.

Bystander Agency

Reciprocal determinism results in a dynamic relationship between the school environment, bystander characteristics, and their intervention behaviors in response to bullying. In this context, bystanders may be viewed as agents of their actions and can intentionally affect their lives and the environment (Bandura, 1986, 2001). Similar to Bandura's (2001) conception of human agency, bystander agency is comprised of four major components discussed below: intentional behavior, ability to plan for the future, self-regulation, and self-reflection.

Bystanders' behaviors can be influenced by the environment (e.g., Frey et al., 2009; Polanin et al., 2012; Raskauskas et al., 2010), however, bystanders are also capable of *intentional behavior* that can influence their environment (e.g., Gini et al., 2008; Salmivalli et al., 2011). By acting intentionally, bystanders can *plan for the future* by considering goals and the consequences of their actions, which may include an aspiration to be a defender, help decrease bullying, help a friend, or feel safe. In order to progress towards these goals, a bystander will need to *self-regulate* their behaviors, or align their

behaviors with their goals. They may develop personal or moral standards of how they wish to behave and distinguish between what is right and wrong. A bystander may have a future goal of helping a friend who is being bullied but feels the need to be uninvolved and safe. Here, the mechanism of self-regulation may cause the student to consider a goal and match behavior to the goal. For example, a bystander might match defending behavior with the goal of helping their friend. Finally, *self-reflection* allows a bystander to determine whether their actions are in line with their future goals. Becoming aware that a bystander's action of standing and watching is not in line with their goal of helping those being victimized might help the bystander to change their behavior to be more in line with their goals.

Bystander Self-Efficacy

Within the proposed social cognitive model of bystander behavior is the concept of bystander self-efficacy. Bystander self-efficacy is based on Bandura's (1997) conception of self-efficacy in Social Cognitive Theory, which has been found to be a predictor of a range of behaviors from academic achievement (e.g., Multon, Brown, & Lent, 1991; Pajares & Schunk, 2001) to risk-taking behaviors (e.g., sexual risk behaviors, use of contraceptives, addictive behaviors) (Schwarzer & Luszczynka, 2006). Bystander self-efficacy is bystanders' belief that they can successfully intervene when witnessing bullying. Inquiring about a bystander's self-efficacy would require the student to consider his or her intentions for various behaviors, the consequences of behavior, the values regarding action or inaction, and a self-awareness as they consider their decision about what to do. Thus, bystander self-efficacy may be a way to gauge a student's bystander agency, which may predict future defending behaviors. Bandura (1997) proposes four

sources of self-efficacy that can increase or decrease self-efficacy beliefs: mastery experiences, vicarious experiences, verbal persuasion, and physiological and affective states (see Figure 2).

Mastery Experiences. Mastery experiences may be the most powerful source of self-efficacy (Bandura, 1997), and these include previous opportunities to use a behavior that were successfully executed. In bystander self-efficacy, a bystander may successfully defend a victim in a bullying incident, thus increasing perceptions of bystander self-efficacy for defending in a future situation. However, it is unnecessary to create an actual

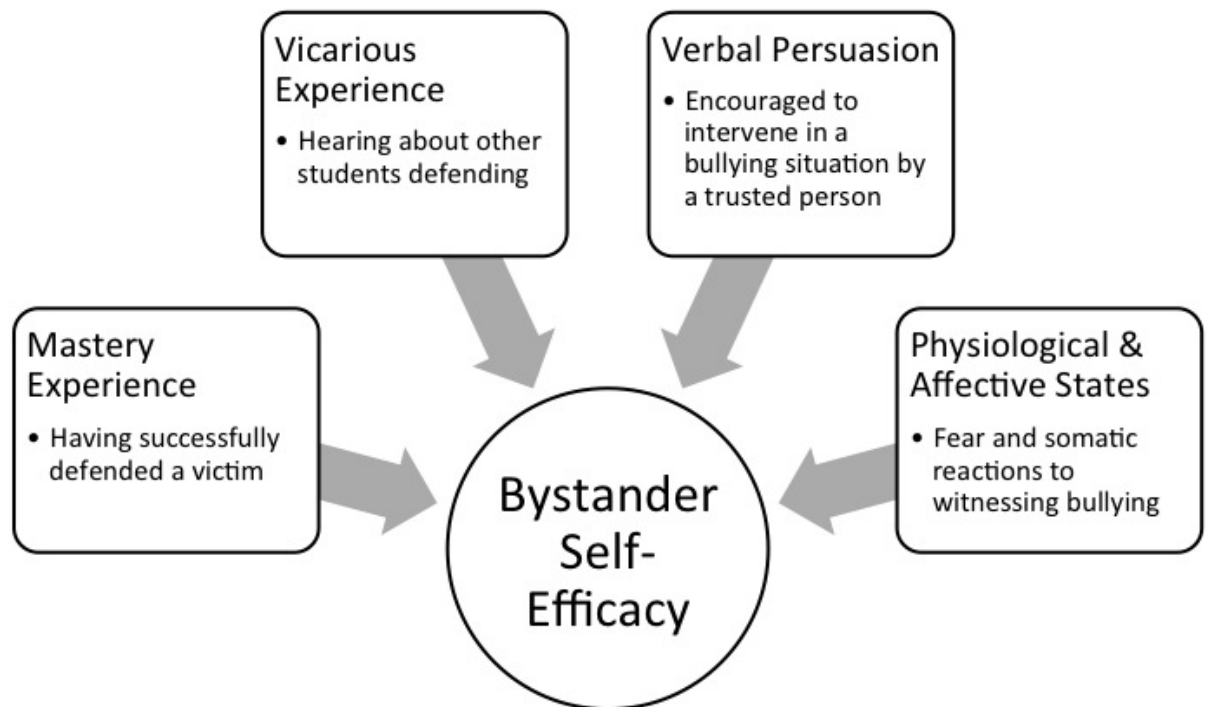


Figure 2. Sources of Bystander Self-Efficacy adapted from Bandura's (1986, 1997) model.

bullying event, or wait for a student to experience a bullying situation, for a student to have a mastery experience of successfully defending. The meta-analysis by Polanin and colleagues (2012) examined studies using intervention programs to increase bystanders' defending behavior. These programs utilized techniques to simulate a bullying experience, such as classroom role-plays, rather than creating a real bullying experience. An increase in bystander defending behavior was observed after students were exposed to these types of simulations. Simulations provide a mastery experience, which can cause an increase in bystander self-efficacy which can, in turn, lead to increases in defending behavior by bystanders.

Vicarious Experiences. Vicarious experience occurs when a student witnesses or hears about another student who intervened successfully in a bullying incident. Having students observe other students, similar to them, defending victims of bullying can increase bystander self-efficacy for intervention and increase the likelihood of defending behavior (Polanin et al., 2012). This source of self-efficacy also may explain why classrooms known to have defenders are likely to have less bullying than classrooms that are not perceived as having defenders (Kärnä et al., 2010; Salmivalli et al., 2011). In classrooms with known defenders, bystanders will observe other bystanders who are in their class defend a victim of bullying successfully. This may increase the bystander self-efficacy of other bystanders in the classroom, thus increasing the likelihood they may intervene when witnessing bullying.

Verbal Persuasion. Another source of bystander self-efficacy is verbal persuasion, statements endorsing the ability of a bystander to act in a bullying situation. Part of the Steps to Respect program, used in a study by Frey and colleagues (2009),

included verbal persuasion through adults coaching students to defend when they see bullying occur, which may have contributed to increasing the likelihood of students intervening in bullying situations. These statements need to come from those whom the student trusts. It could be adults or teachers, but it could also be peers or friends.

Physiological and Affective States. The final source of bystander self-efficacy is physiological and affective states. When a bystander witnesses a bullying incident, they may experience a physical and emotional reaction to it. In particular, bystanders may feel fear and have a somatic reaction to the fear that may cause them to believe they are unable to intervene or act in a bullying situation. Further investigation is needed regarding this source of bystander self-efficacy to determine what physiological and affective states can influence self-efficacy beliefs and behavior and to what degree these states increase or decrease the self-efficacy beliefs.

Bystander Moral Disengagement

Social Cognitive Theory can explain a large part of bystander behavior through bystander agency and bystander self-efficacy. Since bullying is typically considered an undesirable act, an additional construct, moral disengagement, may help to explain bystander behavior. Bystanders' beliefs about bullying and morality can inform how a bystander would self-regulate (a component of bystander agency) their behavior when faced with bullying; however, bystanders may not act in a manner that matches their beliefs. The discord between their actions and beliefs may be explained through a mechanism Bandura (1999) called moral disengagement.

A few studies have examined the phenomena of bystanders and moral disengagement. In Italy, 663 4th and 5th grade students completed questionnaires

regarding bullying behavior and moral disengagement (Pozzoli, Gini, & Vieno, 2012). These researchers developed a moral disengagement scale and found four factors of moral disengagement: “cognitive restructuring” (i.e., moral justification), “minimizing one’s agentic role” (i.e., displacement or diffusion of responsibility), “distorting consequences,” and “blaming/dehumanizing the victim.” Moral disengagement, specifically cognitive restructuring, was found to be positively related with a bystander’s decision to assist or reinforce the bully. Gini (2006) administered surveys to determine a student’s role in bullying (i.e., bully, assistant, reinforcer, defender, outsider, and victim) as well their level of moral disengagement. In a set of bullying scenarios, defenders were less likely to demonstrate moral disengagement than students who self-identified in other bullying roles. Aggressive children were likely to endorse greater levels of moral disengagement. Oberman’s (2011) study of 660 students found unconcerned bystanders and outsiders had elevated levels of moral disengagement.

In light of these findings, the concept of “bystander moral disengagement” is proposed, based on Bandura’s (1999) conception of moral disengagement. Bandura (1999) organizes the various types of moral disengagement using the categories of

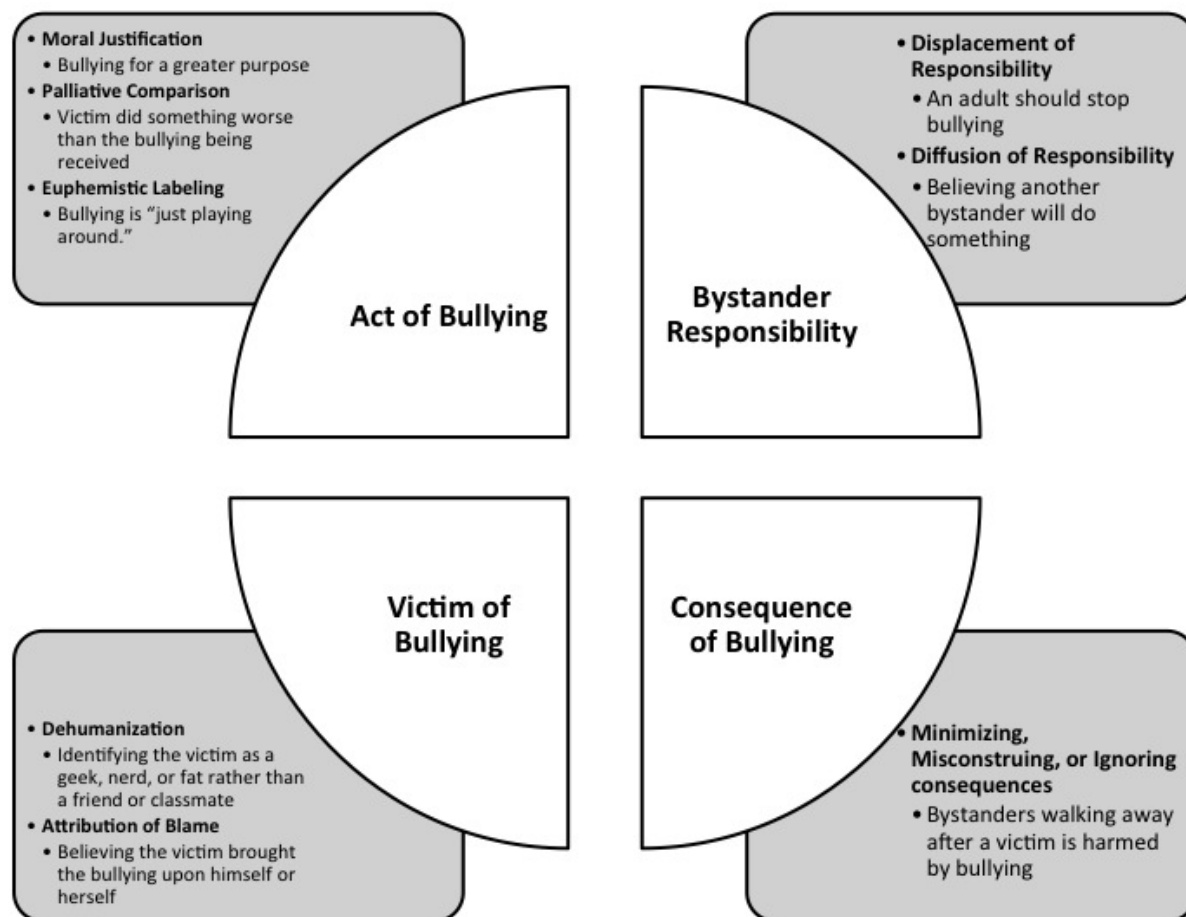


Figure 3. Mechanisms of Bystander Moral Disengagement adapted from Bandura (1999).

reprehensible conduct, detrimental effects, and the victim. In order to apply these categories to bystanders in bullying situations and moral disengagement, the definitions of these three categories have been modified, and a fourth category is added to this model to emphasize responsibility within bullying. Therefore, the four categories of bystander moral disengagement include: act of bullying, bystander responsibility, bullying consequences, and the victim of bullying (see Figure 3).

