PREDICTING VIOLENT INCIDENCE AND DISCIPLINARY ACTIONS IN SCHOOLS: USE OF THE NATIONAL CENTER FOR EDUCATIONAL STATISTICS TO EXAMINE SCHOOL VIOLENCE INTERVENTIONS

by

DON R. KELLY

Presented to the Faculty of the Graduate School of

The University of Texas at Arlington in Partial Fulfillment

of the Requirements

for the Degree of

DOCTOR OF PHILOSOPHY

UNIVERSITY OF TEXAS ARLINGTON

May 2017

Acknowledgements

First and foremost, I acknowledge the role of Christ in my life who was the source of my strength throughout the eight long years from undergrad, master's, and PhD programs. Second, I am thankful for having a loving mother that always told me I could accomplish anything if I put my mind to it. Even though she has passed, know she is with me and very proud of this accomplishment. I love you Mom, God rest your soul. To my wife, Kathy and my children Danielle, Lisa, and April, I thank you for your encouragement, sacrifice of time leaving me alone to complete assignments, and support through the challenges of being in school. I thank my brothers Bill, Randy, Bud, Cortney, my sister Stacy, and their families for always being optimistic and proud of what I was trying to do.

To my committee members, Dr. Alexa Smith-Osborn, Dr. Peter Lehmann, and Dr. Catheleen Jordan; each of you in your own way helped me tremendously as I maneuvered through the doctoral process. You helped me to accomplish my goals, you challenged me to excel beyond my what I thought I could accomplish, you corrected my mistakes gently, and you helped mold me into a colleague. To my outside committee member Dr. Gary Lacefield, your friendship and support over these past thirty years has been an inspiration to me and your calm voice in the storm helped me to stay centered, thank you.

To my dissertation committee chair Dr. Mike Killian, words cannot express my sincere appreciation for your patience and guidance during the program. You are wise beyond your years, I hope the PhD candidate and professor relationship will developed during this process will grow into a strong colleague friendship in the future.

Finally, I would like to acknowledge and thank members of my cohort Kris Hohn, Marcus Crawford, Dorothea Ivey, and Olga Verbovaya. We came together as a family, struggled together, encouraged one another, and stuck together. At every step of the way I knew I could count on each of you. I pray our friendships continue to grow in the years to come.

April 10, 2017

Abstract

PREDICTING VIOLENT INCIDENCE AND DISCIPLINARY ACTIONS IN SCHOOLS: USE OF THE NATIONAL CENTER FOR EDUCATIONAL STATISTICS TO EXAMINE SCHOOL VIOLENCE INTERVENTIONS

Don R. Kelly, PhD, LMSW

The University of Texas at Arlington, 2017

Supervising Professor: Michael Killian

Background: Violence reduction in schools has become an important consideration as school administrators work to provide a safe and peaceful atmosphere for learning. This study provided evidence of main effect and interaction effect utilizing multiple interventions to predict the number of serious violent incidents and total number of disciplinary actions recorded in schools. Additionally, this study aimed to identify interventions demonstrating the greatest promise for changing school culture.

Research indicates that culture change, conflict transformation education, restorative justice/discipline, and mental health interventions are popular processes for reducing violence in schools. It was the intention of the researcher to determine what degree these interventions predict school violence and understand the relationship between culture change, conflict transformation education, restorative justice/discipline, mental health variables, and outcomes. Understanding the relationship between these interventions should identify which interventions were significantly associated with rates of school violence.

Methods: Data from National Center for Educational Statistics (NCES) study, a nationally representative study of US schools (n = 2648), was used to identify use of interventions intended to reduce school violence. Schools reported use of Conflict Transformation Education interventions, Restorative Justice/Discipline interventions, culture change strategies, and mental health services were identified in the dataset. Using Poisson regression modeling, schools' reported use of these interventions

was used to predict rates of serious violent incidents and disciplinary actions recorded, after controlling for school characteristics. Furthermore, an interaction effect was tested between Restorative Justice/Discipline and other intervention types. Schools' reported use of Conflict Transformation Education interventions, Restorative Justice/Discipline interventions, culture change strategies, and mental health services were hypothesized to predict a lower reports of school violence. Furthermore, it was hypothesized the interaction effect between Restorative Justice/Discipline interventions and each culture change, conflict transformation education, and mental health variables would predict a lower rates of school violence.

Results: The findings generally demonstrated that increased reported use of interventions was associated with greater reported rates of both serious violent incidence and disciplinary action reported. Schools reported levels of serious violent incidence and disciplinary action reported varied by school characteristic, including school level, size, minority population, and urbanicity. However, use of Conflict Transformation Education interventions and Restorative Justice/Discipline interventions were predictive of lower rates of violence reported in schools. This indicated that schools using Conflict Transformation Education and Restorative Justice/Discipline interventions together could experience lower levels of serious violent incidents. Finally, schools which reported using both mental health and restorative justice/discipline together reported lower rates of disciplinary actions reported. Schools implementing either mental health or conflict transformation education coupled with restorative justice/discipline interventions might then report experiencing lower levels of serious violent incidence and disciplinary action reported.

Conclusion: An explanation of the finding, limitations, implications for theory, school social work, and policy are advanced. While more research is needed, this study provides a solid foundation for future studies. Teaching our children how to build a peaceful school environment could provide them with the knowledge for building a future peaceful society.

Keywords: school violence; restorative justice; conflict transformation; mental health; culture change

Table of Contents

List of Tables

Chapter I

Introduction

Violence reduction in schools has become an important consideration as school administrators work to provide a safe and peaceful atmosphere for learning. To gain clarity of understanding, this chapter contemplates when violence in schools became a concern, approaches used for addressing the problem, how violence is defined, and how violence is manifest. Further deliberation is given to levels of behavior, types of behavior associated with the violence levels, and interventions utilized to curb violence.

Two problems are addressed in this study. First, there is no research or evidence that can be found indicating the main effect and interaction effect of utilizing multiple interventions to predict the number of serious violent incidents and total number of disciplinary actions recorded in schools. Second, there is no research or evidence that can be found indicating those interventions showing the greatest promise for changing school culture. By exploring these phenomenon, this study will inform school social work practice and add to the knowledge base.

Study Purpose

The purpose of this study is threefold. Research indicates that culture change (CC), conflict transformation education (CTE), restorative justice/discipline (RJ/D), and mental health (MH) interventions are popular processes for reducing violence in school. First, the researcher wants to determine to what degree these interventions have on predicting school violence. Evidence shows that interventions mentioned work to reduce violence in schools (Boyd, & Anderson, 2013; Bradshaw, Waasdorp, & Leaf, 2015; Flannery, Fenning, Kato, & McIntosh, 2014; Nocera, Whitbread, & Nocera, 2014; Sorlie, & Ogden, 2007). Therefore, the second purpose of this study is to understand the relationship between culture change, conflict transformation education, restorative justice/discipline, mental health variables, and outcomes. Understanding the relationship between these interventions should give insight into which interventions are significantly associated with predicting positive or negative outcomes.

Hypotheses

• There is a favorable main effect between culture change, conflict transformation education, restorative justice/discipline, and mental health variables predicting a lower total number of serious violent incidents and the total number of disciplinary actions recorded in schools.

•There is a favorable interaction effect between culture change, conflict transformation education, restorative justice/discipline, and mental health variables predicting a lower total number of serious violent incidents and the total number of disciplinary actions recorded in schools.

Results should help identify the difference in the logs of expected counts for a one unit change in the predictor variable as other predictor variables in the model are held constant. Confirming these hypotheses is important when considering the events of April 20, 1999 (Columbine High School massacre).

Background

It is not unusual for major events to be the spark that force society to take action such as the event at Columbine. This section introduces the reader to the spark credited with the movement of society to make our schools safer. There is discussion of steps to ensure safety (e.g., metal detectors), the levels of violence as defined by schools, and the interventions most commonly used to reduce violence in schools.

The Columbine High School shooting that occurred on April 20, 1999 had a ripple effect across the United States. Since Columbine, schools across the United States have responded with an energized effort to safeguard schools (Heinen, Webb-Dempsey, Moore, McClellan, & Friebel, 2007). Yet, the victimization rate of students ages 12 to 18 at school is still 52 per 1,000 (Morgan, Kemp, Rathbun, Robers, & Synder, 2014). The victimization rate away from school is 38 victimizations per 1,000 students, and during any school year, approximately 85% of public schools recorded that one or more crime incidents had taken place at school (Morgan, Kemp, Rathbun, Robers, & Synder, 2014).

Security

While many schools focus on security utilizing surveillance, metal detectors, and increased police presence, others have suggested that schools should focus on the impact of school culture (Mattaini, & McGuire, 2006; Heinen, et al, 2007; Coyle, 2008; Bosworth, & Judkins, 2014). May (2014) posits that creating safe school environments using security techniques help students and faculty feel safe; however, these techniques do little to change the environment that cultivates violent behavior. Further, utilization of punitive measures such as suspensions and loss of privileges may stifle misbehavior in the immediate context; nevertheless, long-term change is small (Chin, Dowdy, Jimerson, & Rime, 2012; Mullet, 2014).

According to Mullet (2014), teaching prosocial behaviors, and motivating healthier decision making in the misbehaving students is the key. To gain a clear understanding of the phenomenon, the next section will explore how violence is defined, discuss categories of change, identify levels of problem behavior, and introduce interventions used to change behavior.

Violence

It would be reasonable to think that violence only includes severe acts that cause physical harm; however, violence is much more. To gain a better perspective of the school violence phenomenon, we must understand the definition of violence. Violence is defined by The World Health Organization (WHO) as the "intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, which either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation" (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002, p. 5). Intentionality is the key regardless of the outcome it produces (Krug, et al., 2002). Anything motivated in a physically or emotionally injurious or damaging way may be described as violent even if not meant to be violence (Krug, et al., 2002).

Whitted and Dupper (2005) indicate that violence manifests itself in numerous ways. Growing evidence of underlying forms of violence (such as bullying) have a profound effect on the learning environment in schools (Whitted & Dupper, 2005). If left unchecked, underlying forms of violence can lead to serious violence (Whitted & Dupper, 2005). Hence, preventing forms of violence requires a comprehensive approach that includes a focus on categories of change such as school climate/culture, conflict transformation, restorative justice/discipline, and mental health services (Bosworth & Judkins, 2014). These categories of change are necessary according to Sharkey and Fenning (2012) because punitive measures are ineffective in teaching proactive behaviors and may have the opposite effect of exacerbating undesirable behaviors. Subsequently, efforts to reduce violence in schools focus on three broad goals of providing evidence-based services (educational, behavioral, and mental health), promoting a school culture conducive to learning, and maximizing access to school-based and community based resources (Kelly, 2016). Recognizing there are varying levels of violence severity, schools use differing paradigms for severity identification.

Tier Levels

According to Boyd and Anderson (2013), three paradigms define levels of behavior for intervention. Universal (Tier I) behavior interventions promote pro-social behavior among all students (Boyd, & Anderson, 2013). Targeted (Tier II) behavior interventions are intended for students at risk for developing serious problematic behavior, and intensive (Tier III) behavior interventions aim to support students who engage in serious challenging behavior that has not responded to other efforts (Boyd, & Anderson, 2013). Tier I subgroup behaviors could include, but are not limited to negative attitudes, anxiety, inappropriate language, cheating, name-calling, tardiness, poor self-esteem, defiance, hyperactivity, or lack of participation (Flannery, Fenning, Kato, & McIntosh, 2014). Tier II behavioral subgroups represent approximately 15% of students in schools who need targeted instruction on specific skills (Boyd, & Anderson, 2013; Osher, Bear, Sprague, & Doyle, 2010; Goodman, 2006). These students may be those with repeated office referrals or behavioral issues in and out of the classroom, such as bullying (Nocera, Whitbread, & Nocera, 2014). Tier III behavioral subgroups represent approximately 1% of students who need individual intensive intervention for chronic discipline violations, antisocial behavior, or mental health challenges (Bradshaw, Waasdorp, & Leaf, 2015). As standardizing the of various types of disruptive behavior has received national recognition, so too have interventions progressed to curb disruptive behavior for each level.

Interventions

Table 2 illustrates interventions guided by theory that curb disruptive behavior includes the Schoolwide Positive Behavior Intervention and Support (SWPBIS) program, Safe Schools/ Healthy Schools (SS/HS) program, Restorative Justice/Discipline RJ/D, and the Conflict Transformation Education (CTE) program (Kelly, 2017). CTE is also known as Conflict Resolution Education (Lederach, 2003). The SWPBIS program refers to a system change process for an entire school or district (Boyd, & Anderson, 2013; Bradshaw, Waasdorp, & Leaf, 2015; Flannery, Fenning, Kato, & McIntosh, 2014; Nocera, Whitbread, & Nocera, 2014; Sorlie, & Ogden, 2007). The underlying theme is teaching behavioral expectations as any core curriculum subject (Nocera, Whitbread, & Nocera, 2014). The school focuses on three to five behavioral expectations that could include respect for yourself, others, property, relationships, responsibilities, or safety (Sorlie, & Ogden, 2007).