Act of Bullying. This categorization of moral disengagement mechanisms refers to the methods in which bystanders overcome their belief that bullying is a negative act.

These methods include *moral justification*, *palliative (or advantageous) comparison*, and *euphemistic labeling* (Bandura, 1999) (see Figure 3). Moral justification refers to portraying an act of bullying as being beneficial to society or moral based on the purpose of the act. For example, a bystander, who uses moral justification for an act of bullying, may believe the school would be better off if the victim was no longer in the school instead of considering the moral issues of bullying. Palliative comparison is the juxtaposition of an immoral act (i.e., bullying) in comparison to an act of greater immorality. For example, a bystander may compare a victim being verbally bullied with a victim who was physically bullied and believe the former does not need intervention because it is not a serious problem like physical bullying. The third method for act of bullying is euphemistic labeling which refers to language that is used to make the immoral act or victim seem less immoral. For example, a bystander may view a bully as playing around with the victim rather than as bullying.

Bystander Responsibility. A second set of moral disengagement mechanisms is related to bystander responsibility, much like Thornberg and colleagues' (2012) conception of bystander irresponsibility. Two mechanisms are identified under the category of bystander responsibility, *displacement of responsibility* and *diffusion of responsibility* (Bandura, 1999) (see Figure 3). Displacement involves moving the bystander's responsibility for intervention to another person of greater authority or influence explaining the lack of personal responsibility for the immoral action. For example, a bystander may believe an adult should stop a bullying incident rather than a student bystander. From the perspective of a bystander using displacement of responsibility, the bystander following the directions of a bully might believe he or she is

not harming the victim directly because only the bully is making the decisions. Diffusion of responsibility refers to spreading the bystander's obligation to intervene during bullying across many individuals. As a result, the bystander might not feel a sense of responsibility or obligation to intervene (Bandura, 1999). In a bullying situation, a large group of students may witness bullying. Though the bystanders may believe they have responsibility to take some action in defense of the victim, this sense of responsibility may be diffused across the entire group so that bystanders do not feel enough responsibility to take action. As a result, the collective action of the bystanders would be to watch the bullying occur.

Bullying Consequences. Bullying consequences is the third part of bystander moral disengagement, which refers to the perceptions of the results of bullying. The moral disengagement mechanism within this category is to *disregard or distort the consequences*, where the results of a person's immoral actions are ignored or misconstrued (see Figure 3). For a bystander, this may occur when the bystander simply walks away immediately after the bully has harmed a victim. The bystander then choosing to do nothing about witnessing the incident would then be ignoring the harm that has befallen the victim from the bullying.

Victim of Bullying. The fourth category of bystander moral disengagement is related to bystanders' perceptions of the victim of bullying. The two types of moral disengagement mechanisms within this category include *dehumanization* and *attribution of blame* (Bandura, 1999) (see Figure 3). Dehumanization occurs when viewing a person in derogatory terms. For example, a bystander may witness bullying of a fellow student but disengage by conceptualizing the victim as the fat kid, stupid kid, nerd, or geek.

These negative terms detach the victim from their human characteristics and can provide justification for not intervening. Attribution of blame, much like Thornberg and colleagues' (2012) conception of blaming the victim, refers to moving the blame for the immoral act to another entity, for example the victim of bullying may be seen as causing the bullying due to her/his actions in class or their appearance.

Collective Bystander Agency

Thus far in the current paper, the discussion of a social cognitive perspective of bystander behavior has largely been about the individual bystander. However, some researchers (e.g., Kärnä et al., 2010; Salmivalli, 2010; Salmivalli et al., 2011) have provided evidence of a collective process in bullying. Based on Bandura's (1997; 2001) conception of collective agency, collective bystander agency is proposed under the social cognitive model of bystander behavior, which is a group's ability to intentionally act to affect their lives and the school environment regarding bullying. A group can be defined as a social set of students such as friends, cliques, classroom, or school. Bandura (1997; 2001) discussed collective agency as a dynamic interplay of individuals utilizing their abilities and resources to progress towards a group goal. Hence, collective bystander efficacy cannot be defined simply as the sum of individual self-efficacies. Individuals who are confident in their abilities to perform a task individually, may have a low collective efficacy due to their inability to function together as a group. Hence, collective bystander efficacy is the group's perceived ability to reduce bullying through intervention, rather than an aggregation of individual self-efficacies. Though individual and collective efficacies are different, there is evidence that the two are related (Barchia & Bussey, 2011; Fernandez-Ballesteros, Diez-Nicolas, Caprara, Barbaranelli, & Bandura,

2002). For example, a study of individual efficacies for managing one's life and contributing to societal change found that both of these individual efficacies ($\beta = .11$, $\beta = .57$) contributed to a collective efficacy for changing society (Fernandez-Ballesteros et al., 2002). In a longitudinal study on bullying, 1,285 students, between grades 7-10, were surveyed, and those who endorsed a higher collective efficacy to stop peer aggression reported a greater frequency of defending behaviors than those who reported a lower level of collective efficacy (Barchia & Bussey, 2011).

The goal of this paper was to propose a Social Cognitive Model of Bystander Behavior that can help to explain bystander behavior through an understanding of the individual bystander characteristics, the school environment, and bystander behaviors

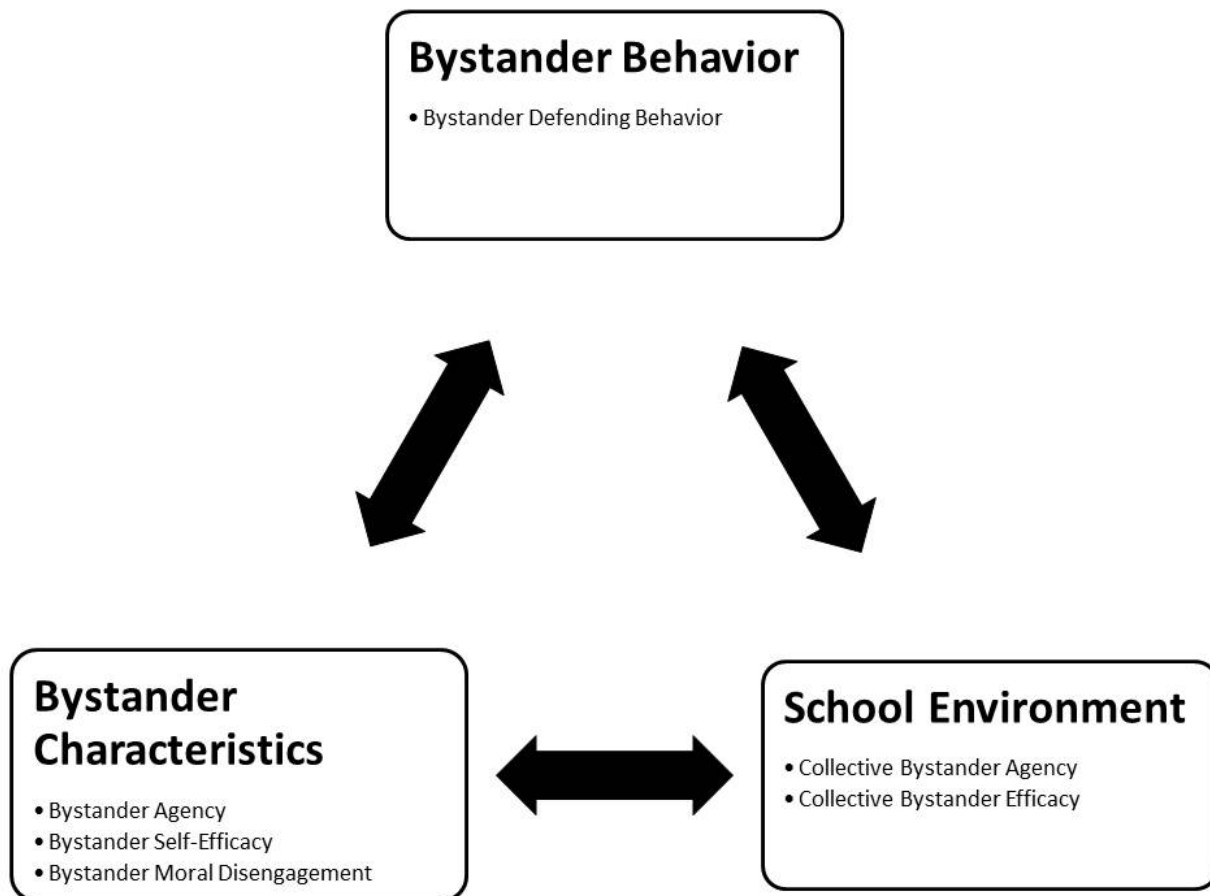


Figure 4. Social Cognitive Model of Bystander Behavior.

(see Figure 4). In addition, the model presented the notion of interaction, or reciprocal determinism, among the elements of bystander characteristics, school environment, and bystander behavior. Through reciprocal determinism, bystanders are able to influence their environment as well as be influenced by their environment. Because of reciprocal determinism, bystanders are proposed to have the characteristic of bystander agency. Bystander self-efficacy allows for insight into a bystander's agency, while bystander moral disengagement provides theoretical basis for the reasons a bystander may choose not to defend a victim of bullying. In addition, the group nature of bystander behaviors

suggests the presence of a collective bystander agency and collective bystander self-efficacy.

Research Agenda

The Social Cognitive Model of Bystander Behavior (see Figure 4) proposed in this paper has implications for future research. The following section describes a research agenda that is based on the three key components of the above-mentioned model: bystander characteristics, school environment, and bystander behaviors. A hallmark of the proposed model is the reciprocal determinism among the components, thus a method for investigating the interactions will be presented. The research agenda will conclude with ideas for intervention and prevention based on the Social Cognitive Model of Bystander Behavior.

Bystander Characteristics

An important aspect of bystander characteristics is bystander agency and its four components (i.e., intentional behavior, ability to plan for the future, self-regulation, and self-reflection). Research is needed to learn about bystander agency and how bystanders develop their agency. Investigations into bystander agency would be difficult due to the challenge of distinguishing the various components. For example, research into self-regulation could not be done while excluding self-reflection, knowing the intention of the bystander, or what the bystander believes will happen. Instead of attempting to study the individual components in order to understand bystander agency, it may be beneficial to investigate bystanders' beliefs regarding both their ability to defend a victim of bullying and their values or morals. The following sections will discuss bystander self-efficacy,

which is the belief of a bystander to act in a bullying incident, and bystander moral disengagement, which is a method of a bystander to not act in a bullying incident.