The SS/HS program works to prevent youth violence and substance use in schools and communities, and promotes and improves student access to mental health services (Harris, McFarland, Siebold, Aguilar, & Sarmiento, 2007; Massey, Boroughs, & Armstrong, 2007; Sprague, Nishioka, & Smith, 2007). The program recognizes that schools alone cannot respond effectively to violence, substance use, untreated mental illness, and a broad range of antisocial behaviors (Massey, Boroughs, & Armstrong, 2007). Therefore, SS/HS works to strengthen the role of schools as healthy learning environments that support the academic, social, and emotional growth of students in a collaborative approach among schools and other youth-serving organizations in the community (Sprague, Nishioka, & Smith, 2007).

RJ/D programs seem to offer effective alternatives to traditional disciplinary processes. Bazemore (1999) indicates that because of its educational value, RJ/D is useful for promoting diversionary and alternative measures that would otherwise deprive youth of their liberty. Zehr (2015) stipulates that RJ/D involves those with a stake in a specific harm were all involved work together to collectively identify and address harms, needs, and obligations to heal and make things right as possible (Zehr, 2015). Zehr (2015) suggests there are three pillars of RJ/D, 1) restorative justice focuses on crime done to individuals and communities; 2) harm to victims, offenders, and the community are in need of healing; 3) wrongs and offenses to victims means that offenders must be held accountable and responsible through restorative discipline alternatives. The emphasis is on the participation of all stakeholders working to define justice for each situation. The RJ/D paradigm is a relatively new response to offending behavior.

The CTE program includes various interventions in areas such as peer mediation, violence prevention, social and emotional learning, conflict resolution education, and anti-bias education. CTE strategies empower students to deal constructively with interpersonal conflicts, cultural differences, and the need for these approaches to be grounded in day-to-day experiences (Scheckner, & Rollin, 2003; Smith, Daunic, Miller, & Robinson, 2002; Thompkins, Chauveron, Harel, & Perkins, 2014). When youth experience success with negotiation, mediation, or consensus decision-making in school they are more likely to use conflict transformation processes elsewhere in their lives (Thompkins, Chauveron, Harel, & Perkins, 2014).

It is critical to recognize these interventions focus on some aspect of the overall goals. In other words, SWPBIS, SS/HS, CTE, and RJ/D interventions address the broad goals of providing evidence-

based services (educational, behavioral, and mental health), promoting a school culture conducive to learning, and maximizing access to school-based and community based resources. Further, these interventions address problem correction associated with the categories of change (Table 5). Chapter 2 explores work from the past and reveals many difficulties involved with the study of school violence.

There is much to learn and study regarding violence reduction in schools. It is encouraging that many of the more prominent programs such as those mentioned, are guided by theory. As we are attempting to understand the behavior related to violence in schools, due consideration must be given to what theory or theories help us to understand deviant behavior leading to violence. It is one thing to conceptualize what may cause deviant behavior; it is another to attain consensus or evidence to confirm such concepts. Understanding the theoretical viewpoints that guide the development of intervention allows us to understand poor behavior and correct the behavior, which will help clarify the main effect or interaction effect using multiple interventions and indicate which interventions when combined are most likely to create school culture change is the purpose of this study.

In this chapter, a discussion of the purpose, hypothesis, background, tier levels, and interventions that are critical for understanding the rational for this study are provided. Chapter two explores the theories most commonly used to guild past research and the theory guiding this study.

Chapter II

Theoretical Models

While the previous chapter establishes the foundation for this study, chapter two examines the theories used to understand, explain, and predict poor student in past previous studies. This chapter expands on previous research offering an alternative theory supporting the use of combined interventions to predict serious violent incidence and disciplinary action s recorded in schools and reinforce the use of positive reinforcement correcting poor behavior.

The literature indicates that SWPBIS interventions are mostly guided by behavior, problem behavior, and social cognitive theories; CTE and RJ/D interventions are guided by social learning and social cognitive theories; and SH/HS interventions are guided by behavior, social learning, and social cognitive theories (Flannery, Fenning, Kato, & McIntosh, 2014; Harris, McFarland, Siebold, Aguilar, & Sarmiento, 2007; Massey, Boroughs, & Armstrong, 2007; Nocera, Whitbread, & Nocera, 2014; Scheckner, & Rollin, 2003; Smith, Daunic, Miller, & Robinson, 2002; Thompkins, Chauveron, Harel, & Perkins, 2014). The importance of theory cannot be overstated when discussing behavior and interventions related to school violence reduction. Theory is more than a set of findings, theory helps us to understand, explain, and predict a phenomenon of interest (Haugh, 2012). A good theory helps us to make sense of a phenomenon and surmise a likely future under similar circumstances (Haugh, 2012). This chapter explores behavior, problem behavior, social development, social learning, and social cognitive theories utilized to guide development and use of interventions used for violence reduction in schools. The theories discussed include behavior, problem behavior, social development, social learning, and social cognitive theories. While it is possible that insight, systems, development and other theories could guide the development of violence reduction interventions and research, behavior theories are mentioned repeatedly and most often.

Social workers are in a unique position to enact real change in the school environment. Knowing the theories that help explain and predict behavior can help school social workers design specific processes to combine interventions. Focusing on work that connects theory to combined intervention evidence can help in developing quantitative statements about school violence, main effect and

interaction effect, school culture change. Details of evidence based theories that support violence reduction interventions are described in this chapter.

Based on previous research by Miller & Dollard (1950), Rotter (1954), and Bandura (1963), many violence reduction programs appear to be grounded in social, cognitive, or behavioral principles. These theories are important to consider because they were the foundation of derived theory, research, and clinical methods developed by social scientist such as Skinner, Jessor, Vygotsky, and Bandura and Walters that support various interventions applied to violence reduction methods today (Kelly, 2017). One concept of these theories is that behavior is learned; thus, changing behavior involves learning new behaviors. A second concept is that feelings and behaviors are mediated by thought processes. Violence reduction theories such as behavior theory (Skinner, 1938), problem behavior theory (Jessor, 1956), social development theory (Vygotsky, 1978), and social learning theory (Bandura & Walters, 1963) are based on longstanding, proven practices in the fields of education and social work (Kelly, 2017). These theories attend to the needs of students through reduction of suspensions, absences, bullying, and class disruptions and help in the improvement of academic success (Kelly, 2017). Consequently, a brief review of the theories commonly used to guide programs in schools today begins with behavior theory followed by problem behavior, social development, and social learning, and social cognitive theories.

Behavior Theory

Skinner (1938) proposes poor behavior is the reaction to the external environment created by the self, others, or an event (Skinner, 1938). Skinner posited that reinforced behavior is repeated and behavior not reinforced is extinguished. Skinner (1953) submits that positive reinforcement fortifies a behavior by providing a result an individual find pleasing like offering candy to a child when they behave as instructed. Negative reinforcement occurs through the removal of an adverse stimulus that is rewarding or supporting positive behavior as it removes an unpleasant experience (Skinner, 1953).

Regarding punishment, Skinner (1953) saw punishment as the opposite of reinforcement since it eliminates a response rather than increase it and that punishment weakens behavior. Skinner (1953) posited there are many problems with using punishment; for instance, punished behavior is not forgotten, it is suppressed, and the behavior returns when punishment is no longer present. Punishment causes increased aggression as a coping mechanism, creates fear that can generalize to undesirable behaviors

such as fear of school, and rarely steers toward the desired behavior (Skinner, 1953). Reinforcement guides an organism towards what to do while punishment only tells an organism what not to do (Skinner, 1953). Research indicates that many schools have managed problem behaviors through punishing practices of suspensions and expulsions rather than praise and reinforcement (Maag, 2001; Atkins et al., 2002; Kohn, 1996). Many teachers and administrators have felt that using punishment was the only way to deal with problem behaviors and that punishment was quick and effective in helping eliminate disruptions in the classroom (Kohn, 2006). More recently, there has been a realization that while punishment is quick and relatively easy to administer, it does nothing to teach children the appropriate ways to behave (Maag, 2001). With this awareness came the need to use methods of positive behavior support and reinforcement such as those used in the top interventions (Maag, 2001).

Problem Behavior Theory

While behavior theory is a major theory indicating that poor behavior is considered a reaction to the external environment created by the self, others, or an event, problem behavior theory is a minor theory indicating poor behavior deviates from social norms (Skinner, 1938; Jessor, 1987). Problem behavior theory is important because it is more specific to school environmentally exhibited behaviors, Development of Problem Behavior Theory (PBT) began in 1958 with a study of alcohol abuse in a marginalized group in American society, Native Americans (Jessor, 2014). The fundamental premise of PBT was developed based on the concept of anomie posited by Merton in 1957, and social learning theory posited by Rotter in 1954 (Jessor, 2014). While Durkheim originated the construct of anomie, Merton was a protégé of Durkheim; however, Merton's construct is more relevant to this study because he was more interested in deviance. PBT demonstrates that all behavior emerges out of the structure and interaction of three systems: behavior, personality, and environment (Jessor, 1968). PBT holds that when the personality system and perceived school environment system clash, behavioral problems become manifest (Jessor, 1987). Problem behaviors include general delinquent and deviant behavior, alcohol use, cigarette smoking, marijuana use, and other illicit drug use.

Risk factors contributing to the formation of deviance include low self-esteem, low success expectations, a sense of alienation and desperation, orientation toward antisocial friends, parents, and peer models with problem behavior, disconnection with conventional institutions, and failure in school

(Jessor, 1991). Protective/resiliency factors include relationships with adults, supportive family relationships, the perception of a normative control from the outside, conventional friends that demonstrate positive models of behavior, good school results, involvement in pro-social groups and in positive social activities, positive attitude toward school, intolerance of deviance, religious faith, and volunteer activity (Jessor, 1991).

In the early stages of PBT development, criticism concerning lack of time-extended data precluded inferences about causal direction or impact requiring longitudinal study following lives through periods of the life course (Jessor, 2014). Additionally, in assessing adolescents already in high school, the earlier adolescent life stage was omitted overlooking significant life transitions (Jessor, 2014). These issues were addressed in continued Jessor longitudinal studies during 1960, 1968, 1977, 1991, and reinforced by longitudinal studies conducted in China, Turkey, Taiwan, Kenya, Netherlands, Spain, Switzerland, and the United States. These studies all showed that problem behaviors are related and that any single problem behavior must be viewed within the complex systems of behavior, personality, and perceived environment (Donovan, 2005). The theory is widely used to explain dysfunction and maladaptation in adolescence and places an emphasis on self-reinforcement and self-efficacy, which is consistent with social work values and ethics (Donovan, 2005). Teaching behavioral expectations and rewarding students for following them is a positive approach for managing problem behavior.

Social Development Theory

As problem behavior theory views poor behavior as deviation from social norms, according to social development theory, lack of social interaction plays a fundamental role in poor behavior development (Jessor, 2014; Chen, 2015). Vygotsky (1978) indicated that every function in the child's cultural development appears on the social level and later on the individual level. The cultural development functions occur interpsychologically between people and then interpsychologically in the child equally building towards voluntary attention, logical memory, and the formation of concepts (Vygotsky, 1978).

Vygotsky (1978) suggests that the potential for cognitive development depends upon the zone of proximal development (ZPD). The ZPD is the distance between the actual development level as determined by independent problem solving and the level of potential development as determined

through problem solving under adult guidance or in collaboration with peers (Rieber, 1997). Full development of ZPD depends upon full social interaction and a range of skills that can be developed with adult guidance or peer collaboration exceeding what can be attained alone (Rieber, 1997). One way to think of ZPD is to consider three functions: 1) child can perform a task independently without assistance; 2) child can complete a task with assistance from an adult or peer; and 3) the child cannot perform the task. The second function (child can complete a task with assistance from an adult or peer) is the ZPD.

Vygotsky (1978) posits that the relationship between development and learning in children can be reduced to three major theoretical positions. The first theoretical position is that child development and learning are independent of each other (Vygotsky, 1978). The second theoretical position is that learning is development, which is represented by a diverse group of theories based on the concept of reflex (Vygotsky, 1978). The third theoretical position attempts to overcome the extremes of the other two by simply combining them by stating that each influences the other (Vygotsky, 1978).

Evidence indicates Social development is a process in which students learn to interact with others around them in creating friendships and acquaintances that help boost their moral and self-esteem (Scheckner, & Rollin, 2003). Further, evidence has indicated that prosocial behavior may buffer the negative effect of school violence in adolescent friendships (Smith, Daunic, Miller, & Robinson, 2002).

Social Learning Theory

Whereas social development theory posits that lack of social interaction plays a fundamental role in poor behavior development, social learning theory denotes poor behavior is influenced by environmental factors. Further, Social Learning Theory (SLT) holds that psychological and environmental factors combined influence the development of specific behaviors (Bandura & Walters, 1963). SLT stresses the importance of attending to and modeling the behaviors, cognitions (e.g., attitudes and beliefs), and emotions of others defined by three principles (Bandura & Walters, 1963). First, observational learning is attained when modeled behavior is structured, rehearsed symbolically, and then openly portrayed (Bandura & Walters, 1963). Second, the acceptance of the modeled behavior is strengthened when the outcomes of the behavior are valued, or lead to desirable outcomes (Bandura & Walters, 1963). Third, the observer is more likely to assimilate the modeled behavior when the attributes

are similar to those of the observer, there is a cognitive-behavioral connection, the results are well regarded by the observer, and the adopted behavior is practical or functional (Bandura & Walters, 1963).

Bandera and Walters (1963) propose that social learning theory can explain the development of deviant behavior and criminal conduct. When the behavior is adopted, it leads to consequences with positive outcomes such as group acceptance, sense of power, attention of peers, or a group role that infuses a sense of pride (Bandura & Walters, 1963). This means that positive reinforcement could determine whether the behavior is continually replicated.

Although SLT is not typically associated with empowerment, it can easily fit within an individual empowerment framework if there is no coercion involved in the application and clients are primarily definers of treatment goals and strategies (Bandura, 1977). Social learning theory's emphasis on self-enforcement and self-efficacy follows social work values and ethics. SLT supports that human nature is largely environmentally determined accepting deviant behavior in behavioral terms, but does not judge the behavior itself. The theory assumes that behavior develops from complex cognitive processes applied to real events in the social and physical world. Two primary processes through which learning occurs are classical conditioning and operant conditioning. Classical conditioning emphasizes learning that occurs based on association; operant conditioning stresses the importance of reinforcement.

The theories mentioned are widely applied to support and guide many research projects and intervention programs that work to reduce violence in schools (Kelly, 2017). These theories stress the influence of the environment or social context exerted on violent behavior and considers that the person carries out an active role throughout the learning process. The environment is regarded as responsible for the origin of violence in the sense that the person’s behavior is a reaction learned through environmental events. This perspective mainly accentuates that behavioral problems cannot be attributed only to the person; they must be considered a product of the interaction between the individual and the environment such as the classroom or school. While using the various theories to guide research and practice are encouraging, a common link is the use of social cognitive theory. Where social learning espouses the learning through observation and reinforcement, social cognitive theory explains human behavior in terms of the cognition, environment, people, and behavior interaction.

Social Cognitive Theory

While behavior, problem behavior, social development, and social learning theories are widely applied to support and guide many research projects and intervention programs that work to reduce violence in schools, social cognitive theory (SCT) views poor behavior from the lens of triadic reciprocality appearing to combining many constructs of psychological theories (Robbins, Chatterjee, & Canda, 2012; Bandura, 1986). The source theorist for social cognitive theory is Albert Bandura. Bandura posited that intelligence helps people achieve congruency within the environment (Robbins, Chatterjee, & Canda, 2012). The theory explains human functioning through a model of triadic reciprocality in which behavior (response received), cognition (self-efficacy), and the environment (influence of environmental aspects) are intertwined determinants of each other defined in terms of basic capabilities such as symbolization, forethought, vicariousness, self-regulation, self-reflection, and plasticity (Bandura, 1989). Bandura (1986) denotes that psychological theories have mostly indicated that learning can occur only by performing responses and experiencing their effects. In reality, "virtually all learning phenomena resulting from direct experience can occur vicariously by observing other people's behavior and its consequences for them" (Bandura, 1986, p. 20). The capacity to learn by observation provides many opportunities for people to acquire rules for generating and regulating behavior and avoid trial and error (Bandura, 1986). Even though human thought and conduct may be fashioned through experience, innately determined factors form behavior to some degree (Bandura, 1986). While genetic factors affect behavioral potentialities, both experimental and physiological factors interact, often in intricate ways to determine behavior (Bandura, 1986).

Symbolization represents a capacity to use symbols that transform transient experiences into guidelines for future action and give meaning, form, and continuance to lived experiences (Bandura, 1986). Forethought regulates behavior as individuals anticipate the likely consequences of their prospective actions, set goals, and plan courses of action (Bandura, 1986). Through exercise of forethought, people motivate themselves and guide their actions anticipatorily, which is rooted in symbolic activity (Bandura, 1986). Images of desirable future events foster the behavior most likely to bring about positive outcomes converting future consequences into motivators and regulators of foresight for behavior

(Bandura, 1986). “Forethought is translated into action through the aid of self-regulating mechanisms (Bandura, 1986, p. 19).

Bandura (1986) theorizes that psychological theories have mostly indicated that learning can occur only by performing responses and experiencing their effects. In reality, “virtually all learning phenomenon resulting from direct experience can occur vicariously by observing other people’s behavior and its consequences for them” (Bandura, 1986, p. 20). The capacity to learn by observation provides many opportunities for people to acquire rules for generating and regulating behavior and avoid trial and error (Bandura, 1986). It would be difficult to teach cultural practices without the benefit of models to exemplify cultural patterns. Some skills can only be mastered through the utility of modeling (Bandura, 1986).

Considering self-regulatory capabilities, behavior is typically motivated and regulated by internal standards and self-evaluated reactions to actions (Bandura, 1986). As we adopt personal standards, discrepancies between performance and the standard are activated through self-evaluation and self-directedness that influences future behavior (Bandura, 1986). Self-directedness is exercised by exerting influence over the environment, arranging environmental conditions, and recruiting cognitive guides; this creates incentives that contribute to motivation and actions (Bandura, 1986).

Through self-reflection, people can derive generic knowledge about themselves and the world; people can evaluate and alter their own thinking; people can monitor their ideas, act on them, or predict occurrences from them; and people can judge the adequacy of their thoughts from the results, and change them accordingly (Bandura, 1986). People can produce faulty thought patterns through reciprocal causation of erroneous beliefs creating social effects that confirm faulty thought patterns (Bandura, 1986). People act on thoughts and later analyze how well their thoughts served them in managing events (Bandura, 1986).

Bandura’s (1986) social cognitive theory posits that learning most likely occurs if there is close identification between the observer and the model and if the observer has a good deal of self-efficacy. Self–efficacy is the extent to which an individual believes that they can master a particular skill, more precisely, “the belief in one’s capabilities to organize and execute the courses of action required to manage prospective situations” (Bandura, 1995, p. 2). Self-efficacy functions as an important set of

proximal determinants of human motivation and action that operate through motivational, cognitive, and intervening processes (Bandura, 1986). Individuals with high self-efficacy are more likely to believe they can master challenging problems and they can recover quickly from setbacks and disappointments. Individuals with low self-efficacy are less confident and do not believe they can perform well, which leads them to avoid challenging tasks (Bandura, 1995). Therefore, self-efficacy plays a central role in behavior performance. Observers who have high level of self-efficacy are more likely to adopt observational learning behaviors (Bandura, 1995).

The concept of triadic reciprocality and explanation of vicarious observation is and all-encompassing notion useful for the study. The theory appears to explain behavior seen through culture change combined with CTE, RJ/D, and mental health services interventions. Further, social cognitive theory will provide justification for culture change, CTE, RJ/D, and mental health services interventions as viable methods for correcting poor behavior.

Conclusion: Connection of Theory to Interventions

Theory matters, and SCT emphasizes positive responses to student behavior, efficacy, and environment factors associated with school violence reduction. The interventions in this study appear to be supported by SCT in that they address problem behavior within the tier system framework. More importantly, each of the interventions (CC, CTE, RJ/D, and MH) addresses problem behavior with an emphasis on positive responses to poor student behavior as oppose to punitive responses. As Tier level I, II, and III responses can be adaptive to SCT approaches, SCT is an appropriate theory for guiding this study and future research.

As Bandura's social cognitive theory indicates, creating a positive environment through culture change can have very positive effects on behavior. CTE interventions provide a mechanism for building self-efficacy, which is important according to social cognitive theory. RJ/D creates a positive environment that helps to build self-efficacy and affords each student in the process to be treated with dignity and respect, which is an essential based on social cognitive theory. The use of mental health services helps to create a positive environment and provides dignity and respect for all, which is necessary for learning and vital according to social cognitive theory.

Chapters one and two deliberated on the purpose of this study, provided background information, explained types of discipline, the interventions, and theory as it relates to this study. Chapter three considers components of previous studies.

Chapter III

Critique of Research Literature

Chapters one and two deliberated on the purpose of this study, provided background information, explained types of discipline, the interventions, and theory as it relates to this study. Chapter three considers components of previous studies. Specifically, this chapter analyzes the literature to identify problems associated with the study of violence reduction in schools and determines gaps in the research. A comprehensive view of the issues provide insight into the strengths and weaknesses associated with past research efforts in the school environment and identifies areas of possible improvement that could strengthen future studies as they relate to school culture change. Categories for discussion in this section include quality, sample size, measurement of outcomes, validity, reliability, and outcomes. Further, the review reveals bias and measurement effect limitations to consider in this proposed secondary data analysis.

Based on a review of articles related to violence reduction in schools (Table 3), there is much diversity in scope and purpose (Kelly, 2017). This is both admirable and disconcerting. It is admirable that school districts and schools across the country recognize a need and try to resolve problems using evidence based programs. It is concerning that no one program has been shown to address all behavior problems related to violence in schools or rarely show improvements in targeted problems by over 35% (Black, & Washington, 2008; Harris, McFarland, Siebold, Aguilar, & Sarmiento, 2007; Nocera, Whitbread, & Nocera, 2014; Thompkins, Chauveron, Harel, & Perkins, 2014). Studies related to violence reduction methods vary greatly regarding sample size, design, standardized measurement of constructs, outcomes, quality, validity, and reliability. Therefore, these study components warrant further scrutiny to help identify strengths and weaknesses of past studies and provide justification for the study.

Quality

Quality research most commonly refers to the scientific process encompassing all aspects of study design.; yet the challenges related to implementing comprehensive, science-based programs in schools vary (Gottfredson et al., 2004; St. Pierre & Kaltreider, 2004). Further, there are difficulties getting buy-in from all levels of school staff and problems allocating time and personnel for implementation. As such, quality tends to be poor (Hallfors & Godette, 2002). Further, limited research encompasses the

standards of quality for staff development training in implementing intervention programs (Lund, Blake, Ewing, & Banks, 2012). While most studies measure the effectiveness of the intervention methods through the utilization of standardized instruments, the question of staff training could bring into question the level of fidelity. When programs have been rigorously evaluated, the results have been mixed, for both violence prevention programs and whole-school interventions (Menard, & Grotpeter, 2014).

Most research designs related to violence reduction and intervention in schools are notably quasi-experimental with scattered experimental, exploratory, and mixed method designs incorporated across the United States (Bradshaw, Waasdorp, & Leaf, 2015; Nocera, Whitbread, & Nocera, 2014; Scheckner, & Rollin, 2003). This is understandable, as many of the studies have been initiated to address an existing problem or problems (Coyle, 2008; de Anda, 1999; Hall, & Bacon, 2005). Further, many studies seek to substantiate the effectiveness of specific interventions (Black, & Washington, 2008; Bradshaw, Waasdorp, & Leaf, 2015; Corcoran, & Stephenson, 2001). It is possible that many studies could be replicated, but the generalization of results could be difficult as few studies make use of experimental models. Lack of experimental models could make it difficult to distinguish between random and systematic error affecting reliability and validity. Still, most studies are peer-reviewed, show high fidelity, and many adhere to quality standards of reporting (Chin, Dowdy, Jimerson, & Rime, 2012; Whitted, & Dupper, 2005).

Many school violence reduction study designs assess interventions for at least one outcome representing either 1) aggressive or violent behavior (e.g., fighting, bullying); 2) disruptive behavior (e.g., behavior problems, conduct disorder); 3) problem behavior (i.e., internalizing and/or externalizing problems), 4) improved academic achievement, or 5) a combination of these (Menard, & Grotpeter, 2014; Komro, et al., 2004; Schroeder, et al., 2012). Most studies apply a quasi-experimental design that compared students exposed to one identifiable interventions with one or more control or comparison conditions on at least one outcome (Boyd, & Anderson, 2013; Lund, Blake, Ewing, & Banks, 2012; Massey, Boroughs, & Armstrong, 2007; Thompkins, Chauveron, Harel, & Perkins, 2014). In numerous research studies, participants were exposed to pretest and posttest data collection methods on at least one qualifying outcome or sufficient demographic for equivalence of the treatment and control groups (Flannery, Fenning, Kato, & McIntosh, 2014; Corcoran, & Stephenson, 2001; Menard, & Grotpeter, 2014).