Bystander Self-Efficacy. An important area of bystander characteristics to investigate is bystander self-efficacy, because it indicates bystanders' perception of their ability to act in a bullying incident. Bystander self-efficacy provides insight into bystander agency, because in order to believe a bystander is able to intervene, the bystander needs to have intended to intervene, considered the future consequences of the behavior, considered their values of what should be in done, and self-reflected on their ability. These are all components of bystander agency, thus making bystander self-efficacy a potential method to measure bystander agency. Two initial areas of research are a) investigating the extent to which bystander self-efficacy increases bystander intervention behaviors and b) identifying the sources of bystander self-efficacy. The first research area is needed to determine if bystander self-efficacy contributes to bystanders' decisions about whether to intervene when witnessing bullying. Establishing the relationship between bystander self-efficacy and bystander behavior would suggest bystanders' self perceptions are important in determining their behaviors, which could inform intervention and prevention efforts focused on increasing bystander self-efficacy. Though initial research has indicated bystander self-efficacy to be an important predictor to bystander behavior (Thornberg et al., 2012), further studies are needed to determine the strength of the relationship between self-efficacy and behavior in bystanders and to understand the nature of bystander self-efficacy. It is possible that the nature of bystander self-efficacy may include multiple factors, as found in investigations of self-efficacy and victims of bullying (e.g., Singh & Bussey, 2010).

Another important area of research is the sources of bystander self-efficacy (i.e., mastery experiences, verbal persuasion, vicarious experience, and physiological and affective states). Understanding the sources of bystander self-efficacy will provide insight into the influences of bystander self-efficacy. The sources are proposed as potentially responsible for fostering or diminishing bystander self-efficacy. They also can determine which influences affect bystander self-efficacy. For example, if vicarious experiences were found to be strongly related to increased bystander self-efficacy, it is likely that bystanders are strongly influenced to intervene or not intervene based on the experiences of other bystanders similar to themselves.

Future research about the sources of bystander self-efficacy is needed to determine the strength that each source has to increase or decrease self-efficacy as well as the direction of these relationships. The strength of the sources can be determined through instruments designed to measure each of these sources. For example, a potential measure of mastery experiences can be constructed by asking bystanders to report the number of previous experiences of defending a victim of bullying. Based upon the current model, it is predicted that each of the sources will increase bystander self-efficacy, but the relationship may not be linear or may involve a multilevel approach where multiple sources work together to affect bystander self-efficacy.

Bystander Moral Disengagement. Another bystander characteristic within the social cognitive model of bystander behavior is moral disengagement. Future research in bystander moral disengagement is needed to extend knowledge about the eight mechanisms of moral disengagement that were grouped into the following four categories: act of bullying, bystander responsibility, bullying consequences, and victim of

bullying. Research about bystander moral disengagement can investigate whether bystanders tend to use some categories more than frequently than others, when various categories are most likely to be used, and how bystander moral disengagement is related to bystander behavior. It may be possible that bystanders can use more than one mechanism of bystander moral disengagement simultaneously, and using multiple mechanisms may increase bystander moral disengagement. Research on these aspects moral disengagement would provide information that might be used to design interventions to strengthen bystanders' efforts to defend or support victims. For example, if a group of bystanders were known to morally disengage by dehumanizing the victim, an intervention program might be developed and tested in an effort to humanize victims (e.g., enhancing the perception that victims are human beings who can be hurt). Also, considering that bystanders may use more than one mechanism of bystander moral disengagement, research is needed to determine whether intervention efforts may need to be prepared to address multiple mechanisms simultaneously.

Measurement of bystander moral disengagement would be an important step in its investigation. Previous studies have researched moral disengagement and bystander behaviors (e.g., Gini, 2006; Obermann, 2011), but these studies have typically used a general measure of moral disengagement by aggregating the mechanisms into a single moral disengagement variable. Bystander moral disengagement is proposed to have eight mechanisms, and exploratory research needs to be conducted to determine the existence of the eight mechanisms in bystanders of bullying. However, in this exploratory research, questions regarding bystander moral disengagement should be specific to bystanders of

bullying, as specificity of moral disengagement questions has allowed for a more sensitive measure (Pozzoli et al., 2012).

School Environment

For bystanders of bullying, the environment typically involves the school and those within that setting. Researchers are emphasizing the influence of groups within the school environment on bystander behavior with the emerging evidence of the influence of the environment on bystander behavior (e.g., Kärnä et al., 2010; Polanin et al., 2012; Salmivalli et al., 2011). Thus, an initial area of research under the proposed model should be to investigate collective bystander efficacy. Future research of collective bystander efficacy should focus on both individual and group bystander behaviors. It is expected that collective bystander efficacy would increase bystander defending behaviors in both individuals and groups as bystander behavior is a group phenomenon that emphasizes the influence of groups (e.g., Salmivalli et al., 2011). In addition, methods of increasing collective bystander efficacy should be investigated as well.

In order to begin research in collective bystander efficacy, it is recommended that qualitative techniques (e.g., interviews, focus groups, and observations) be used to collect exploratory information (Bogdan & Biklen, 2007). An advantage of using qualitative techniques, such as an interview, allows for open ended questions where respondents are able to freely give any information they believe is relevant to a question, such as cultural context to an incident. This advantage will be important in the research of collective bystander efficacy as there is little information currently available. This type of data collection will have several levels, because there are several levels of groups within a school environment, such as group of friends, a classroom, a grade level, a hallway of

students, or even the entire school. It is possible that the various levels have varying degree of influence on bystanders of bullying. The advantage of qualitative techniques will be important in regards to the different levels as researchers can determine what groups the bystanders perceive in the school environment as well as their effectiveness in affecting bullying. Further inquiry can ask specific group levels that emerge, and this may lead to quantitative measures that will have questions regarding more than one level of collective efficacy.

Once exploratory information has been collected, this information can be converted into a survey measure for quantitative data collection to determine trends of collective bystander efficacy beliefs (e.g., Hitchcock et al., 2005). The exploratory data would contain information about specific behaviors groups tend to use and items can be developed from those behaviors. For instance, if it is found that groups of friends walking together prevents bullying, a collective bystander efficacy item can be worded as, how sure are you that you and your friends can walk together at school? A collective bystander efficacy measure can be used to determine relationships with bystander behaviors. The measure can also be used to determine relationships in more complex models, such as how collective bystander efficacy affects bystander self-efficacy, which may ultimately affect victimization.

Bystander Behavior

Research in the area of bystander behavior should focus on the types of behaviors bystanders may use when witnessing bullying. This information will help to answer questions in examining the interactions of the components discussed in the next section. There are several ways a bystander could become involved in a bullying incident,

such as blocking a bully, telling an adult, talking to a bully, aiding the victim, or diverting attention. In addition to researching what types of behaviors bystanders use, there are two further questions to explore, how often are the various types of behaviors used, and how effective the behaviors are in defending victims of bullying.

Methods to begin exploring these questions can start with qualitative techniques, such as interviews (Bogdan & Biklen, 2007). These interviews can be conducted with students or adults in the school, such as administrators or teachers, regarding the types of behaviors used by bystanders and how often they are used. With the collection of qualitative data, this information can be converted into a scale (e.g., Hitchcock et al., 2005) that can be administered to multiple students at once and provide trends of frequency of bystander behaviors and perceptions of effectiveness. Data collected from this scale could then be used to determine the effect of certain behaviors on the environment (e.g., collective bystander efficacy) and bystander characteristics (e.g., bystander self-efficacy and bystander moral disengagement).

Interactions of the Model Components: Reciprocal Determinism

One advantage of this model is its focus on the interaction of the three primary components (i.e., bystander characteristics, school environment, and bystander behavior), thus a major area of inquiry would be to determine how the components affect one another. As extensions of the questions posed in the earlier sections, the following research questions should be considered within the model, how do the bystander characteristics of bystander self-efficacy and bystander moral disengagement affect environmental factors such as collective bystander efficacy, how do bystander characteristics and collective bystander efficacy affect bystander defending behavior, and

how do bystander defending behaviors in turn influence bystander characteristics and collective bystander efficacy? It is expected that each of the components will have a positive relationship with each other, with the exception of bystander moral disengagement, which would have a negative relationship with defending behaviors. Since the question of bystander characteristics and collective bystander efficacy influencing bystander behavior will be examined through the questions mentioned in the previous sections, an important first step in researching reciprocal determinism will be to examine the effect of behaviors on bystander characteristics and collective bystander efficacy.

There has been evidence of bystander characteristics affecting bystander behavior, for example Polanin and colleagues (2012) found students who received an intervention treatment were more likely to intervene in bullying incidences, which suggests that the characteristics of the bystander have changed due to the changes in behavior. However, further investigation would be needed to determine what characteristics have been changed. One potential area is bystander self-efficacy, because having successfully experienced a successful intervention is the source of bystander self-efficacy. Another potential characteristic to be affected by behavior is bystander moral disengagement. In turn, these characteristics may likely affect future bystander behaviors as well as the behaviors and characteristics of other bystanders in the surrounding environment. By understanding the effects of behavior on the environment, attention would be needed in detecting changes in the characteristics of groups of bystanders as well as individuals.

Prevention and Intervention

Increasing bystander defending behaviors has been suggested as a means to prevent bullying within a school environment (e.g., Barhight et al., 2013; Flashpohler et al., 2009; Gini et al., 2008; Rock & Baird, 2012; Thornberg & Jungert, 2013). Salmivalli (2010) argued intervention with bystanders may be more effective than attempting to intervene with bullies, due to the likelihood that bystanders will be more likely to believe bullying is wrong when compared to bullies. A recent meta-analysis of bystander intervention programs found that the programs were effective in increasing bystander defending behavior (Polanin et al., 2012). According to the proposed model, the social cognitive model of bystander behavior, providing an intervention has the ability to change all three components of the model due to reciprocal determinism. For instance, an intervention for an individual to increase bystander self-efficacy for defending behavior, would increase bystander defending behavior. Increase in defending behavior would then influence those in the environment, which would then positively influence the characteristics of the individual. Bystander intervention programs are a promising direction for reducing and preventing bullying, and research in this area should continue developing these programs. Based on upon the social cognitive model of bystander behavior, an intervention that combines both bystander characteristics and collective bystander efficacy to affect behavior will be discussed.

Interventions designed to increase bystander defending behavior can begin with the increasing of bystander self-efficacy, which can be increased with activities based on the sources of bystander self-efficacy. As mentioned previously, ascertaining the effectiveness of the sources in increasing bystander self-efficacy would be helpful in the

design of an intervention program. For example, if mastery and vicarious experiences for defending behaviors were found to be effective in increasing bystander self-efficacy, then potential activities may involve role-play and discussion of bystander experiences with bullying where successful defending of the victim occurred. In addition, if moral disengagement was found to be negatively correlated with defending behavior, a bystander intervention can also include activities designed to ascertain the beliefs of bystanders and change beliefs. For example, if bystanders were found likely to use moral justification, then activities should be designed to emphasize the harm of bullying and long term effects and consequences of taking no action. In a previously proposed research question, it was considered if an increase in bystander self-efficacy and a decrease in bystander moral disengagement would lead to greater defending behaviors in bystanders. If this hypothesis were to be confirmed, then this intervention focused on bystander self-efficacy and moral disengagement can potentially increase defending behavior, which may in turn increase the bystander characteristics that are related to greater defending behavior. This means, after an intervention is successfully conducted with bystanders, they may continue to become more likely to defend as every instance of defense would increase their characteristics.

One additional area of the model that needs to be addressed in the proposed intervention would be the environmental factor. As previously discussed, collective bystander efficacy would be an important step in affirming the model and understanding groups of bystanders. If collective bystander efficacy were found to influence bystander behavior and characteristics, an intervention based on the model would be conducted in groups at various levels. These group interventions would increase the perception that the

group seeks to defend victims of bullying, which could in turn increase defending behaviors and characteristics in individual bystanders. Group level interventions can be conducted with a small number of students to an entire classroom in order to increase collective bystander efficacy. The increase in collective bystander efficacy would then lead to an increase in bystander self-efficacy, as the group feels more efficacious to defend victims of bullying, so would then an individual feel efficacious as well. With greater self-efficacy and collective bystander efficacy, there is a greater likelihood of defending behaviors from bystanders. Successful defending behaviors would in turn increase the efficacies in both the individual and group.