Quasi-experimental studies were most common due to feasibility and the ethical responsibilities associated with an at-risk population such as children. Few pre-experimental/pilot or preventive studies were utilized by school districts across the United States. This could be due to the sense of urgency school districts experience when the problems affect the learning environment unexpectedly. It is also possible that pre-experimental and preventive studies are not seen as a priority.

Sample Size

Many studies include multiple schools with sample size varying from individual case studies to hundreds of thousands of children and/or teachers in both primary and secondary education settings (Boyd, & Anderson, 2013; Schroeder, Messina, Schroeder, Good, Barto, Saylor, & Masiello, 2012; Massey, Boroughs, & Armstrong, 2007). Samples in many studies comprise a mixture of boys, girls, and minorities representing children ages 12 to 17. Ranges of risk levels are also present, from general population students who do not exhibit aggressive behavior to students exhibiting aggressive behavior or both (Schroeder, Messina, Schroeder, Good, Barto, Saylor, & Masiello, 2012; Boyd, & Anderson, 2013). In addition, various samples include youth that demonstrate violent behavior (Corcoran, & Stephenson, 2001). With few exceptions, most studies utilize non-random convenience or purposeful sampling in multiple locations or one location (Bosworth, & Judkins, 2014; Chin, Dowdy, Jimerson, & Rime, 2012; Harris, McFarland, Siebold, Aguilar, & Sarmiento, 2007; Komro, et al., 2004; Menard, & Grotpeter, 2014). Some studies draw samples from an entire school district, while others select samples from troubled schools only (Corcoran, & Stephenson, 2001; Nocera, Whitbread, & Nocera, 2014; Smith, Daunic, Miller, & Robinson, 2002). Various studies collect samples involving as many as 107 schools with as few as one school (Nocera, Whitbread, & Nocera, 2014; Schroeder, et al., 2012).

It is understandable that studies vary widely as it is reasonable to assume need and availability of resources could drive or limit the action. Further, having a need in one location may not necessitate implementation in another if the problem has not reached a critical point negatively affecting the learning environment. It could also be possible that school districts lack the trained research personnel capable of expanding studies beyond the targeted demographic.

Measurement of Outcomes – Standardized Measures

Measurements of outcomes typically employ a heterogeneous mix of standardized scales and often behavioral counts such as referrals and suspensions. Standardized measurement often focuses on student-centric or school environment-centric aims of each intervention. Even though wide varieties of standardized tools are used in violence reduction research, numerous studies utilized various evidence based standardized tools. The tools utilized appear to measure evidence-based educational, behavioral, and mental health services, culture change, and community involvement. SWPBIS and SS/HS interventions mostly employ the School-wide Evaluation Tool (SET) and the Teacher Observation of Classroom Behavior Checklist (TOCA) addressing culture and mental health (Boyd, & Anderson, 2013; Flannery, Fenning, Kato, & McIntosh, 2014; Harris, McFarland, Siebold, Aguilar, & Sarmiento, 2007; Sprague, Nishioka, & Smith, 2007). RJ/D and CRE interventions apply the Behavior Assessment Scale (teachers & students) and the Teen Conflict Survey address education and behavior (Scheckner, & Rollin, 2003; Smith, Daunic, Miller, & Robinson, 2002). The SET, TOCA, and Behavior Assessment Scale are commonly used with multiple intervention programs such as SWPBIS, SS/HS, and CRE.

Besides the normal scales and surveys that utilize count data, many studies also collect count data related to the number of office disciplinary referrals and suspensions, which has become the standard for measuring intervention success. Most interesting is that very few studies collected any data related to academic improvement or attendance. Considering that academic achievement could be the ultimate goal of any primary or secondary institution, a reasonable person would hope that by reducing violence, academic achievement could be maximized and attendance increased.

Student-focused measures. TOCA is a nonclinical measure of children's behavior completed by teachers. Various versions of the TOCA have been used in large-scale research trials to assess the impact interventions based on teacher ratings of children's behavior (Bradshaw, Waasdorp, & Leaf, 2015). TOCA is usually administered by a trained evaluator in a face-to-face interview (Bradshaw, Waasdorp, & Leaf, 2015).

In contrast to the TOCA, the Teen Conflict Survey obtains information regarding the participant's demographic and environmental histories and collects baseline data concerning outcome areas to demonstrate the treatment validity (Scheckner, & Rollin, 2003). The scale also measures the

effectiveness of the treatment knowledge, self-knowledge, self-efficacy, and intentions (Scheckner, & Rollin, 2003). Further, the instrument measures reading skills to assess differences between students in each group (Scheckner, & Rollin, 2003).

School environment-focused measures. The schoolwide evaluation tool (SET) is an external evaluation tool that measures the implementation of SWPBIS and results in a score of the percentage of critical features implemented to the criterion. The items are distributed into seven subscales measuring whether schools have implemented the essential features of SW-PBIS. The subscales include 1) defined behavioral expectations, 2) taught behavioral expectations, 3) established ongoing system for rewarding behavioral expectations, 4) achieved consensus on system for responding to behavioral violations, 5) engaged in ongoing behavioral monitoring and decision making, 6) maintained effective management practices, and 7) secured district-level support for ongoing implementation (Boyd, & Anderson, 2013). Each implementation rating is criterion referenced regarding that specific practice (Boyd, & Anderson, 2013).

While the SET uses a more environmental approach to assessment, the Behavior Assessment Scale assesses an array of behaviors that represent the environment, behavioral problems and strengths, including internalizing or externalizing problems, issues in school, and adaptive skills (Smith, Daunic, Miller, & Robinson, 2002; Scheckner, & Rollin, 2003). The scale is used to measure adaptive and problem behaviors in school settings (Smith, Daunic, Miller, & Robinson, 2002; Scheckner, & Rollin, 2003).

The School climate survey is a probe into the social-emotional climate based on student opinion. It includes questions about how students feel about reporting information (e.g. About bullying or fights or weapons) to adults, and how they feel about other students who make those reports (Nocera, Whitbread, & Nocera, 2014). It also asks about how comfortable they are hanging out with peers who are different, and how wrong they and their peers think certain behaviors are (Nocera, Whitbread, & Nocera, 2014). Both behavior assessment and school climate tools are anonymous to ensure maximum validity.

Outcomes measurement validity and reliability. Many studies utilize standardized test for measurement with at least moderate validity (Bradshaw, Waasdorp, & Leaf, 2015; Flannery, Fenning, Kato, & McIntosh, 2014). Good construct validity is demonstrated in several studies as an

operationalization accurately reflects many constructs (Sprague, Nishioka, & Smith, 2007; Scheckner, & Rollin, 2003; Thompkins, Chauveron, Harel, & Perkins, 2014). The criterion validity of many studies indicates that the operationalization behaves the way it should as it relates to the theory of the construct (Bradshaw, Waasdorp, & Leaf, 2015; Sorlie, & Ogden, 2007; Sprague, Nishioka, & Smith, 2007).

Measurement error did not seem to create issues in most studies as instruments were validated through experts, including school-based teachers and university faculty, verifying for content validity (Thompkins, Chauveron, Harel, & Perkins, 2014; Smith, Daunic, Miller, & Robinson, 2002). With expert reviews, most instruments were previously pilot tested for clarity, item misinterpretation, and length of administration with a small group of students (Komro, et al., 2004; Menard, & Grotpeter, 2014; Smith, Daunic, Miller, & Robinson, 2002). In addition, many studies incorporate the use of multiple measures to reduce systematic error (Boyd, & Anderson, 2013; Nocera, Whitbread, & Nocera, 2014; Schroeder, et al., 2012). Using informants less directly involved in the implementation process could have strengthened validity in many studies; however, no concerns were noted. No mention of data verification was noted; indeed, discussion of data recording could not be verified.

Many studies used statistical procedures to test internal scale consistencies utilizing Cronbach's alpha (de Anda, 1999; Hall, & Bacon, 2005; Menard, & Grotpeter, 2014; Smith, Daunic, Miller, & Robinson, 2002; Thompkins, Chauveron, Harel, & Perkins, 2014). Further, office discipline referrals (ODR) are considered valid indicators of the rates of problem behavior, delinquency, punitive discipline procedures, and perceived school safety (Flannery, Fenning, Kato, & McIntosh, 2014). Numerous studies have used ODR data demonstrating good concurrent validity (Boyd, & Anderson, 2013; Bradshaw, Waasdorp, & Leaf, 2015; Flannery, Fenning, Kato, & McIntosh, 2014; Sprague, Nishioka, & Smith, 2007).

Many studies use measurement instruments with psychometric properties showing high test–retest reliability, interrater reliability, and internal consistency (See, Boyd, & Anderson, 2013; Bradshaw, Waasdorp, & Leaf, 2015; Schroeder, et al., 2012; Massey, Boroughs, & Armstrong, 2007; Smith, Daunic, Miller, & Robinson, 2002). Since many studies show strong psychometric properties and use multiple instruments with multi-item scales, it is possible to equate self-reported data with high confidence (See, Flannery, Fenning, Kato, & McIntosh, 2014; Nocera, Whitbread, & Nocera, 2014; Black, & Washington, 2008; Sprague, Nishioka, & Smith, 2007; Thompkins, Chauveron, Harel, & Perkins, 2014). Many studies

measured internal consistency and reliability utilizing Cronbach's alpha (de Anda, 1999; Hall, & Bacon, 2005; Menard, & Grotpeter, 2014; Thompkins, Chauveron, Harel, & Perkins, 2014). By calculating all split-half estimates from the same sample, solid correlations are demonstrated in the studies reviewed. Still, reliability might have been stronger if outside observers were more prevalent in school research studies.

School Outcomes

Typically, studies report various positive outcomes such as reduction in disciplinary referrals (Boyd, & Anderson, 2013; Bradshaw, Waasdorp, & Leaf, 2015; Flannery, Fenning, Kato, & McIntosh, 2014; Nocera, Whitbread, & Nocera, 2014; Smith, Daunic, Miller, & Robinson, 2002), bullying (Black, & Washington, 2008; Schroeder, et al., 2012; Menard, & Grotpeter, 2014), and problem behavior (Sorlie, & Ogden, 2007; Massey, Boroughs, & Armstrong, 2007; Sprague, Nishioka, & Smith, 2007). Positive outcomes include increased use of conflict resolution skills (Scheckner, & Rollin, 2003; Smith, Daunic, Miller, & Robinson, 2002; Thompkins, Chauveron, Harel, & Perkins, 2014), and reports of students feeling safer (Massey, Boroughs, & Armstrong, 2007; Sprague, Nishioka, & Smith, 2007; de Anda, 1999).

Violence prevention programs that aspire to change school culture usually provide for teacher training in prevention, curriculum integration, classroom management, discipline, early warning signs, positive behavioral intervention, and promote community integration in violence prevention activities (Boyd, & Anderson, 2013; Bradshaw, Waasdorp, & Leaf, 2015; Flannery, Fenning, Kato, & McIntosh, 2014; Nocera, Whitbread, & Nocera, 2014; Sorlie, & Ogden, 2007). Numerous programs use conflict transformation techniques with a focus on student involvement to resolve problems (Scheckner, & Rollin, 2003; Smith, Daunic, Miller, & Robinson, 2002; Thompkins, Chauveron, Harel, & Perkins, 2014). Other prevention programs emphasize restorative justice/discipline by providing school probation, weekend detention, loss of privileges, require community service, and involve the community juvenile justice system (de Anda, 1999; Hall & Bacon, 2005; Komro, Perry, Veblen-Mortenson, Stigler, Bosma, Munson, & Farbakhsh, 2004). Finally, there are prevention programs that concentrate on mental health services through behavior modification, social work counseling, and involve community mental health services (Massey, Boroughs, & Armstrong, 2007; Harris, McFarland, Siebold, Aguilar, & Sarmiento, 2007; Sprague, Nishioka, & Smith, 2007).

Research shows that school-based violence reduction programs are often effective, and that program elements were associated with a decrease in school violence and victimization (Kelly, 2017). On average, Kelly also indicates school violence and victimization decreased when implementing any of the programs mentioned and outcome results tended to be greater in programs that addressed more than one area such as school culture, safety, relationship restoration, conflict transformation skills, and mental health services in any combination. The most important program elements associated with a decrease in school violence and victimization were programs that included all stakeholders such as administration, faculty, students, parents, and the community (Kelly, 2017).

Even though most programs demonstrate effectiveness in reducing school violence, the reduction does not eliminate the problem. While outcomes are positive with violence prevention programs such as those mentioned, there is no universal program that addresses every kind of violence in every situation. Still, considering the obstacles involved with conducting experimental studies in schools (i.e. Working with at risk populations, confidentiality restrictions, informed consent difficulties, and control of the collected data) many studies provide valuable insight into what works to reduce violence in schools.

Conclusions from Review of Literature

There are gaps in the research worth mentioning before discussing the theories that commonly guide school intervention studies. First, many intervention studies use staff to conduct and monitor study progress. This may be due to confidentiality constraints or simply convenience. In either case, looking at the problem with a critical uninvolved perspective may provide further insight. Second, there is no clear indication of the main effect, interaction effect or culture change using multiple interventions. This may be due to the under use of multiple interventions or economic constraints. Using a national secondary data source may provide at least some evidence of increased effect and culture change when doing so. The study of main and interaction effect from the perspective of a non-stakeholder will inform practice and add to the knowledge base unbiasedly.

Chapter three explored and critiqued the current literature related to school violence. The chapter focused on the quality, sample size, measurement outcomes, and school outcomes. Chapter four provides the methodology for this study.

Chapter IV

Methodology

Previous chapters have discussed the background and justification for this study in addition to theory and critique of the literature. Through SCT theory, a link between correcting poor behavior and the interventions used to correct poor behavior can be perceived. Further, SCT theory can explain culture change experienced using multiple interventions, reductions in the total number of serious violent incidents, and the total number of disciplinary actions recorded. As there is no clear indication of the school's ability to reduce violence using multiple interventions or clear indication of which interventions work in conjunction with culture change would reduce school violence, this chapter will identify the components and the process for making this determination. Further, this chapter discusses the rationale for the study, questions to be answered, and addresses the hypotheses for the study. Additionally, a description of the dataset includes background information, sample selection, variables of interest, and control factors.

Rationale

Even though most programs demonstrate effectiveness in reducing school violence, violence is not eliminated. Outcomes are positive; however, no universal program has been demonstrated to reduce violence by over 35% in any demographic (Black, & Washington, 2008; Harris, McFarland, Siebold, Aguilar, & Sarmiento, 2007; Nocera, Whitbread, & Nocera, 2014; Thompkins, Chauveron, Harel, & Perkins, 2014). This could be attributed to difficulties allocating time and personnel for implementation or lack of staff training in implementing intervention programs (Black, & Washington, 2008; Harris, McFarland, Siebold, Aguilar, & Sarmiento, 2007; Nocera, Whitbread, & Nocera, 2014; Thompkins, Chauveron, Harel, & Perkins, 2014). When programs have been rigorously evaluated, the results have been mixed, for both violence prevention programs and whole-school interventions (Menard, & Grotpeter, 2014).

While difficulties allocating time, personnel and lack of staff training seem difficult to overcome, it is possible to study school culture and the interaction with RJ/D, CTE, and MH utilizing the National Center for Educational Statistics (NCES) dataset. The NCES collects extensive data from principals and administrators of public schools (2009-2010 study sample size is 2648 schools) in the United States. The data collection effort fulfills a congressional mandate to collect, collate, analyze, and report full and complete statistics on the

condition of education in the United States. The NCES data are the most extensive and consistent mechanism available nationally for studying the variables connected to violence reduction (Table 6). Variables such as culture change, student involvement, conflict transformation, discipline, and mental health services are available for analysis. Therefore, it is logical that data from this collection be used to study the relationship of school characteristics associated with violence reduction in American schools and examine what school programs and practices could be combined to reduce violence most effectively (Neiman, Murphy, Swaim, Thomas, Parmer, & Chaney, 2015).

Question

Many violence reduction designs assess interventions for at least one outcome representing aggressive or violent behavior, disruptive behavior, problem behavior, improved academic achievement, or a combination of these. Outcome results were greater in programs that address areas of school culture, safety, relationship restoration, conflict transformation, and provide mental health services (Kelly, 2017). In this study, the interest is in the main effect of CC, RJ/D, CTE, and MH interventions in predicting serious violent incidence (SVI) and disciplinary actions reported (DAR), and the interaction between CC, RJ/D, CTE, MH interventions predicting lower rates of SVI and DAR.

1. Objective

    Determine the main effect of culture change, conflict transformation education, restorative justice/discipline, and mental health services in predicting lower rates of SVI and DAR.

Research Question

    What is the main effect of culture change, conflict transformation education, restorative justice/discipline, and mental health services on SVI and DAR?

2. Objective

    Determine the interaction effect between culture change and each, conflict transformation education, restorative justice/discipline, and mental health variables and the DV's (SVI and DAR).

Research Question

What is the interaction effect between culture change, conflict transformation education, restorative justice/discipline, and mental health services variables and the DV's (SVI and DAR)?

Hypothesis

While many interventions show the positive impact separately, this may not be enough to eliminate violence in schools. Although many violence reduction programs appear effective, it is likely these programs are only one component in creating an overall change in school culture. No literature or studies could be found that address multi-component approaches to school violence reduction concentrating on education, active student participation, behavioral intervention, mental health services, and community involvement simultaneously. What is interesting is the lack of research looking at combinations of programs with a focus on changing school culture, interventions, and resources that work together to predict violence in schools.

1.

H1: There is a main effect between culture change, conflict transformation education, restorative justice/discipline, and mental health services variables and predicting lower rates of serious violent incidents and the total number of disciplinary actions recorded in schools.

2.

H1: There is an interaction effect between culture change and each variable of conflict transformation education, restorative justice/discipline, and mental health services predicting lower rates of serious violent incidence and disciplinary actions reported in schools.

Dataset

The NCES is the principal entity for collecting, analyzing, and reporting data related to education in the United States and has conducted this study every school year since the 1996-1997 school year (Neimann et al., 2015). This study is based on the 2009-2010 school year dataset. NCES addresses high-priority education data needs; provide consistent, reliable, complete, and accurate indicators of education status and trends; and report timely, useful, and high-quality data to the U.S. Department of Education, the Congress, the states, other education policymakers, practitioners, data users, and the general public (Neimann et al., 2015). Data is

collected from principals and administrators of public schools across the United States. Unless specifically noted, all information contained within the dataset is in the public domain.

All school principals in all districts received questionnaires and schools of all sizes were sampled ensuring minimal sampling error and nonresponse bias analyses were performed when survey response rates for major reporting groups were less than 85 percent (Dinkes, Kemp, & Baum, 2010). The questionnaire (instrument) used in the national data collection process is the result of extensive research and development on issues of school violence and has evolved over consecutive studies since 1999 (Neimann et al., 2015). Development of the instrument was an interactive process, with regular internal reviews and updates, external reviews by a Technical Review Panel (TRP) and governmental units such as the Office of Safe and Drug-Free Schools and the Office of Special Education and Rehabilitation Services (Neimann et al., 2015). Pretesting of the questionnaire was conducted with 14 schools, and reviews by the Education Information Advisory Committee of the Council of Chief State School Officers and the Office of Management and Budget (Neimann et al., 2015). The questionnaire was updated for content, flow, and clarity based on input from the TRP, seven site visits, and eight debriefing interviews (Neimann et al., 2015).

The NCES instrument is split into eight sections. Each section has a specific focus; section one, school practices and programs; section two, parent and community involvement at school; section three, school security staff; section four, staff training; section five, limitations on crime prevention (e.g., parent's objection, lack of finances); section six, frequency of crime and violence at school; section seven, a number of incidents; section eight, disciplinary problems and actions; and section nine, school characteristics. These sections present a foundation from which policymakers and researchers can understand the environment in which school violence occurs (Neimann et al., 2015).

Sample

The sampling frame for NCES 2010 dataset was constructed from the 2007–08 Common Core of Data (CCD) Public Elementary/Secondary School Universe data file (Neiman et al., 2015). The CCD is an annual collection of data on all public schools and state education agencies in the United States (Neiman et al., 2015). The data is provided by state education agencies; it includes information that describes schools and school districts, including demographics (Neiman et al., 2015).

The same general sample used for 2000, 2004, 2006, and 2008 was utilized for the 2010 study (Neiman et al., 2015). The objective of the sample design was to obtain overall cross-sectional and subgroup estimates of school violence and develop precise estimates of change in various characteristics (Neiman et al., 2015). A stratified sample of 3,476 public schools was drawn for the 2010 study with strata defined by crossing school level, locale, and enrollment size (Neiman et al., 2015).

The initial goal of the NCES 2010 study was to collect data from at least 2,550 schools, considering nonresponse (Neiman et al., 2015). While most U.S. public schools are primary schools, the majority of school violence is reported in middle and high schools (Neiman et al., 2015). To account for the disproportion of primary schools, a larger proportion of the desired sample of 2,550 schools was allocated to middle and high schools (Neiman et al., 2015). The desired sample was allocated to the four school levels: 640 primary schools, 895 middle schools, 915 high schools, and 100 combined schools.

The NCES dataset is more than adequate for the proposed study as it contains variables critical for answering the research question and testing the research hypothesis. Twenty-six independent variables representing the categories of school culture, safety, relationship restoration, conflict transformation, and mental health services were identified in the dataset. Two dependent variables representing the total number of serious violent incidents and total number of students involved in specified offenses were identified in the dataset. Analyzing the relationship between independent variable categories and the dependent variables should provide a clearer picture of what combination of categories (independent variables) could predict a reduction in school violence.

Independent Variables

The fifteen independent variables in this study are count data and determine if the identified action is provided at the school by responding “yes or no”. The question asked on the survey was, “During the school year, did any of your formal programs or efforts intended to prevent or reduce school violence include the following?” (Neiman, Murphy, Swaim, Thomas, Parmer, & Chaney, 2015, p. A-6). Table 1 provides a list of all the variables in this study. Further, the independent variables represent four outcome categories of culture change, safety, conflict transformation, restorative justice/discipline, and mental health services as conveyed in the literature review section. In the final steps in the analysis, variables within each intervention type will be

combined to create an overall score for each school. This score will represent each school's effort in reducing school violence per intervention type.

School culture. Research indicates that categories of change such as school culture, conflict transformation, restorative justice/discipline, and mental health services help reduce violent behavior in schools (Bosworth & Judkins, 2014; Bradshaw, Waasdorp, & Leaf, 2015; Flannery, Fenning, Kato, & McIntosh, 2014; Nocera, Whitbread, & Nocera, 2014; Thompkins, Chauveron, Harel, & Perkins, 2014). Schools were asked if they implement any of six strategies which represent interventions targeting changes in school culture. The school culture interventions were 1) Prevention Curriculum, Instruction, Training (Orpinas, Parcel, Mcalister, & Frankowski, 1995; Brock, Nickerson, Reeves, Savage, & Woitaszewski, 2011; Mattaini, & McGuire, 2006); 2) Teacher Training-Classroom Management (Farrington, & Ttofi, 2009; Maring, & Koblinsky, 2013; Thompson, & Webber, 2010); 3) Teacher Training-Discipline Policies (Dwyer, 2000; Maring, & Koblinsky, 2013; Mayer, 2002; Skiba, Simmons, Staudinger, Rausch, Dow, & Feggins, 2003); 4) Teacher Training-Early Warning Signs For Violent Behavior (Fong, Vogel, & Vogel, 2008; Dwyer, 2000); 5) Teacher Training-Positive Behavioral Intervention (Goh, & Bambara, 2012; Farrington, & Ttofi, 2009; Dwyer, 2000; Orpinas, Parcel, Mcalister, & Frankowski, 1995); and 6) Promote Sense of Community/Integration (Orpinas, Parcel, Mcalister, & Frankowski, 1995; Dwyer, 2000).

Conflict transformation. Schools were asked if they implement the CTE strategy which represents the intervention targeting conflict in school. The school intervention of CTE was measured utilizing one variable of Student Involvement Resolving Problems (C0184 variable; Maring, & Koblinsky, 2013; Noss, 2013; Hahn, Fuqua-Whitley, Wethington, Lowy, Crosby, Fullilove, & Dahlberg, 2007; Crawford, & Bodine, 1996; Smith, Daunic, Miller, & Robinson, 2002).

Restorative justice. Schools were asked if they implemented any of five strategies which represent interventions targeting RJ/D in school. The school RJ/D intervention was measured by applying five variables: 1) School Probation (Armour, 2013; Choi, 2008; Gonzalez, 2012); 2) Detention/Saturday School (Michail, 2011; Vega, Moore, Miranda, 2015; Fenning, Pulaski, Gomez, Morello, Maciel, Maroney, & Maltese, 2012); 3) Loss of Student Privileges (Mullet, 2014; Mullet, 2014; Goh, & Bambara, 2012; Michail, 2011; Flannery, Frank, & Kato, 2012); 4) Require Community Service (Stuart-Cassel, Bell, & Springer, 2011; Michail, 2011); 5)

Community Involvement-Juvenile Justice (Umbreit, Coates, & Vos, 2007; Gumz, & Grant, 2009; Crawford, & Bodine, 1996; Dwyer, 2000).