Conclusion

The purpose of this paper was to propose a Social Cognitive Model of Bystander Behavior that combines aspects of bystander typologies and frameworks including the Participant Roles typology, Moral Disengagement typology, Group Process framework, and Bystander Motivation framework. The proposed model integrates the characteristics of individual bystander and the influence of the bystander's environment as well as account for the interaction between the bystander and the environment. Through this, the Social Cognitive Model of Bystander Behaviors provides several new constructs, adapted from Bandura's (1986) Social Cognitive Model, in order to capture the complex nature of bystander behavior into a single cohesive model. One of these new constructs is bystander agency, which proposes that bystanders can be intentional in their actions when witnessing a bullying incident. Bystanders being intentional with their behavior would mean bystander self-efficacy would be predictive of their behavior and their allocation of resources and effort towards that goal. Another new construct in the proposed model,

bystander moral disengagement, describes mechanisms bystanders may use to not help a victim of bullying. Research is needed to continue to provide support for this model by examining the relationship among the components of bystander characteristics, school environment, and bystander behavior. Further research on the Social Cognitive Model of Bystander Behavior can lead to an understanding of bystander behavior, which would ultimately lead to individualized intervention programs and prevention efforts.

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CHAPTER 2

THE MEDIATING ROLE OF SELF-EFFICACY ON BULLYING VICTIMIZATION

Bullying, defined as occurring repeatedly with an intent to harm another by a person or group with more power (Olweus, 1994), occurs in four ways: physical, verbal, relational and cyberbullying (Jordan & Austin, 2012; Jose et al., 2012; Stassen Berger, 2007; Wang, Iannotti, & Nansel, 2009). Researchers investigating bullying have documented that between 7-19% of school aged children have reported being victimized (Cunningham, 2007; Delfabbro et al., 2006; Nation, Vieno, Perkins, & Santinello, 2008; Peskin, Tortolero, & Markham, 2006; Solberg, Olweus, & Endresen, 2007; Undheim & Sund, 2010). In light of the negative outcomes of bullying victimization that are discussed below, there is cause for concern and research.

Researchers have documented a range of negative mental health and school outcomes resulting from bullying, such as physical health problems (Biebl et al., 2011), self-harm behaviors (Fisher et al., 2012), social problems with teachers and peers (Nation et al., 2008), and lower self-esteem (Jankauskiene et al., 2008). Three particularly important outcomes are anxiety (Hunt, Peters, & Rapee, 2012; Isolan et al., 2013; Menesini, Modena, & Tani, 2009; van Oort et al., 2011), depression (Hunt et al., 2012; Klomek et al., 2011; Menesini et al., 2009; Turner, Exum, Brame, & Holt, 2013; Wang et al., 2011), and negative school climate (Elsaesser & Gorman-Smith, 2013; Varjas, Henrich, & Meyers, 2009; Waasdorp, Pas, O'Brennan, & Bradshaw, 2011). The following sections will examine these negative outcomes to explain their importance to victimization. That will be followed by a section discussing self-efficacy as a potential mediator of the relationship between bullying victimization and these outcomes.

Students who experience bullying victimization were found to have elevated levels of anxiety, which includes elements of panic, somatic problems, general anxiety, separation anxiety, social anxiety, school anxiety, and harm avoidance (Hunt et al., 2012; Isolan et al., 2013; Menesini et al., 2009; van Oort et al., 2011). Isolan et al., (2013) studied 2,355 students between the ages of 9-18 using the Screen for Child Anxiety-Related Emotional Disorders, an anxiety screening measure based on the DSM-IV criteria for anxiety. Students who self-reported being victims of bullying were found to be more likely to have symptoms of anxiety than their uninvolved peers or other students who classified themselves as bullies (Isolan et al., 2013). A study of risk factors and anxiety in adolescence was conducted over a period of 6 years with students between the ages of 10-18, and one of the main findings was an elevated level of anxiety over time in adolescents who had reported being victims of bullying (van Oort et al., 2011). Further, in a study of school-age students, between the ages of 8 and 15, surveys were administered and it was found that victimization was positively correlated with anxiety (Hunt et al., 2012). Anxiety was found to be significantly higher in victims of bullying than students who reported no bullying in a study of 1,278 secondary school students (Menesini et al., 2009). This study also found that students who were more frequently victimized reported greater anxiety than students who were less frequently victimized. The connection between anxiety and bullying victimization also has been supported by physiological measures (Carney et al., 2011). In a study of 91 sixth grade students, those who had experienced bullying victimization had higher levels of cortisol, a hormone related to stress, than students who did not experience bullying.

Depression has been found to be a negative outcome for students who have been victimized by bullying (Hunt et al., 2012; Klomek et al., 2011; Menesini et al., 2009; Turner et al., 2013; Wang et al., 2011). A recent study with 1,874 middle and high school students completing self-report surveys regarding bullying victimization, depression and suicide found that students who reported being victimized by bullying had higher levels of depression and suicidal ideation than students who did not report any involvement in bullying (Turner et al., 2013). Wang and colleagues (2011) investigated 7,313 students in sixth through tenth grade and found that victims of bullying were more likely to report higher levels of depression than students who were not involved or only occasionally involved in bullying. In another investigation, depression was positively correlated with victimization in school-aged children, between 8-15 years of age (Hunt et al., 2012). Secondary school students were more likely to report significantly higher levels of depression than students who did not report victimization (Menesini et al., 2009).

In addition to these findings, bullying victimization has been linked with depression and suicidal ideation long after the bullying incident (Klomek et al., 2011). A longitudinal study of high school students used questionnaires regarding bullying, depression and suicidal ideation. These same students were then contacted four years later to assess their levels of depression and suicidal ideation. Students who were identified at risk for suicide or depression were more likely to have interpersonal, school, and emotional difficulties in the follow-up assessment if they had experienced bullying victimization.

Researchers have found that victimization is related to negative perceptions of school climate (Elsaesser & Gorman-Smith, 2013; Waasdorp et al., 2011; Varjas et al.,

2009). School climate is a complex phenomenon that has been defined in several ways throughout the literature including the quality of school life as perceived by those within the environment (Cohen, McCabe, Michelli, & Pickeral, 2009), feelings of support, respect, safety within the school (Furlong, Greif, Bates, Whipple, & Jiminez, 2005), as well as perceptions of the interpersonal relationships among those within the school environment (Eliot, Cornell, Gregory, & Fan, 2010). In a study of relational aggression and school climate with 5,625 middle school students, victimization was negatively correlated with perceptions of school climate, specifically perceptions of school safety (Elsaesser & Gorman-Smith, 2013). A survey of 11,674 middle and high school students indicated a significant negative correlation between bullying victimization and aspects of school climate, including perceptions of school safety (Waasdorp et al., 2011). These studies demonstrate the importance of the school safety component of school climate when investigating bullying victimization. An investigation of 437 urban middle school students, who reported greater levels of victimization reported feeling less safe in school (Varjas et al., 2009).

These studies provided evidence concerning the positive relationship between bullying victimization and negative outcomes such as internalizing problems (i.e., anxiety and depression), and negative perceptions of school safety. Recently two studies have provided evidence that victimization may negatively influence self-efficacy, which in turn leads to higher negative outcomes, suggesting that self-efficacy may mediate the relationship between victimization and negative outcomes (Barchia & Bussey, 2010; Singh & Bussey, 2010). Self-efficacy's role in victimization and negative outcomes of victimization is an emerging area of study (Andreou, 2004; Barchia & Bussey, 2010;

Bettencourt & Farrell, 2013; Kokkinos & Kipritsi, 2012; Özer, Totan, & Atik, 2013; Singh & Bussey, 2010). The following sections provide a brief overview of self-efficacy and research on self-efficacy in the bullying literature, including studies examining self-efficacy as a mediating variable influencing the relationship between bullying and various outcomes.

Self-Efficacy

Self-efficacy is based on Bandura's (1986) Social Cognitive Theory, which is comprised of three main components, the environment, individual's characteristics, and behavior. This theory suggests that individuals are capable of changing their environment as well as being influenced by it. Thus, an important aspect of an individual's ability to change their environment is self-efficacy, or the individual's belief in his or her ability to successfully accomplish a task. Self-efficacy has been found to be a predictor of a variety of constructs such as academic achievement (e.g., Multon, Brown, & Lent, 1991; Pajares & Schunk, 2001), risk-taking behaviors (e.g., sexual risk behaviors, use of contraceptives, addictive behaviors) (Schwarzer & Luszczynka, 2006), depression (Maciejewski et al., 2000), as well as psychological well-being and mental health (David, Okazaki, & Saw, 2009). Self-efficacy is a person's belief in his or her ability to successfully execute a task. It has been described by Bandura (1997) as a domain specific construct, suggesting that rather than attempting to measure the general construct of self-efficacy, the best assessments are tied to particular areas, such as coping with bullying or academic achievement.

In relation to bullying victimization, bullying is an environmental force that is brought upon a victim. If the victim believes that he or she can cope with victimization, it

is likely that the victim will act to use strategies in response to bullying (e.g., Andreou, 2004; Bettencourt & Farrell, 2013; Kokkinos & Kipritsi, 2012; Özer et al., 2013), thus changing the environment. However, if the victim does not believe he or she can cope with victimization, then it is likely the environmental influences will not change and the victim will continue to be bullied, which would then lead to negative outcomes. Hence, self-efficacy for coping with victimization may be a concept that researchers can study to understand and predict outcomes of victimization.

Self-efficacy studies related to bullying have examined different types of self-efficacy, including self-efficacy for assertion (Andreou, 2004; Kokkinos & Kipritsi, 2012; Özer et al., 2013), self-efficacy for resolving conflicts non-violently (Bettencourt & Farrell, 2013), and emotional self-efficacy (Kokkinos & Kipritsi, 2012; Özer et al., 2013). Self-efficacy for assertion refers to a student's belief in his or her ability to use interpersonal skills to change another person's behavior. For example, students were asked how sure they were about their ability to ask a student to move out of their seat (Andreou, 2004; Kokkinos & Kipritsi, 2012; Özer et al., 2013). Among elementary (Kokkinos & Kipritsi, 2012) and middle school (Andreou, 2004; Özer et al., 2013) students, victimization was negatively related to self-efficacy for assertion. This means that the more victimization a student experiences, the less self-efficacy the student feels regarding his/her ability to change another person's behavior using interpersonal skills. Another type of self-efficacy, self-appraisal of a student's ability to resolve conflicts using nonviolent means, was also negatively related to bullying victimization in middle school students (Bettencourt & Farrell, 2013). Emotional self-efficacy refers to students' belief in their ability to cope with negative emotions, which has been found to be

negatively related to victimization in both elementary (Kokkinos & Kipritsi, 2012) and middle school students (Özer et al., 2013). These studies provide compelling evidence that being victimized decreases self-efficacy beliefs related to behaviors that may help a student when victimized such as changing another person's behavior using interpersonal skills, coping with negative emotions, or resolving conflicts.

There is evidence that self-efficacy is related to bullying victimization, anxiety, depression, and school safety. Self-efficacy for behaviors used to cope with victimization (e.g., assertion, resolving conflicts using nonviolent means, and coping with negative emotions) have had negative relationships with bullying victimization (Andreou, 2004; Bettencourt & Farrell, 2013; Kokkinos & Kipritsi, 2012; Özer et al., 2013). Also, self-efficacy for coping behaviors (e.g., coping with peer aggression and enlisting help from peers) have had negative relationships with mental health outcomes (e.g., anxiety and depression) (Barchia & Bussey, 2010; Singh & Bussey, 2010). Higher levels of self-efficacy for using non-violent methods to solve problems was related to higher perceptions of school safety in eighth grade students (Henry et al., 2011). The relationships between self-efficacy, depression, anxiety, and perceptions of school safety suggest the need for future research to determine the presence of an indirect, or mediating, relationship in which bullying victimization may decrease self-efficacy, which in turn leads to higher the negative outcomes.

Two studies have begun to investigate the mediating effects of self-efficacy on the relationship of bullying victimization with negative outcomes (Barchia & Bussey, 2010; Singh & Bussey, 2010). Singh and Bussey (2009) developed a self-efficacy scale to investigate a victim's coping with aggression. Their self-efficacy scale was comprised of

four subscales: proactive behavior (i.e., self-efficacy for problem solving and conflict resolution), avoiding aggressive behavior (i.e., self-efficacy for avoiding aggressive behaviors in response to being harassed), avoiding self-blame (i.e., self-efficacy for resisting debilitating thoughts), and victim-role disengagement (i.e., self-efficacy for engaging in enabling thoughts). Though there are items in their scale (Singh & Bussey, 2009) that are related to bullying (e.g., “make a plan to get along with the kid who was picking on you”), the majority of the items seemed to be related to coping with peer aggression in general (e.g., “avoid thinking about getting even with the kid”). In a study examining the mediation effect of self-efficacy for coping with peer aggression between peer victimization and negative outcomes (i.e., cognitive depression, social anxiety, and externalizing behaviors), the self-efficacy scales were found to be significant partial mediators. This was confirmed by dividing the sample in half and analyzing the model on both halves of the data. The results of both analyses were compared to determine the reliability of the model. The relationship between self-reported victimization and anxiety was mediated significantly by Proactive Behavior self-efficacy ($\beta = .03, p < .01$), Avoiding Aggressive Behavior self-efficacy ($\beta = .05, p < .01$), Avoiding Self-Blame self-efficacy ($\beta = .05, p < .01$), and Victim-Role Disengagement self-efficacy ($\beta = .06, p < .01$). For the relationship between self-reported victimization and depression, Avoiding Self-Blame self-efficacy ($\beta = .03, p < .01$) and Victim-Role Disengagement self-efficacy ($\beta = .06, p < .01$) were found to be significant mediators. The results of this study provide evidence that the relationship between peer victimization and negative outcomes (e.g., cognitive depression and social anxiety) may be partially explained by self-efficacy for coping with peer aggression.

In a longitudinal study over a span of 8 months with 1,285 secondary school students (Barchia & Bussey, 2010), self-efficacy for enlisting the help of peers was part of a significant mediation path in the model, even though this form of self-efficacy was not found to predict depression significantly. Self-efficacy for enlisting the help of peers did significantly predict collective efficacy (i.e., the belief that students and teachers could work together to stop aggressive behaviors between students), which then significantly predicted depression. Thus, self-efficacy for enlisting the help of peers and collective efficacy were significant mediators between victimization and depression.

These studies provide emerging evidence that self-efficacy may be a significant mediator of the relationship between victimization and internalizing symptoms, which will be one focus of the current study. However, no research has been found that investigates self-efficacy as a mediator of the relationship between victimization and school safety. This area is important to study due to evidence of low perceptions of school safety in victims of bullying (e.g., Elsaesser & Gorman-Smith, 2013; Waasdorp et al., 2011; Varjas et al., 2009), and self-efficacy, as a mediator, may provide some explanation for the reason victims of bullying feel less safe in school.

Rationale for Study

The current study seeks to expand on the findings of an earlier mediation study (i.e., Singh & Bussey, 2010) by using a self-efficacy scale that measures students' belief in their ability to cope with bullying victimization through social supports and taking action (Kim, Varjas, Meyers, & Henrich, 2010b). Though the action scale has similarities to the self-efficacy for taking proactive behaviors (Singh & Bussey, 2010) and resolving conflicts through nonviolent means (Bettencourt & Farrell, 2013) scales, the social

resources self-efficacy scale includes a more comprehensive measure of social supports that examines the self-efficacy of a victim to cope with bullying through a peer, teacher, and adult (Kim et al., 2010b). In addition, the self-efficacy scale used in the current study was selected because its items were created from interviews with children from the 4th through 8th grades using the children's language to enhance the validity of this scale (Kim et al., 2010b). Also, this research was designed to fill a gap in the literature by examining the role of self-efficacy as a mediator of the relationship between bullying victimization and school safety (e.g., Elsaesser & Gorman-Smith, 2013; Varjas et al., 2009; Waasdorp et al., 2011). Finally, the current study utilizes Social Cognitive Theory (Bandura, 1986) to explain victimization, behavior, and outcomes. In the current study, bullying is viewed as an environmental force that affects a victim's self-efficacy to cope. This self-efficacy belief then determines coping behaviors which can affect environmental forces, such as bullying.

In previous mediation research, self-efficacy relating to social supports (e.g., self-efficacy for enlisting the help of peers) mediated the relationship between victimization and depression (Barchia & Bussey, 2010), while a scale similar to the self-efficacy for taking action scale (e.g., self-efficacy for proactive behaviors) mediated the relationship between victimization and anxiety (Singh & Bussey, 2010). This relationship between victimization and anxiety is predicted in that anxiety may be related to a student's inability to act in a bullying situation (Singh & Bussey), hence having a lower self-efficacy for taking action may cause anxiety to rise because of an environmental situation where a victim should act in order to avoid harm but is unable to do so. Depression may result from a perception that the student is unable to find help after a bullying incident

(Barchia & Bussey, 2010), hence a low self-efficacy for social resources may lead to a greater sense of depression, because of an inability to find comfort after a period of danger or safety from future incidences. Finally, self-efficacy specific to social resources is expected to mediate the relationship between victimization and school safety, a measure of school climate where social supports (Furlong et al., 2005) and interpersonal relationships (Eliot et al., 2010) may influence perceptions of school safety. School safety being a perception of the environment and social resources self-efficacy being related to finding help from those in the environment, it is expected that those with low social resources self-efficacy would not feel that the school environment is safe.

The following research questions were proposed in the current study: 1) Does self-efficacy for coping with bullying victimization through social supports mediate the relationship between bullying victimization and depression? 2) Does self-efficacy for coping with bullying victimization through taking action mediate the relationship between bullying victimization and anxiety? 3) Does self-efficacy for coping with bullying victimization through social supports mediate the relationship between bullying victimization and school safety? In line with previous self-efficacy mediation studies (Barchia & Bussey, 2010; Singh & Bussey, 2010), it is hypothesized that self-efficacy for coping with bullying victimization through social supports will mediate the relationships of victimization with the outcomes of depression (research question 1) and school safety (research question 3), while self-efficacy for taking action will mediate the relationship between victimization and anxiety (research questions 2). Together, these predicted

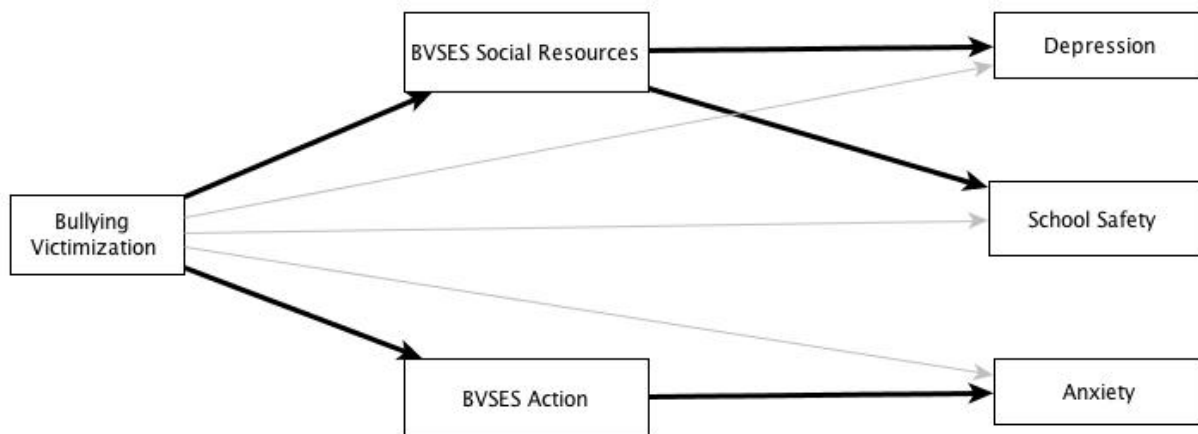


Figure 5. Hypothesized model for the BVSES subscales mediating the relationship between bullying victimization and mental health and school outcomes.

relationships comprise the hypothesized model (see Figure 5). This model and hypotheses will be tested using Structural Equation Modeling with a cross-sectional sample. Due to the use of cross-sectional data, rather than longitudinal data, the hypothesized model will be compared with a hypothesized alternative equivalent model, which will be discussed in the data analysis section.

Method

Context and Participants

The students sampled in this study were from a small urban school district in the southeastern United States. This small district covered a four square mile area and provided education to students in three kindergarten through third grade elementary schools, one fourth and fifth grade academy, one middle school, and one high school at the time of this research. In the 2011-2012 school year, 3,346 students were enrolled in the school district between grades kindergarten through 12th with the following ethnic

breakdown: 58% White, 30% Black, 7.5% Multi-racial, and 4.5% Other. Approximately 25% of students were reported to have received free or reduced lunch in the district. The district has worked with a research team from a local university for 10 years to investigate bullying and develop effective intervention strategies.

The sample for this study was comprised of 551 students in the fourth through eighth grades. The demographics of the participating students included 326 (59%) female students and 225 (41%) male students. Of the students who participated, 25% ($n = 140$) were fourth grade students, 19% ($n = 104$) were fifth grade students, 22% ($n = 121$) were sixth grade students, 14% ($n = 78$) were seventh grade students, and 20% ($n = 108$) were eighth grade students. Out of the total number of students enrolled in these grade levels, 54% ($n = 140/260$) of fourth grade students, 43% ($n = 104/242$) of fifth grade students, 53% ($n = 121/228$) of sixth grade students, 33% ($n = 78/233$) of seventh grade students, and 48% ($n = 108/226$) of eighth grade students participated in the study. The ethnic breakdown of this sample was as follows: 59% ($n = 325$) were White, 26% ($n = 142$) were African-American, 6% ($n = 35$) were Multi-Racial, 5% ($n = 23$) were Other, 2% ($n = 12$) were Asian, and 1% ($n = 8$) were Hispanic/Latino.

Instruments

Student Survey of Bullying Behaviors – Revised 2. The Student Survey of Bullying Behaviors – Revised 2 (SSBB-2; Varjas, Meyers, & Hunt, 2006) was used to measure the level of bullying victimization experienced by students and the perception of safety within the school environment. This scale was used in a study of 437 elementary school students that established a factor model of the victimization scale and provided

evidence of victimized students feeling unsafe in the school environment (Varjas et al., 2009).

Though the complete survey contains 107 items asking about bullying behaviors, bullying victimization behaviors, bystander behaviors, cyberbullying, and school safety, only the 12 bullying victimization (see Table 1) and 8 school safety (see Table 2) items

Table 1

Victimization subscale of the SSBB-2 with bullying types.

How often in the past couple of months have older, bigger, more popular, or more powerful kids picked on you by...	Physical Bullying	Verbal Bullying	Relational Bullying
1. hitting you or kicking you	X		
2. pushing you	X		
3. saying mean things to you		X	
4. spreading rumors about you			X
5. threatening you		X	
6. taking things away from you	X		
7. teasing you		X	
8. ignoring you			X
9. trying to turn friends against you			X
10. leaving you out			X
11. making faces at you	X		
12. calling you names		X	

Table 2

School safety subscale of the SSBB-R2.

**Decide how safe you feel in the following places.
I feel safe...**

1. in my classroom
2. in the lunchroom
3. in the bathroom
4. going to school
5. on the way home from school
6. in the gym
7. in the hall at school
8. in the media center

were used for this study. The victimization scale began with the question stem, “How often do other older, bigger, more popular, or more powerful kids pick on you...” followed by a list of question suffixes for each of the items (e.g., by hitting you). The items in the bullying victimization scale asked how often students had experienced physical (e.g., by kicking you), verbal (e.g., by calling you names), and relational bullying (e.g., by ignoring you). In addition, this survey includes eight items that measure perceptions of safety in a variety of school settings, such as the classroom, hallway, and media center. All of the items used in the victimization and school safety scales were on a four point likert scale that denoted frequency of a behavior occurring ranging from “not at all” to “once a week or more” and from “safe” to “scared.” The victimization scale had a Cronbach’s alpha level of .92, and the school safety scale had an alpha level of .94.

Bullying Victimization Self-Efficacy Scale. The Bullying Victimization Self-Efficacy Scale (BVSES; Kim et al., 2010a) is a 16-item likert scale, with two subscales (i.e., Social Resources and Action), that measured a student’s self-efficacy to cope with bullying victimization. The subscales of the BVSES were established in an earlier study (Kim et al., 2010b) with 152 elementary school students in a rural southeastern school

Table 3
BVSES items with subscales.