Mental health service. Schools were asked if they implemented any of three strategies which represent interventions targeting MH in school. The school MH intervention was measured by applying three variables: 1) Behavioral Modification for Students (Chin, Dowdy, Jimerson, & Rime, 2012; Thompson, & Webber, 2010; Osher, Bear, Sprague, & Doyle, 2010); 2) Student Counseling/Social Work (Massey, Boroughs, & Armstrong, 2007; Kelly, 2016; Lane-Garon, & Richardson, 2003; Duarte, & Hatch, 2014); and 3) Community Involvement-Mental Health (Maring, & Koblinsky, 2013; Nazzal, Forghany, Geevarughese, Mahmoodi, & Wong, 2014; Massey, Boroughs, & Armstrong, 2007).

Outcome Variables

The two dependent variables in this study were continuous and include the total number of serious violent incidents (SVI; defined as the violent acts of murder, suicide, rape, sexual battery, robbery, and fights with a weapon) and the total number of disciplinary actions recorded (DAR; defined as the less violent acts of fights without a weapon, theft, larceny, and vandalism). The question was asked on the survey: During the school year, how many incidents involving each type of the following crimes or offenses have occurred at your school? (Neiman, Murphy, Swaim, Thomas, Parmer, & Chaney, 2015, p. A-12). Incidents were defined above in the two dependent variable descriptions (Table 1).

It should be mentioned that possession of a firearm or explosive device, distribution, possession, or use of illegal drugs, possession of a weapon other than a firearm or explosive device, and distribution, possession, or use of alcohol are types of student behaviors or incidents were not included in these the dependent variables. Therefore, these events were not controlled for when analyzing total number of serious violent incidents or total disciplinary actions recorded for physical attacks or fights.

Control Variables (Covariates)

In the 1996-97 NCES study, it was found that many violence and discipline indicators were associated with school size. Discipline issues such as tardiness, absenteeism, physical conflicts among students, and verbal abuse of teachers were prevalent (Heaviside, Rowand, Williams, & Farris, 1998). Further, serious violent crime was more likely to be reported by the largest schools (1000 + population) in large cities because schools in cities were twice as likely to report serious violent crime as those in towns and rural locations where

population sizes are smaller; although, city schools were not significantly different from urban schools (Heaviside, Rowand, Williams, & Farris, 1998). Heaviside, Rowand, Williams, and Farris (1998) suggest that size, instructional level, and urbanicity could confound study outcomes. Hence, these possible variables are isolated, because a type III error (correctly rejecting the null hypothesis for the wrong reason) could occur if an unknown factor influences the dependent variable. For this study, size was measured as population of less than 300, 300-499, 500-999, and 1000 plus students. Levels were measured as primary schools (1-6 grades), middle schools (7-8 grades), high schools (9-12 grades), and all levels combined (1-12 grades). Urbanicity was measured as city, suburb, town, and rural. Race was measured as less that 5% minority, between 5% and 20% minority, 20% to 50% minority, and over 50% minority.

This chapter offered an explanation of the rationale, research question, hypothesis, dataset, sample, independent variables (CC, CTE, RJ/D, and MH), outcome variables, and control variables (covariates) for this study. In the next chapter, review of the analysis process is considered.

Chapter V

Analysis

Previous chapters have introduced and expounded on the background, theoretical models, critiqued past literature, and described the methodology for this study. Chapter five illustrates the analysis plan for the study. The analytic plan included a frequency analysis of measures of central tendency for the central position of all independent, dependent, and control data. This contained mean, median, and mode of the variables. Measures of dispersion were analyzed for data variability within a data set. More specifically, an analysis of the standard deviation, variance, and the range was conducted.

Missing Data

Even in a well-designed and controlled study, missing data occurs in almost all research. Missing data can reduce the statistical power of a study and can produce biased estimates, leading to invalid conclusions. The NCES 2010 surveys contained some level of item nonresponse after the data collection phase, and imputation procedures were used to create values for all questionnaire items with missing information (Neiman et al., 2015). Further, after data cleaning and editing, base-weighted item response rates ranged from 81 to 100 percent (Neiman et al., 2015). Of the 231 questionnaire items reviewed, the mean weighted item response rate was about 98 percent and the majority of the items had weighted response rates of over 85 percent (Neiman et al., 2015). As rigorous efforts to account for missing data were conducted by the creators of the data set (Neiman et al., 2015), there were no missing data related to the variables in this proposal.

Exploration of Descriptives

Each variable was evaluated for relative frequency of occurrence to determine the measure of the probability of that event in each school. On average, schools report 94% daily student attendance; 99.5% of schools require visitor check-in; 91% of schools monitor the doors; 45% of schools in the study monitor gates; 2.1% of schools require student to pass through metal detectors; 71.9% of schools have close campus for lunch; 39.4% of schools utilize drug sniffing dogs; and 6.6% of schools require drug testing for extracurricular activities. In addition, 62.4% of school enforce a strict dress code; 68.5% of schools provide electronic notification for parents for school wide emergencies; 75.9% of schools provide two-way radios for staff; and 73% of schools have security cameras. Most surveys were completed by Principals

(75.4%) or Vice-Principals (17.5%). Crime where students live was low (57.3%), moderate (20.5%), high (7.3%), or a mix (14.9%). Crime where the schools where located was low (74.7%), moderate (19.4%), or high (6%).

Exploration of Independent Variables

In step two, descriptive statistics (frequency and percentage) will be calculated for each independent variable (IV) as it relates to number of schools that utilize the IV's for intervention. Binomial tests were conducted to examine if a significant number of schools were either offering or not offering each intervention (i.e., null hypothesis being that the same number of schools implement each intervention as those who reported not).

Exploration of Covariates

Each covariate variable of urbanicity (city, suburb, town, rural), size (<300, 300-499, 500-999, 1000+), level (primary, middle, high school, combined) was evaluated for relative frequency of occurrence to determine the measure of the probability of the covariate in each school. Each variable was evaluated for percentage of relative frequency of occurrence in each school. Based on the percentages in each category and their relationship with the dependent variables, covariates were dichotomized for further analyses.

Exploration of Dependent Variables

Step three analysis involved a descriptive analysis (frequency and percentage) of the two dependent variables (DV) identified as number of serious violent incidents and total number of disciplinary actions recorded as they relate to the mean, standard deviation, standard error, and variance for the racial, school level, urbanicity, and school size, for each school that reports five or more incidences.

Bivariate Poisson Regression

For step four of the analysis, Bivariate Poisson regression was utilized for each individual IV with DV. Poisson regression was most appropriate statistical method for working with dichotomous IVs and continuous DVs that are heavily skewed count data. A preliminary review of the dataset indicates the data was positively skewed consistent with count data. Counts are non-negative integers that represent the number of occurrences of an event within a fixed period. Model count data was analyzed as a function of covariates. This model was needed because like in logit models, the dependent variable has restricted

support. Given the Poisson distribution, we model the mean as a function of covariates. This creates the Poisson regression model, providing a method of determining the combination of variables predictive of the outcome under study in this regression analysis. All Poisson regression models were conducted through SPSS 24.0 (IBM, 2016).

Creation of Intervention Summary Scores

Step five involved the creation of latent variables for each category of school culture, restorative justice/discipline, and mental health utilizing the IV's associated with each category. The goal of combining the variables within each intervention type was to create a summary score representing the degree of effort to predict school violence within each category of culture, RJ/D, CTE, and MH with a summary score created for each. These summary scores were created using Mplus (Muthen & Muthen, 2012) and Confirmatory Factor Analysis (CFA).

CFA combines variables into latent variables providing a platform for the subsequent assessment of fit to the data. Confirmatory factor analysis (CFA) is a statistical technique used to verify the factor structure of a set of variables (Kim, & Mueller, 1978). Specifically, CFA is a method used to test if a relationship between variables and the latent constructs exists. Here, the latent construct represented the degree schools reported utilizing culture, RJ/D, CTE, and MH to predict school violence. CFA for a latent construct shows which variables load onto which factors. Absolute fit indices determine how well the model reproduces the data (Kim, & Mueller, 1978). For this study, Mplus 7.426 software was utilized to conduct CFA using the weighted least squares means and variance (WLSMV) estimation (Brown, 2006). The WLSMV estimates are useful when working with data not normally distributed, such as the data used for this study (Brown, 2006). The chi-square goodness of fit test will be used to evaluate the difference between the observed and expected values with a value closer to zero indicating a good fit (Fisher, 1956).

Indices of fit produced through Mplus included Root Mean Square Error of Approximation (RMSEA), Bentler Comparative Fit Index (CFI), and Tucker-Lewis index (TLI). RMSEA is a measure of fit based on non-centrality adjusting for parsimony measuring the closeness of expected covariance to observed covariance with values between .08 and .10 indicating adequate fit reported with confidence intervals

(Kline, 2011). The CFI and TLI indices with values equal or greater than 0.95 demonstrate fit by contrasting model fit to a baseline model (Hu & Bentler, 1999; Kline, 2011).

Multivariate Poisson Regression and Testing of Interactions

Since the dependent variables comprise count data, Poisson regression was used to predict the outcome of a continuous dependent variable comprising count data with multiple categorical independent variables. Using this type of regression model helped determine which of the intervention summary scores had a statistically significant effect on the dependent variable. Utilization of Poisson regression aided in identify the difference in the logs of expected counts for a one unit change in the predictor variable as other predictor variables (urbanicity, level, size, and race) in the model are held constant.

In the sixth and final step, an analysis of the DV count data using Poisson regression was conducted. This stage controlled for various control variables mentioned above.

A main effect is the effect of one IV on the DV controlling for effects of all other independent variables included in the model. For this analysis, the main effects were determined using the F scores and p values through multivariate Poisson regression modeling. First the main effect of either CTE, CC, or MH services were calculated for each DV. Next, all covariates were included in the model to control their effect on the DV when estimating the main effect of each intervention type. A third model was created by adding RJ/D to the model with the four covariates and either CTE, CC, or MH services. Lastly, an interaction term was created and included in the model by combining the effects of RJ/D with either CTE, CC, or MH services. A statistical interaction occurs when the effect of one independent variable on the dependent variable changes depending on the level of another independent variable. Each of these four models were tested with each intervention type (CTE, CC, or MH) and for each DV (SVI and DAR). Utilizing Poisson regression modeling, a determination of interaction was analyzed by observing an increase or decrease the exp β outcomes in the parameter estimate scores for the interaction term.

This chapter explicated on missing data, independent variables, covariates, dependent variables, bivariate Poisson regression, summary scores, multivariate Poisson regression, and testing of interactions unique to this study. Chapter six explores the results.

Chapter VI

Results

Introduction

Previously, the discussion has focused on the problem, theoretical foundations that explain the problem, a critique of previous research literature, and the methodology and process of analysis for this study. This chapter presents the findings on the best approach for reducing violence in schools. First, descriptive statistics were conducted for the sample and important variables. Second, the covariates of urbanicity, race, school size, and grade level are discussed. Third, results from Poisson regression models are presented wherein the covariates were used to predict the two dependent variables. Fourth, each intervention type was used to predict the two dependent variables. Fifth, confirmatory factor modeling is used to generate latent variables and summary scores for each type of intervention. Finally, multivariate Poisson regression was conducted using each intervention type, the covariates, restorative justice, and testing for interaction effects.

Sample

Schools in the sample (n=2648) were located in the 50 states of the United States in District of Columbia. Schools were also separated by geographic region in the data set. Although this was not a consideration for this study, it is interesting to know how geographical data was divided. Within the primary strata, schools were sorted by geographic region (Northeast, Southeast, Central, West). Schools excluded from the sample included schools in the outlying areas of the United States and Puerto Rico, overseas Department of Defense schools, newly closed schools, home schools, Bureau of Indian Education schools, special education schools, vocational schools, alternative schools, and schools that taught only prekindergarten, kindergarten, or adult education. Regular schools, charter schools, and schools that have partial or total magnet programs are included in the frame.

The number and percent of schools reporting use of interventions with minorities less than 5%, 5%-20%, 20%-50%, and more than 50% enrollment (Race) was illustrated in Table 7. The percentage of minority enrollment was classified as the percent of students enrolled in the school whose race or ethnicity is classified as one of the following: American Indian or Alaskan Native, Asian or Pacific Islander, African American, or Hispanic. The most commonly supported schools (33.8%) in the study by race have

over 50% minority populations (Table 11). The least commonly supported schools (12.7%) in the study by race have less than 5% minority populations (Table 11).

The number and percentage of schools reported using interventions by city, suburb, town, and rural location (urbanicity) are illustrated in Table 8. Urbanicity was defined in the data by city, which was classified as a central city of a Metropolitan Statistical Area (MSA) with a population of 250,000 or more. A suburb is classified as a place within an MSA of a central city, but not primarily in the central city with a population less than 250,000 and greater than or equal to 100,000. A town is classified as a place not within an MSA, but with a population greater than or equal to 2,500 and over 25 miles and less than or equal to 35 miles from an urbanized area. Rural is classified as a place with a population less than 2,500 and is over 5 miles but less than or equal to 25 miles from an urbanized area, as well as rural territory that is over 2.5 miles but less than or equal to 10 miles from an urban cluster. The most commonly supported schools (33.3%) in the study by urbanicity were located in suburban school districts (Table 11). The least commonly supported schools (14.8%) in the study by urbanicity were located in towns (Table 11).

The number and percentage of schools reported using interventions by < 300 students, 300-499 students, 500-999 students, and 1000+ students (size) are illustrated in Table 9. Size of enrollment included total number of students enrolled as defined by Common Core of Data (CCD). Small were classified as less than 300 students. Medium schools were classified as 300 to 999 students. Large schools were classified as 1,000 or more students. The most commonly supported schools (38.1%) in the study by size have 500-999 student populations (Table 11). The least commonly supported schools (11.5%) in the study by size have < 300 student populations (Table 11).

The number and percentage of schools reported using interventions by primary school, middle school, high school, and combined school (level) are illustrated in Table 10. Instructional level schools were classified according to grade span in the Common Core of Data (CCD). Elementary school were classified as low grade of 3 or less and high grade of 1 through 8. Middle school were classified as low grade of 4 through 9 and high grade of 4 through 9. High schools were classified as low grade of 9 through 12 and a high grade of 10 through 12. Schools that did not precisely meet these qualifications were classified as combined. The most commonly supported schools (35.8% and 34.3%) in the study by

level are high schools followed closely by middle schools (Table 11). The least commonly supported schools (4%) in the study by level are combined schools (Table 11).

Independent Variables

For descriptive purposes, tables 6 through 13 describe culture change, conflict transformation, restorative justice/discipline, and mental health services using variables from Table 1. Variables describing Culture Change include prevention curriculum/instruction/training (C0174), teacher training-classroom management (C0266), teacher training-discipline policies (C0268), teacher training-early warning signs for violent behavior (C0272), teacher training-positive behavioral intervention (C0276), and promote sense of community/integration (C0186).

The variable describing CE was student involvement resolving problems (C0184). Variables describing RJ/D include school probation available (C0442), detention/Saturday school available (C0446), loss of student privileges available (C0450), require community service available (C0454), and community involvement-juvenile justice (C0208). Variables describing MH include behavioral modification for students (C0176), student counseling/social work (C0178), and community involvement-mental health (C0212).

All independent variables from Table 1 were represented in Descriptives Table 6. The majority of the schools represented in the sample (n = 2648) reported using at least one of the interventions in the study (96%). The dependent variables were disciplinary actions recorded (DAR) and serious violent incidence (SVI). Table 6 demonstrates the top used interventions and the least used interventions as they relate to the means and standard deviations for disciplinary actions reported (DAR), serious violent incidents (SVI).

The majority of schools (84.4%) in the study reported using at least one culture change intervention, 51.9% of schools reported using a conflict transformation education intervention, 96% of school's report using at least one restorative justice/discipline intervention, and 93.9% of school's report reported using at least one mental health intervention.

As mentioned, numerous interventions describe culture change (C0174, C0266, C0268, C0272, C0276, and C0186). A majority of schools reporting using culture change interventions including 84% of schools that use prevention curriculum/instruction/training (C0174), 79.3% use teacher training-classroom

management (C0266), 64.5% use teacher training-discipline policies (C0268), 48.5% use teacher training-early warning signs for violent behavior (C0272), 77.3% use teacher training-positive behavioral intervention (C0276), and 82.9% promote sense of community/integration (C0186). Regarding conflict transformation education, 51.9% of schools in the study use student involvement resolving problems (C0184) as an intervention.

Numerous interventions describe restorative justice/discipline (C0442, C0446, C0450, C0454, and C0208). Restorative justice/discipline interventions were widely used with 64.9% reporting the usage of school probation available (C0442), 80.4% detention/Saturday school available (C0446), 96% loss of student privileges available (C0450), 37.9% required community service available (C0454), and 51.2% utilizing community involvement-juvenile justice (C0208) as interventions.

Three interventions describe mental health (C0176, C0178, and C0212). Many schools use mental health as an intervention with 91% using behavioral modification for students (C0176), 93.9% using student counseling/social work (C0178), and 598% using community involvement-mental health (C0212).

Covariates

Race. Independent variables by race (Table 7) indicates that schools with minority populations of less than 5% reported using fewer violence reduction interventions (10.1% to 14.8%) than schools with higher minority populations. Schools with 5 to 20% minority population and 20 to 50% minority populations reported using violence reduction interventions at a slightly higher rate (24.6% to 27.6%, and 24.9% to 27.5% respectively). Schools with a minority population of over 50% reported using violence reduction interventions more often than all schools with smaller minority populations (31.2% to 38.2%). Except for the “prevention curriculum/instruction/training intervention” ($p = .16$), school probation available ($p = .24$), and detention/Saturday school available ($p = .32$), all interventions were significant at .07 or less with six interventions having p values of less than .001, indicating increased reported use of interventions in schools with greater proportions of racial/ethnicity minority students.

Urbanicity. Based on the results of this study (Table 8), schools in towns ($n = 276$) reported using violence reduction interventions less often (10.4% of the time) than schools in other urban areas. Of those schools in the sample, 19.4% of city schools ($n = 515$), 23.8% of suburb schools ($n = 630$), and

17% of rural schools (n = 454) reportedly utilized at least one violence reduction intervention. Regarding CC, 20.5% (n = 543) city, 24.5% (n = 649) suburb, 10.2% (n = 271) town, and 17.6% (n = 465) rural schools reportedly utilized at least one of the six interventions representing culture change. Concerning CE, 15% (n = 396) city, 19.1% (n = 505) suburbs, 6.5% (n = 174) town, and 11.3% (n = 300) rural schools applied a conflict transformation intervention as a means to reduce violence. As it relates to RJ/D, 17.6% (n = 466) city, 21.9% (n = 579) suburb, 10.3% (n = 272) town, and 16.3% (n = 433) rural schools reportedly employed at least one of the five restorative justice/discipline interventions to reduce violence. As to MH, 21.9% (n = 580) city, 27.1% (n = 719) suburb, 12.3% (n = 326) town, and 19.6% (n = 520) rural schools reportedly devoted resources to at least one of three metal health interventions to reduce violence. Except for school probation availability ($p = .48$), detention/Saturday school availability ($p = .20$), and loss of student privileges availability ($p = .23$), which were possible components of RJ/D, all other interventions were significant at $p \leq .03$. Eight interventions were significant at $p < .001$, indicating that urbanicity was significantly associated with the interventions reported use. Schools in urban and suburban areas reported increased usage of interventions compared to schools in rural areas or towns.

Size. Regarding CC in Table 9, 7.8% of student populations <300 (n = 207), 14.5% of student populations 300-499 (n = 383), 27.8% of student populations 500-999 (n = 736), and 22.7% of student populations 1000+ (n = 602) reportedly utilized at least one of the six interventions representing culture change. Concerning CTE, 4.8% (n = 127) of student populations less than 300, 9.7% (n = 257) of student populations 300 to 499, 19% (n = 504) of student populations 500 to 999, and 18.4% (n = 487) of student populations of greater than 1000 students reportedly used CTE interventions. As it relates to RJ/D, 6.8% (n = 180) of student populations less than 300, 12% (n = 318) of student populations 300 to 499, 24.2% (n = 642) of student populations 500 to 999, and 23% (n = 610) of student populations of greater than 1000 students reportedly employed at least one of the five restorative justice/discipline interventions to reduce violence. As to MH, 8.4% (n = 222) of student populations less than 300, 16.3% (n = 431) of student populations 300 to 499, 31% (n = 808) of student populations 500 to 999, and 25.8% of student populations of greater than 1000 students devoted resources to at least one of three metal health interventions to reduce violence.

With the exception of teacher training in classroom management ($p = .12$) and loss of student privileges availability ($p = .07$) all other interventions were significant at $p \leq .003$. Eleven interventions were significant at $p < .001$, indicating school size was significantly associated with the interventions reported use. Schools with populations of greater than 1000 students reported increased usage of interventions.

Grade Level. Grade level schools (Table 10) include primary schools (PS) usually comprised grades 1-6. Middles schools (MS) usually comprised grades 7-8. High schools (HS) usually comprised grades 9-12 and combined schools (COM) include all grades 1-12. Of those schools in the sample, 16.5% of PS (n = 438), 25.2% of MS (n = 668), 25% of HS (n = 662), and 2.7% combined schools (n = 71) reportedly utilized at least one violence reduction intervention (Table 10). Of those primary schools in the study, 28.1% reported using teacher training in positive behavioral interventions more often than any other intervention and reportedly utilized community service interventions the least (16.1%). Of those MS in the study, 37.9% reported using detention/Saturday school more than other interventions and using loss of student privileges the least (34.4%). Of those High schools in the study, 48.3% reportedly used community involvement-juvenile justice more than other interventions and prevention curriculum/instruction/training the least (31.7%). Combined schools reported using almost no interventions (2.8% to 4.8%).

Regarding CC, 19.1% of PS(n = 507), 26% of MS (n = 687), 25.1% of HS (n = 665), and 2.6% of combined schools (n = 69) reported utilizing at least one of the six interventions representing culture change. Concerning CE, 12.2% of PS (n = 324), 18.2% of MS (n = 483), 19.7% of HS (n = 522), and 1.7% of combined schools (n = 46) reportedly used conflict transformation interventions. As it relates to RJ/D, 12.2% of PS (n = 323), 23.8% of MS (n = 631), 31.2% of HS (n = 825), and 2.6% of combined schools (n = 70) reported employing at least one of the five restorative justice/discipline interventions to reduce violence. As to MH, 20% of PS (n = 529), 28.4% of MS (n = 753), 29.3% of HS (n = 777), and 3.2% of combined schools (n = 85) devoted resources to at least one of three metal health interventions to reduce violence. HS reported using more interventions than schools of other levels.

Dependent Variables

Table 11 offers a view of the means and standard deviations of serious violent incidence (SVI) and disciplinary actions reported (DAR) as related to each covariate categories of race, school level, school size, and urbanicity. Concerning the association between race and SVI each year, schools with minority populations of less than 5% reported a mean of .42 incidents yearly (SD = 1.80), schools with minorities between 5% and 20% reported a mean of .51 incidents yearly (SD = 2.65), schools with minorities between 20% and 50% reported a mean of .95 incidents yearly (SD = 3.25), and schools with minorities over 50% reported a mean of 1.53 incidents yearly (SD = 6.72), $F(3, 2644) = 8.70$, $p < .001$. This indicated schools with minority populations greater that 50% were significantly associated with higher rates of serious violent incidents. Post hoc tests indicated schools with minority populations of 50% or greater reported higher rates of DAR.

Considering the association between race and DAR each year, schools with minority populations of less than 5% experienced a mean of 8.46 incidents yearly (SD = 16.61), schools with minorities between 5% and 20% experienced a mean of 9.98 incidents yearly (SD = 37.22), schools with minorities between 20% and 50% experienced a mean of 15.70 incidents yearly (SD = 21.06), and schools with minorities over 50% experienced a mean of 24.83 incidents yearly (SD = 54.36), $F(3, 2644) = 25.04$, $p < .001$. This indicated schools with minority populations greater that 50% were significantly associated with higher rates of DAR. The post hoc test indicated schools with minority populations of 50% or greater reported higher levels of SVI and DAR.

Regarding the association between school level and SVI each year, primary schools (PS) experienced a mean of .48 incidents yearly (SD = 2.23), middle schools (MS) experienced a mean of 1.04 incidents yearly (SD = 6.37), high schools (HS) experienced a mean of 1.28 incidents yearly (SD = 3.78), and combined schools (COM) experienced a mean of .48 incidents yearly (SD = 1.80), $F(3, 2644) = 4.60$, $p = .003$. This indicated HS reported higher rates of SVI yearly than PS, MS, and COM schools. The post hoc test indicated HS reported more SVI each year followed by MS, PS, and COM.

Regarding the association between school level and DAR each year, PS experienced a mean of 6.44 incidents yearly (SD = 15.95), MS experienced a mean of 20.48 incidents yearly (SD = 44.88), HS experienced a mean of 19.73 incidents yearly (SD = 43.97), and combined schools experienced a mean

of 13.90 incidents yearly (SD = 45.34), $F(3, 2644) = 20.48$, $p < .001$. This indicated MS reported higher rates of DAR yearly than PS, HS, and COM schools. The post hoc test indicated MS reported more DAR each year followed by HS, COM, and PS.