Right now, how sure are you that you can...	Social Resources	Action
1. Talk about your feelings with your friends about bullying	X	
2. Get help when you are bullied	X	
3. Ignore a bully		X
4. Tell a bully to stop bullying		X
5. Talk about your feelings with your teachers about bullying	X	
6. Get help from a friend when you are bullied	X	
7. Tell an adult you are being bullied	X	
8. Walk away from a bully		X
9. Tell a bully that you don't want to fight		X
10. Get help from an adult when you are bullied	X	
11. Tell a teacher you are being bullied	X	
12. Talk to a bully		X
13. Stand up to a bully		X
14. Get help from a teacher when you are bullied	X	
15. Ask a bully to stop bullying		X
16. Confront a bully		X

district. The instructions of the BVSES begin with the question stem, “Right now, how sure are you that you can...” and each of the 16 items is the question suffix (see Table 3). The two subscales each are comprised of 8 items. The subscale Social Resources examines a student’s self-efficacy to cope by turning to or talking to teachers, adults, or friends. Items in this subscale include “tell a friend you are being bullied,” and “get help from a teacher when you are bullied?” The action subscale contains items referring to the student’s self-efficacy to take immediate action when the bullying occurs. Items from this subscale include “stand up to a bully,” and “tell a bully you don’t want to fight?” A five point likert scale was used ranging from “not sure” to “very sure.” The social resources subscale has a Cronbach’s alpha level of .93, while the action subscale has a Cronbach’s alpha level of .91. Overall, the BVSES has a Cronbach’s alpha level of .93.

Behavior Assessment System for Children, 2nd Edition. The Behavior Assessment System for Children, 2nd Edition (BASC-2; Reynolds & Kamphaus, 2004) is a widely used self-report measure designed to assess self-perceptions about the student's emotions and behaviors. The 139-item (child version for 8-11 year old students) or 185-item (adolescent version for 12-21 year old students) measure utilizes both true and false items as well as a four point likert scale consisting of "never," "sometimes," "often," and "almost always." For the purposes of the current study, selected BASC-2's scale T-scores (i.e., standardized score to determine how deviant an individual score is from the collected sample of the BASC-2) were used to explore the mental health and school outcomes of students. For mental health outcomes, the anxiety and depression scales were used. The anxiety scale measures feelings of nervousness and fear, while the depression scale measures feelings of unhappiness and sadness. The self-esteem scale assesses feelings of self-worth. The BASC-2 subscales had the following Cronbach's alpha levels: the child form anxiety ($\alpha = .86$) and depression ($\alpha = .84$), the adolescent form anxiety ($\alpha = .86$) and depression ($\alpha = .88$) (Reynolds & Kamphaus, 2004).

Procedures

Once the institutional review board (IRB) approval for this study was obtained from the University and school district. A letter from each school principal and a consent form were sent home to the parents, via the students, explaining the purpose of the research. After a week, an additional letter and consent form was sent home to parents who had not responded to the initial consent. In total, 72% of the consent forms were returned to the researchers. On the day of the survey, students who had returned a consent form were brought to a computer lab or library with computers set up, where a trained

researcher read an assent aloud. Students who assented to the survey continued with the computer based survey through PsychData (i.e., an online survey data collection tool; PsychData, 2013), while a trained research assistant escorted students who did not assent back to their classroom. Instructions were read aloud to the students on how to complete the computer portion of the surveys, and students were instructed to raise their hands if they had a question. The computer portion contained the SSBB-2 and BVSES measures, and most students completed these surveys within 30 minutes.

The BASC-2 was completed on a separate occasion in a school cafeteria in the fourth and fifth grade academy while the middle school students used a gymnasium. The students were brought to the evaluation area by a trained research assistant who provided the age appropriate version of the measure. The students were read aloud the instructions and asked to proceed with completing the measure. Students in the fourth and fifth grade academy were read aloud the items while they followed along and answered the items. Once the student completed the measure, a trained research assistant examined the critical items of the BASC-2. Students who responded with “True”, or “Often” or “Almost Always”, on critical items of the BASC-2 were queried to determine if the student was in psychological distress and in need of a mental health referral. The school counselor was notified and asked to meet with the student if the GRA determined the student to be in psychological distress. If the student was assessed to have no significant problems and all items were answered, the student was allowed to return to class. Students took approximately 30-45 minutes to complete the BASC-2.

The data collected from the BASC-2 administration were computer scored by trained research assistants in the weeks following the completed administration. Data

from the computer scoring software were then transferred to a data analysis software package (i.e., Statistical Package for Social Sciences) and combined with the data collected from the computer administration of the SSBB-R2 and the BVSES.

Missing Data

The computer-based surveys were designed so that students were required to respond to every question before moving onto the next screen. Due to this method, no missing data were in the computer portion of the dataset. On the BASC-2, a graduate research assistant visually verified that all items were answered on each survey. These BASC-2 measures were then scanned into a computer-based scoring software package, which yielded T-scores, which were used for the data analysis. Six students were missing either both or one of the T-scores of the BASC-2 outcome measure (i.e., anxiety and depression). The number of missing data comprised of less than 5% on a single variable, thus was considered an ignorable data loss, thus listwise deletion is an acceptable method of handling missing data (Kline, 2011). These were removed from the dataset for analysis for a final n=545 students used in the data analysis.

Data Analysis

Measurement Model. Prior to investigating the relationships among bullying victimization and self-efficacy with mental health and school outcomes, a confirmatory factor analysis was conducted to determine the factor structure of the SSBB-R2 victimization scale, school safety scale, and the BVSES. As the factor structure of the SSBB-R2 victimization scale has been established (Varjas et al., 2009), the victimization items were parceled into sum scores based on the three types of bullying victimization (i.e., physical, verbal, and relational) and their fit was assessed in the confirmatory factor

analysis. The SSBB-R2 victimization scale items were parceled to allow for optimization of the measurement structure of the confirmatory factor analysis (Little et al., 2002). The items within each of the three types were considered to be homogeneous, or measuring the same construct, which were then considered to be indicators of victimization. The fit of the school safety items into a school safety factor also was examined. The confirmatory factor analysis included the items of the BVSES and their fit into a two factor structure (i.e., Social Resources and Action) was assessed. The analyses were run using Mplus version 6.12 (Muthén & Muthén, 2010). Due to the skewed distribution of the BVSES items, a robust maximum likelihood estimation was used instead of maximum likelihood estimation, because of the maximum likelihood estimation technique being sensitive to assumptions of normality (Kline, 2011).

The model fit will be evaluated by examining the Root Mean Square Error of Approximation (RMSEA), the Comparative Fit Index (CFI), and the Standardized Root Mean Square Residual (SRMR). RMSEA values that are equal to or less than .05 indicate good model fit (Browne & Cudeck, 1993), whereas a CFI value greater than or equal to .95 and a SRMR value less than or equal to .08 are considered to have acceptable model fit (Hu & Bentley, 1999).

Structure Model. It was hypothesized that self-efficacy for coping with bullying victimization through social supports will mediate the relationship between victimization and the outcomes of depression and school safety, while self-efficacy for taking action will mediate the relationship between victimization and anxiety (see Figure 5). Structural equation modeling techniques were used in Mplus version 6.12 (Muthén & Muthén, 2010) to determine the structure model.

When using structural equation modeling, Kline (2011) suggested investigations of predicted models include comparison to hypothesized alternative equivalent models. Though fit statistics can be calculated for a hypothesized model, it is possible to have different theoretically plausible configurations of the paths in a model and yield similar mathematical fit statistics. Thus, by comparing the two models, an argument can be made that one model may be more plausible, rather than simply preferring one model over the other.

In the current study, the hypothesized alternative equivalent model examined the mediating role of anxiety, depression, and school safety on the relationship between bullying victimization and self-efficacy for coping with bullying (see Figure 6). A possible alternative to the negative outcomes being the result of an inability to cope with victimization may be the reverse; negative outcomes contributing to an inability to cope. Specifically, this model expected that depression would mediate the relationship between victimization and social resources self-efficacy, because feelings of depression may result in the victim not feeling self-efficacious to utilize social resources such as friends, teachers, and adults in the school environment. Likewise, anxiety may mediate the

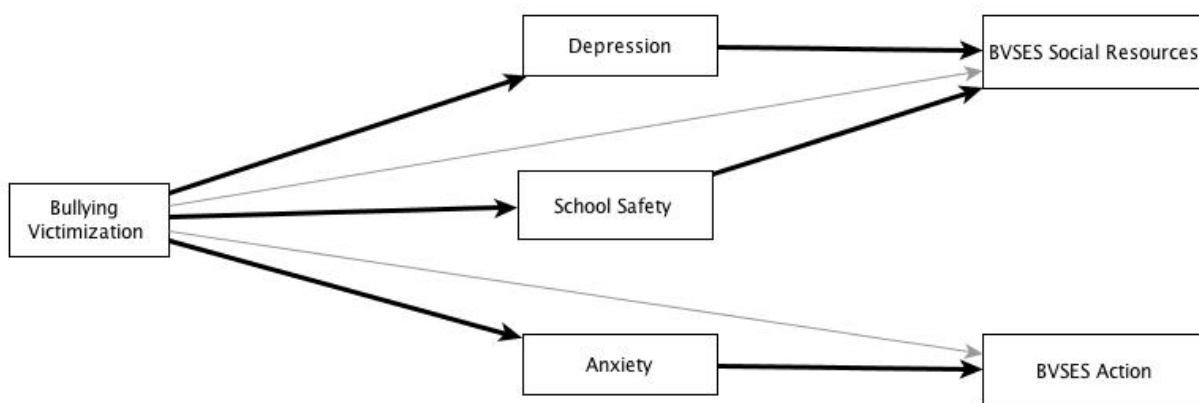


Figure 6. Hypothesized alternative equivalent model.

relationship between victimization and action self-efficacy because a victim may not feel self-efficacious to respond to bullying due to the anxiety the victim is feeling. Perceptions of school safety may influence social resources self-efficacy in that feeling the school is not a safe place, the student is likely to believe there are few or no social resources available in that environment.

Model fit for both the hypothesized model and the hypothesized alternative equivalent model were assessed using the same criteria as those used in the Measurement Model phase of this analysis (i.e., RMSEA, CFI, and SRMR). In addition, due to equivalent models having the similar fit indices, the two models were compared by examining the significance of the indirect effects in both models as well as the size of the indirect effects.

Results

Measurement Model

A confirmatory factor analysis was conducted on the items of the BVSES, school safety scale, and the parceled victimization types of the victimization scale. The

Table 4
Standardized Factor Loadings of Items.

Scale	Factor Loadings			
	1	2	3	4
1. Bullying Victimization				
Physical Victimization	0.85			
Verbal Victimization	0.92			
Relational Victimization	0.80			
2. School Safety				
Safety Item 1		0.85		
Safety Item 2		0.89		
Safety Item 3		0.79		
Safety Item 4		0.85		
Safety Item 5		0.65		
Safety Item 6		0.81		
Safety Item 7		0.84		
Safety Item 8		0.69		
3. BVSES Social Resources				
BVSES Item 1			0.52	
BVSES Item 2			0.80	
BVSES Item 5			0.80	
BVSES Item 6			0.58	
BVSES Item 7			0.88	
BVSES Item 10			0.90	
BVSES Item 11			0.87	
BVSES Item 14			0.90	
4. BVSES Action				
BVSES Item 3				0.54
BVSES Item 4				0.78
BVSES Item 8				0.63
BVSES Item 9				0.66
BVSES Item 12				0.80
BVSES Item 13				0.78
BVSES Item 15				0.90
BVSES Item 16				0.77

standardized factor loadings of the individual items are reported in Table 4, and the correlation matrix for the six latent variables can be found in Table 5. The resulting model was considered a good fit according to the following fit statistics: $\chi^2(406, N=545)$

Table 5
Correlation Matrix of Latent Variables.

Variables	1	2	3	4	5	6
1. Bullying Victimization	-	-0.42	-0.18	-0.18	0.49	0.57
2. School Safety	-0.42	-	0.37	0.44	-0.38	-0.41
3. BVSES Social Resources	-0.18	0.37	-	0.53	-0.22	-0.27
4. BVSES Action	-0.18	0.44	0.53	-	-0.27	-0.24
5. Anxiety	0.49	-0.38	-0.22	-0.27	-	0.62
6. Depression	0.57	-0.41	-0.27	-0.24	0.62	-

Note: All correlations are significant ($p < .001$).

= 9384.95, $p < .001$, RMSEA = .05, CFI = .95, SRMR = .07 (Browne & Cudeck, 1993; Hu & Bentler, 1999). Though the chi-square statistic is significant, the other indicators of fit, which are not as sensitive to sample size, indicated a good fit. Initially, the model resulted in the following fit statistics: $\chi^2(364, N=545) = 1257.07$, $p < .001$, RMSEA = .07, CFI = .90, SRMR = .07. In addition to these results indicating poor fit and the BVSES items being analyzed in a confirmatory factor analysis for the first time, the modification indices were examined. A second analysis was run in which the error terms

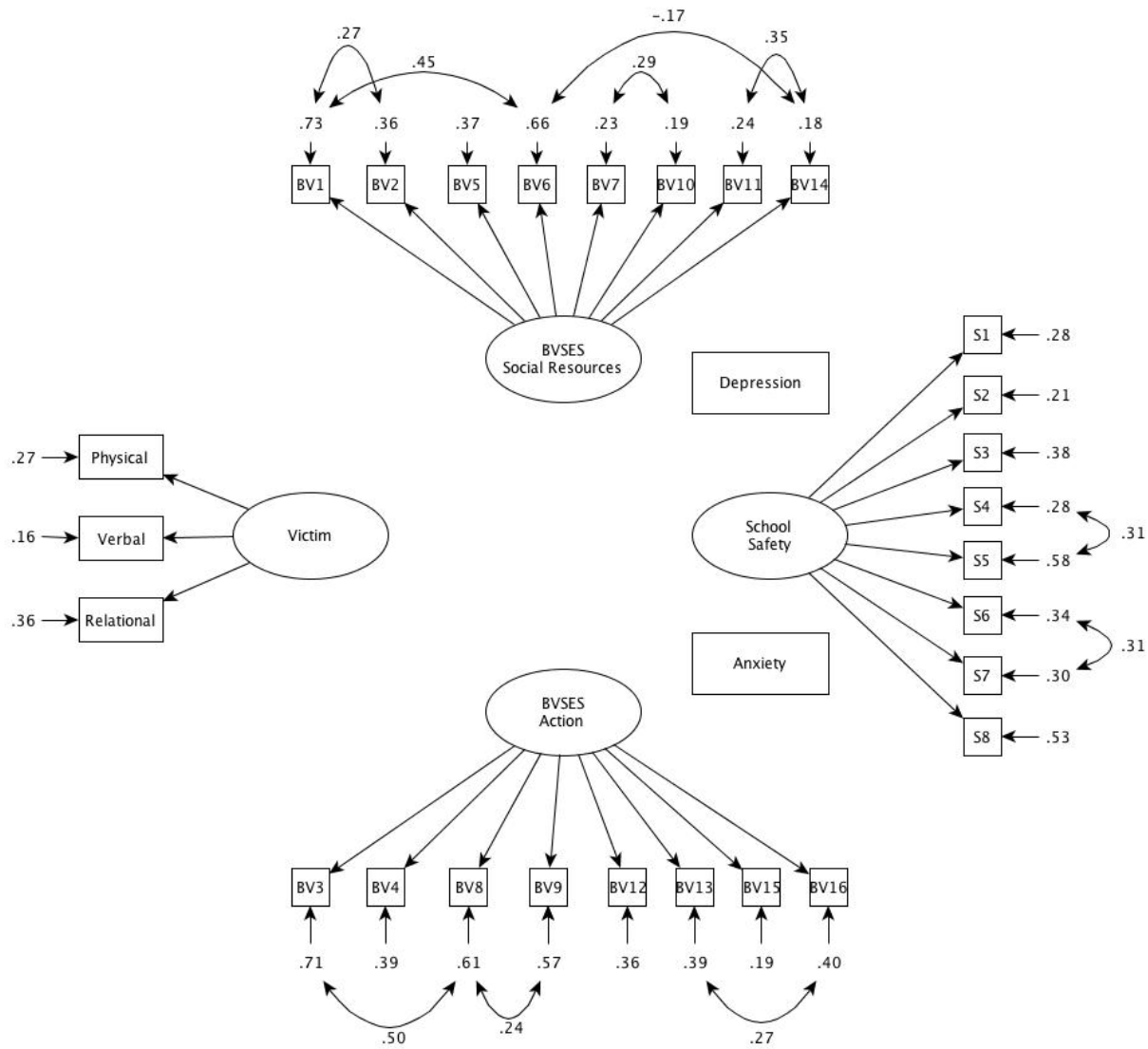


Figure 7. Measurement model with standardized residual variances and correlations.

of items within a factor were allowed to correlate in order to allow for better fit (see Figure 7). The majority of the items that were allowed to correlate were from the BVSES scales with a couple from the school safety scale. The items that were modified seemed to be due to the wording of the items, for instance one of the items was worded as “get help from a friend when you are bullied,” which was correlated with “get help from a teacher

when you are bullied.” Another reason for the correlations among the item residuals was that some items involved similar actions, for instance a student may tell an adult he or she is being bullied, and this is very similar to getting help from an adult when he or she is being bullied. As a result of this analysis, a six factor model was specified: Victimization, BVSES Social Resources, BVSES Action, School Safety, Depression, and Anxiety (see Figure 7).

Structure Model

The hypothesized mediation model was tested using a robust maximum likelihood estimation in order to account for the skewness in the distribution of items in the BVSES scales (Kline, 2011). Like the model fit statistics of the measurement model, similar criteria were used to determine goodness of fit in the mediation model: RMSEA of .06 or lower, CFI of .95 or higher, and SRMR of .08 or lower (Hu and Bentler, 1999). The overall model yielded the following fit statistics: $\chi^2(357, N=545) = 799.034, p < .001$, RMSEA = .05, CFI = .95, SRMR = .08. The product of the regression coefficients

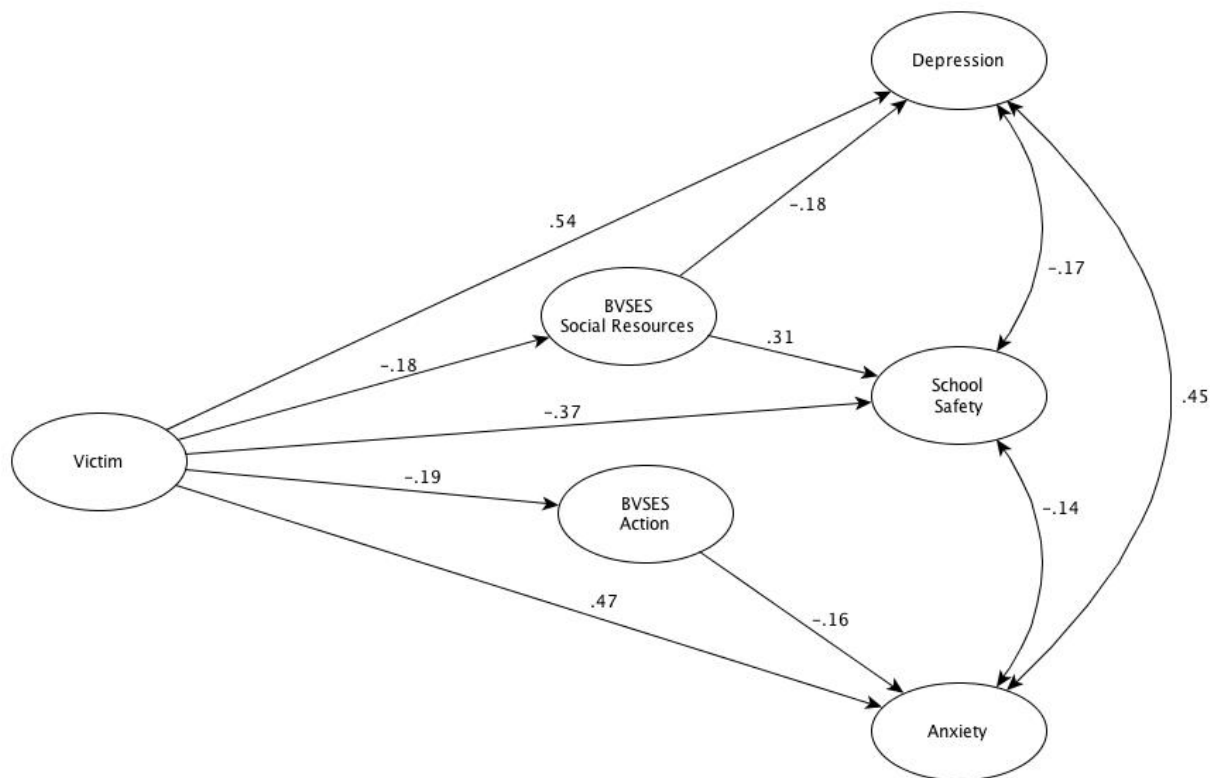


Figure 8. Hypothesized model with standardized direct effects and correlations.

of the direct paths (see Figure 8) determined the strength of the indirect or mediation relationships. These mediation coefficients are then standardized to allow for comparison. As predicted, the social resources self-efficacy scale of the BVSES partially mediated the relationship for bullying victimization with depression ($\beta = .03, p = .006$), and with school safety ($\beta = -.06, p = .001$). Also hypothesized, the action self-efficacy scale of the BVSES partially mediated the relationship between victimization and anxiety ($\beta = .03, p = .007$).

The hypothesized alternative equivalent model yielded the following fit statistics: $\chi^2(357, N=545) = 822.57, p < .001, RMSEA = .05, CFI = .95, SRMR = .11$. The hypothesized alternative equivalent model does not have as good a fit as the hypothesized

model because of the relatively high SRMR. To further compare the two models, the AIC and BIC statistics were examined. The hypothesized model resulted in a lower Akaike Information Criterion (AIC; 48351.15) and Bayesian Information Criterion (BIC; 48811.34) than the alternative model (AIC = 48380.66; BIC = 48840.85). Overall, the fit statistics suggest that the hypothesized model may have a slightly better fit than the alternative model, but these statistics were very similar, thus mediation effects were further examined with another type of comparison.

Examination of the mediation effects was done by examining the size of the standardized coefficients of the indirect effects (see Table 6). As in the hypothesized model, the product of the coefficients of the direct paths (see Figure 9) determined the strength of the mediation relationships in the alternative model. Upon examination of

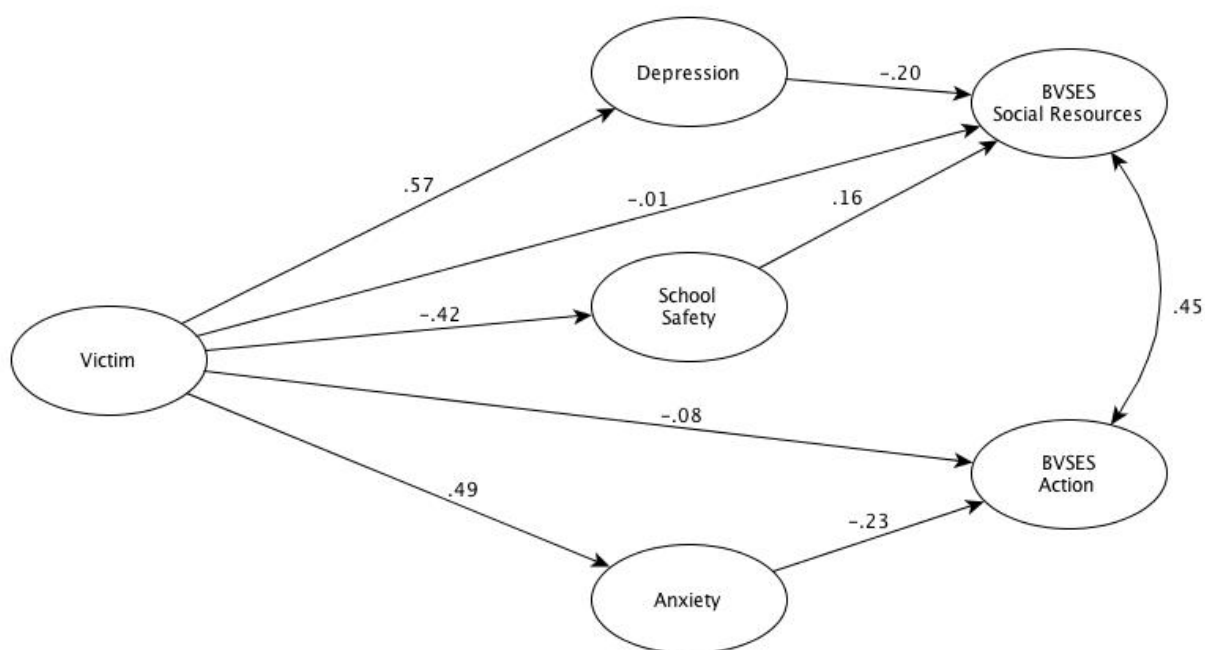


Figure 9. Alternative hypothesized equivalent model with standardized direct effects and correlation.

Table 6
Indirect Effects from the Hypothesized and Alternative Models.

Model	Mediating Variable	Dependent Variable	β coefficient
Hypothesized Model	BVSES Social Resources	Depression	.03
	BVSES Social Resources	School Safety	-.06
	BVSES Action	Anxiety	.03
Alternative Model	Depression	BVSES Social Resources	-.11
	School Safety	BVSES Social Resources	-.07
	Anxiety	BVSES Action	-.11

Note: All β coefficients are significant ($p < .01$).

their comparable indirect effects, the alternative model's indirect effects were greater (see Table 6). In the hypothesized model, BVSES social resources as a mediator is smaller in magnitude than the equivalent path in the alternative model where depression is the mediator. This is true for the other two paths where both BVSES social resources and BVSES action as mediators are smaller in magnitude than school safety and anxiety as mediators in the alternative model.

Another method of comparing the hypothesized model with the alternative model is to evaluate how much of the total effect is explained by mediating variables. The total effect reflects how much influence an independent (or exogenous) variable has on a dependent (endogenous) variable. Once the model accounts for a mediating variable, the remaining effect between the exogenous and endogenous variable is referred to as the direct effect. The magnitude of the change can be compared between the equivalent paths of the two models. A mediation path that causes a greater change in the total effect is likely to have a greater mediation effect in the model.

The total effect between victimization and depression is $\beta = .57$, but when BVSES social resources is added into the model, the remaining direct effect is $\beta = .54$. Similarly, the total effect of victimization and school safety decreases from $\beta = -.42$ to a

direct effect of $\beta = -.37$ when BVSES social resources is included as a mediator. In comparison, the equivalent path of the alternative model (effect for victimization and BVSES social resources) has a total effect of $\beta = -.18$, but when depression and school safety are included in the model as mediators, the direct effect becomes $\beta = -.01$, indicating a greater change than the equivalent paths in the hypothesized model. The total effect of victimization and anxiety also experiences a slight decrease from $\beta = .49$ to a direct effect of $\beta = .47$ with the inclusion of BVSES action as a mediator. In contrast, the total effect of victimization and BVSES action $\beta = -.19$ experiences a greater decrease in the direct effect $\beta = -.08$ when accounting for the mediation of anxiety in the alternative model.

Discussion

The purpose of this study was to determine if two types of self-efficacy for coping with bullying victimization (i.e., social resources and action) would mediate the relationship between bullying victimization and negative outcomes (i.e., depression, anxiety, and perceptions of school safety). Specifically, this investigation was designed to determine whether social resources self-efficacy would mediate the relationships of victimization with depression and school safety, and whether action self-efficacy would mediate the relationship between victimization and anxiety. These predictions were based on theory and on previous mediation studies using self-efficacy and victimization (e.g., Barchia & Bussey, 2010; Singh & Bussey, 2010). Though the findings for mediation were similar to Singh and Bussey's (2010) study, the additional comparison with the alternative model yielded a different conclusion. The fit statistics of the hypothesized model, had a slightly better fit than the alternative model, and had significant mediation

effects which seemed to confirm that self-efficacy was a significant mediator of the relationships between victimization and negative outcomes. However, when the magnitude of the mediation effects was compared in both models, the mediation effects in the hypothesized model were smaller in magnitude. The smaller mediation effects of the hypothesized model provide evidence that the strength of the direct effect between victimization and the negative outcomes are so great that self-efficacy accounted for little mediation.

Measurement Model

A confirmatory factor analysis of the latent variables in the study (i.e., victimization, BVSES Social Resources, BVSES Action, Depression, Anxiety, and School Safety) was conducted to determine the measurement model. The fit indices from the measurement model supported the factor structure of all the latent variables, but a number of post hoc modifications were conducted after the analysis on the BVSES scales as the initial analysis resulted in several correlated items in addition to relationships accounting for the latent factors or subscales (i.e., Social Resources and Action). Though post hoc modifications allow for a better fit of the model that confirmed the two latent factors, the modifications that were needed suggest that some items may be related due to other influences such as similar wording or the presence of another factor. Therefore, it is suggested that future research is needed with the BVSES to determine the effects of deleting or rewriting similarly worded items.

Structure Model

The purpose of the structure model was to examine the relationships among the latent variables, specifically victimization's effects on self-efficacy and negative

outcomes as well as investigating mediation effects. The results of these analyses support the findings of previous studies where higher levels of victimization leads to higher feelings of depression (Hunt et al., 2012; Klomek et al., 2011; Menesini et al., 2009; Turner et al., 2013; Wang et al., 2011), anxiety (Hunt et al., 2012; Isolan et al., 2013; Menesini et al., 2009; van Oort et al., 2011), and decreased perceptions of school safety (Elsaesser & Gorman-Smith, 2013; Waasdorp et al., 2011; Varjas et al., 2009). Students who experience greater victimization were found to have lower levels of self-efficacy for coping with bullying, which is similar to findings in previous studies (Andreou, 2004; Bettencourt & Farrell, 2013; Kokkinos & Kipritsi, 2012; Özer et al., 2013; Singh & Bussey, 2010). In addition to the relationship with bullying victimization, the current study found self-efficacy for coping with bullying had a negative relationship with depression and anxiety and a positive relationship with perceptions of school safety. This is in line with the findings of previous studies that found similar forms of self-efficacy to be significant predictors of anxiety and depression (Barchia & Bussey, 2010; Singh & Bussey, 2010) as well as perceptions of school safety (Henry et al., 2011).

The first hypothesis of this study was to examine the mediation effect of self-efficacy for coping with bullying victimization using social resources on the relationship between victimization and depression. Specifically, it was expected that higher levels of victimization would lead to a lower belief in a student's ability to cope with victimization by seeking help from friends, teachers, and adults (i.e., social resources self-efficacy). This lower self-efficacy was then predicted to lead to higher feelings of depression (Andreou, 2004; Bettencourt & Farrell, 2013; Kokkinos & Kipritsi, 2012; Özer et al., 2013). Also, to provide further support for the presence of a mediation effect, the total

effect (i.e., the sum of the direct effect and the indirect effect) was expected to decrease when accounting for the mediation (or indirect) effect, via social resources self-efficacy, more than the decrease in total effect in the comparable alternative model. The hypothesized mediation model was found to be significant, but had a smaller influence on the total effect between victimization and depression than the alternative model where a larger portion of the total effect for the relationship between victimization and social resources self-efficacy was explained by depression. The findings of the current study suggest that the relationship between victimization and depression may not include self-efficacy as a meaningful mediator. It is possible that the feelings of depression begin to emerge soon after victimization and that the level of depression determines the level of self-efficacy a student may have, as suggested by the findings in the alternative model.

In regards to the second hypothesis, where self-efficacy for coping with bullying victimization by taking action was expected to significantly mediate the relationship between victimization and anxiety, the results were similar to the first hypothesis. Though the results suggest that higher levels of victimization are related to lower action self-efficacy, which in turn is related to higher feelings of anxiety, when the mediation effect of action self-efficacy was compared with the mediation effect in the alternative model, action self-efficacy explained only a small portion of the total effect of victimization on anxiety. The stronger mediation effect in the alternative model suggests that a student may feel anxious when victimized by others, which in turn may hinder the student's ability to feel that they can take action to cope with bullying, such as telling a bully to stop or seeking help from a friend. This is further supported by the level of self-

efficacy being influenced by physiological or affective feedback, such as feelings of anxiety (Bandura, 1993).

The third hypothesis predicted that self-efficacy for coping with bullying victimization through social resources would be a significant mediator of the relationship between victimization and school safety. Similar to the mediation effects of the first two hypotheses, the direction of the relationships were as expected; higher levels of victimization would be related to lower levels of social self-efficacy, which would then be related to lower perceptions of school safety. However, when the mediation effect for social resources self-efficacy was compared with the mediation effect in the alternative model, the mediation effect of social resource self-efficacy explained a small portion of the total relationship between victimization and anxiety. The comparison of the two models suggests that there is stronger evidence for students to experience decreased perceptions of school safety with greater levels of victimization. This low perception of school safety may then contribute to a lower sense of self-efficacy to cope with bullying by seeking help from others, such as teachers, adults, and friends.

The findings of the current study suggest that the relationship between victimization and negative outcomes may not be mediated in a meaningful way by self-efficacy for coping with bullying victimization. The current study did find the hypothesized mediation model to be significant similar to the findings of the Singh & Bussey (2010) study, but using a comparison with an alternative model, which suggested that the mediation effects of self-efficacy may not be meaningful. Further research is needed to determine the nature of self-efficacy in bullying victimization.

Limitations and Future Research

Though there is support for a significant partial mediation effect of self-efficacy on the relationship between victimization and negative outcomes, the comparison with the alternative model suggests that the relationship between victimization and negative outcomes may be sufficiently strong, and that there is not a meaningful mediation effect for self-efficacy for coping with bullying. However, there are limitations regarding the observed relationships in this study. One limitation is the use of cross-sectional data to examine mediation effects, since this design cannot fully determine causality of the variables and because the relationships between these variables may change over time (Cole & Maxwell, 2003). It is possible that perceptions of victimization, self-efficacy, depression, anxiety, and school safety can change over time as a student develops. As a result, the relationships among these variables can also change over time. Future investigation with longitudinal data is needed to study the effects of victimization and negative outcomes over time.

As mentioned previously, an important area for future research would be to continue investigating self-efficacy and its role as a mediator between victimization and negative outcomes. With only a few studies currently examining this phenomenon, it might be helpful to determine how self-efficacy mediation replicates in other studies. One potential direction is to compare the self-efficacy scales used in the present study and in the Singh & Bussey (2010) study to determine how mediation effects replicate. If self-efficacy were found to be an important mediator, this can inform intervention efforts to include aspects in the curriculum that focus on increasing beliefs of self-efficacy. Further, if future research does not support self-efficacy as an important mediator, then this would

add evidence indicating that the strength of the relationship between victimization and the outcomes are strong enough to prevent meaningful mediation. Also, self-efficacy for coping with bullying may potentially be a mediator in a more complex model. For example, it is possible that self-efficacy may predict collective efficacy, which may then predict negative outcomes as in the study by Barchia & Bussey (2010). This would mean that self-efficacy and other variables such as collective efficacy may together be important mediators between victimization and negative outcomes. It is also possible that there may be variables that are indicators of self-efficacy, such as feelings of depression, anxiety, and school safety as suggested by the hypothesized alternative model of the current study.

Another area of future research can be to examine the effects of the outcome variables at different levels of victimization. There is emerging evidence that highly victimized students and students who are not highly victimized report differing levels of coping effectiveness (Harper et al., 2012), thus it is possible that examining outcomes for groups with different levels of victimization may yield differences in the effects of self-efficacy to cope with bullying as a mediator between victimization and negative outcomes. In addition to differences in victimization, there are other variables to consider such as gender, ethnicity, and attendance in an urban, rural, or school district. The current study used a sample of students in fourth through eighth grades, and students who primarily self-identified as being White or Black in an urban school district. Analyses examining the impact of gender, ethnic groups and types of school districts may provide further understanding of this phenomenon.

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