Regarding the association between school size and SVI each year, schools with student populations of less than 300 students experienced a mean of .30 incidents yearly (SD = 1.37), schools with student populations of 300 to 499 experienced a mean of .60 incidents yearly (SD = 3.21), schools with student populations of 500 to 999 experienced a mean of .68 incidents yearly (SD = 2.86), and schools with student populations of greater than 1000 experienced a mean of 1.78 incidents yearly (SD = 6.98), $F(3, 2644) = 13.64$, $p < .001$. This indicated schools with populations of 1000+ reported higher rates of SVI than schools with populations under 1000. The post hoc test indicated schools with populations of 1000+ report higher rates of SVI than schools with populations under 1000.

Considering the association between school size and DAR each year, schools with student populations of less than 300 experienced a mean of 4.35 incidents yearly (SD = 8.62), schools with student populations of 300 to 499 experienced a mean of 7.71 incidents yearly (SD = 12.42), schools with student populations of 500 to 999 experienced a mean of 15.83 incidents yearly (SD = 41.29), and schools with student populations of greater than 1000 students experienced a mean of 27.03 incidents yearly (SD = 51.56), $F(3, 2644) = 38.98$, $p < .001$. This indicated schools with populations of greater than 1000 students reported higher rates of DAR than schools with populations under 1000. The post hoc test indicated schools with populations of 1000+ report higher rates of DAR than schools with populations under 1000.

Concerning the association between school urbanicity and SVI each year, schools in cities experience a mean of 1.49 incidents yearly (SD = 6.25), schools in the suburbs experienced a mean of 1.01 incidents yearly (SD = 4.74), schools in towns experienced a mean of .64 incidents yearly (SD = 2.63), and rural schools experienced .53 incidents yearly (SD = 249), $F(3, 2644) = 5.93$, $p < .001$. This would indicate city schools report higher rates of SVI than schools in the suburbs, towns, or rural areas. Post hoc analysis indicated schools in urban areas reported higher rates of SVI.

The association between school size and DAR each year in cities experienced a mean of 20.88 incidents yearly (SD = 41.45), suburb schools experienced a mean of 18.62 incidents yearly (SD =

51.06), town schools experienced a mean of 12.38 incidents yearly (SD = 25.97), and rural schools experienced a mean of 10.84 incidents yearly (SD = 25.97), $F(3, 2644) = 9.79$, $p < .001$. This would indicate city schools report higher rates of DAR than schools in the suburbs, towns, or rural areas. Post hoc test indicated schools in urban areas reported higher rates of DAR

In summary, post hoc tests indicated that schools with populations over 1000 students, minority populations of 50%, and in the urban areas were the schools with significantly higher reported rates of SVI and DAR incidents. Ranking school levels in order, HS experienced more SVI each year followed by MS, PS, and COM. Ranking school levels in order, MS experiences more DAR each year followed by HS, COM, and PS.

Bivariate Poisson Regression

Using Poisson regression modeling, each intervention within each of the four intervention types (i.e., CC, CTE, RJ/D, and MH) was used to predict reported SVI (Table 12) and DAR events (Table 13). The beta, exponent of beta, 95% confidence intervals, and p values for each intervention category are provided below.

CC and SVI/DAR. Results for four interventions representing CC were significant predictors of higher rates of SVI and include: Prevention Curriculum/Instruction/Training (β = .452, exp(β**)** = 1.571 [95% CI 1.384-1.783 $p < .001$), Teacher Training-Classroom Management (β = .446, exp(β**)** = 1.561 [95% CI 1.397-1.745], $p < .001$), Teacher Training-Discipline Policies (β = .464, exp(β**)** = 1.590 [95% CI 1.454-1.738], $p < .001$), and Teacher Training-Early Warning Signs for Violent Behavior (β = .346, exp(β**)** = 1.413 [95% CI 1.306-1.529], $p < .001$). Schools which reported using these interventions reported mean SVI events as 41% to 59% than schools not reporting implementing these CC interventions. This indicated these four CC interventions were significant predictors of higher levels of SVI. Teacher Training-Positive Behavioral Intervention (β = .081, exp(β**)** = 1.085 [95% CI .987-1.193], p = .93); and Promote Sense of Community/Integration (β = -.021 exp(β**)** = .980 [95% CI .884-1.085], p = .69) were not significant predictors of higher rates of SVI.

Results for four categories representing CC as it related to DAR were significant predictors of higher rates of DAR and included Prevention Curriculum/Instruction/Training (β = .055, exp(β**)** = 1.056 [95% CI 1.028-1.084], $p < .001$), Teacher Training-Classroom Management (β = .220, exp(β**)** = 1.247

[95% CI 1.216-1.178], p < .001), Teacher Training-Discipline Policies (β = .341, exp(β) = 1.407 [95% CI 1.378-1.437], p < .001), Teacher Training-Early Warning Signs for Violent Behavior (β = .059, exp(β) = 1.061 [95% CI 1.041-1.081], p < .001), Teacher Training-Positive Behavioral Intervention (β = .007, exp(β) = 1.007 [95% CI .985-1.030], p = .53), and Promote Sense of Community/Integration (β = .036, exp(β) = 1.036 [95% CI 1.010-1.063], p < .01). Schools which reported using these interventions also reported mean DAR incidents as 25% to 41% more than schools not using these interventions. Results indicated these four CC interventions were significant predictors of higher levels of DAR. Teacher Training-Positive Behavioral Intervention and Promote Sense of Community/Integration were not significant predictors of higher rates of DAR.

CTE and SVI/DAR. The sole intervention representing CTE significantly predicted rates of SVI which was Student Involvement Resolving Problems (β = .159, exp(β) = 1.172 [95% CI 1.084-1.267], p < .001). Schools reporting using Student Involvement Resolving Problems reported 17% higher rates of mean SVI events. Similarly, use of Student Involvement Resolving Problems significantly predicted DAR rates (β = .137, exp(β) = 1.147 [95% CI 1.125-1.168], p < .001). The intervention was a significant predictor of higher levels of DAR. Schools using this intervention reported 14% more DAR events on average than the schools not using this intervention.

RJ/D and SVI/DAR. Results for the interventions representing RJ/D as it related to SVI were School Probation Available (β = .549, exp(β) = 1.732 [95% CI 1.581-1.898], p < .001), Detention/Saturday School Available (β = .633, exp(β) = 1.884 [95% CI 1.667-2.129], p < .001), Loss of Student Privileges Available (β = 1.329, exp(β) = 3.778 [95% CI 2.603-5.483], p < .001), Require Community Service Available (β = .695, exp(β) = 2.005 [95% CI 1.854-2.168], p < .001), and Community Involvement-Juvenile Justice (β =.573, exp(β) = 1.773 [95% CI 1.634-1.924], p < .001). This indicated all RJ/D interventions were significant predictors of higher levels of SVI. Schools using these interventions reported from 77% to more than three times more SVI events on average.

Results for the category representing RJ/D as it related to DAR were School Probation Available (β = .456, exp(β) = 1.577 [95% CI 1.543-1.612], p < .001), Detention/Saturday School Available (β = .792 exp(β) = 2.207 [95% CI 2.139-2.278], p < .001), Loss of Student Privileges Available (β = .347 exp(β) = 1.415 [95% CI 1.338-1.497], p < .001), Require Community Service Available (β = .339 exp(β) = 1.404

[95% CI 1.378-1.431], p < .001), and Community Involvement-Juvenile Justice (β = .342 exp(β**)** = 1.408 [95% CI 1.381-1.435], p < .001). This indicated all RJ/D interventions were significant predictors of higher levels of DAR. Schools using these interventions reported between 41% and more than two times more DAR events on average.

MH and SVI/DAR. Results for the category representing RJ/D as it related to SVI were Behavioral Modification for Students (β = .676 exp(β**)** = 1.965 [95% CI 1.637-2.359], p < .001), Student Counseling/Social Work (β = .585 exp(β**)** = 1.795 [95% CI 1.453-2.217], p < .001), and Community Involvement-Mental Health (β = .533 exp(β**)** = 1.705 [95% CI 1.566-1.856], p < .001). This indicated all MH interventions were significant predictors of higher levels of SVI. Schools using these interventions reported 63% to 70% more SVI events on average.

Results for the category representing MH as it related to DAR were Behavioral Modification for Students (β = .510 exp(β**)** = 1.665 [95% CI 1.598-1.735], p < .001), Student Counseling/Social Work (β = .305 exp(β**)** = 1.357 [95% CI 1.297-1.419], p < .001), and Community Involvement-Mental Health (β = .247 exp(β**)** = 1.280 [95% CI 1.255-1.305], p < .001). This indicated all MH interventions were significant predictors of higher levels of DAR. Schools using these interventions reported 28% to 67% more DAR events on average.

CFA and Factor Scores

Confirmatory factorial analysis (CFA) was performed for the CC model with six items (Table 14) and model fit was supported with a RMSEA value of .076 (90%CI of .065 to .087, CFI = .958, TLI = .930), and a χ^2 value of 145.6 (p < .001). The RJ/D model was supported with five items and model fit was supported with a RMSEA value of .024 (90%CI of .007 to .041, CFI = .988, TLI = .977), and a χ^2 value of 12.4 (p = .03). The MH model used only three items, two of which were reported being utilized by over 90% of schools. A dichotomous variable was then created for MH interventions. Schools reporting implementing all three MH intervention types were dichotomously coded as implementing MH, where 2 or fewer reported mental health services were coded as not implementing MH. A latent variable was not created for CTE as it is a single-item indicator (C0184, Student Involvement Resolving Problems) and remained dichotomously coded.

Bivariate Poisson Latent Variables

Using Poisson regression modeling, latent variables were created utilizing each intervention as they related to the four intervention types (i.e., CC, CTE, RJ/D, and MH) for the purpose of predicting reported SVI and DAR events (Table 15).

CC SVI/DAR. The composite variable CC significantly predicted higher rates of SVI as the positive slope (.137) indicated a positive relationship between CC and SVI (β = .137, exp(β**)** = 1.147 [95% CI 1.116-1.179], p < .001). This indicated that for every one-point increase in CC (each added intervention) the mean SVI rate increases by a factor of 1.147 or 15%. For each additional CC intervention schools reported using, the mean SVI rate was predicted to increase 15%. The composite variable CC significantly predicted higher rates of DAR as the positive slope (.57) indicated a positive relationship between CC and SVI (β = .57, exp(β**)** = 1.059 [95% CI 1.052-1.065], p < .001). This indicates that for every one-point increase in CC (each added intervention) the mean DAR rate increased by a factor of 1.059 or 6%. For each additional CC intervention schools reported, the mean SVI rate was predicted to increase by 6%.

CTE SVI/DAR. CTE significantly predicted lower rates of SVI as the negative slope (-.159) indicated a negative relationship between CTE and SVI (β = -.159, exp(β**)** = .853 [95% CI .789-.923], p < .001). This indicated that for every one-point increase in CTE, the mean SVI rate decreased by a factor of .853 or by 85% on average. This indicated if a school implemented this CTE intervention, there was an associated decrease in mean SVI incidents by 85%.

CTE significantly predicted lower rates of DAR as the negative slope (-.137) indicated a negative relationship between CTE and DAR (β = -.137, exp(β**)** = .872 [95% CI .856-.889], p < .001). This indicated that for every one-point increase in CTE, the mean DAR was predicted to decrease by a factor of .872 or 87% on average. This meant if a school fully implemented the CTE intervention, mean DAR were predicted to decrease by 87%.

RJ/D SVI/DAR. The composite variable RJ/D significantly predicted higher rates of SVI as the positive slope (.422) indicated a positive relationship between RJ/D and SVI (β = .422, exp(β**)** = 1.525 [95% CI 1.469-1.583], p < .001). This indicated that for every one-point increase in RJ/D (each added

intervention) the mean SVI rate increased by a factor of 1.525 or 53%. This means if a school reported using an additional RJ/D intervention, there was an associated SVI increase of 53% on average.

The composite variable RJ/D significantly predicted higher rates of DAR as the positive slope (.280) indicated a positive relationship between RJ/D and DAR (β = .280, exp(β**)** = 1.323 [95% CI 1.312-1.335], p < .001). This indicated that for every one-point increase in RJ/D (each added intervention) the mean DAR rate increased by a factor of 1.323 or 32%. For each additional RJ/D intervention schools reported implementing, mean DAR scores were predicted to increase by 32%.

MH SVI/DAR. MH significantly predicted lower rates of SVI as the positive slope (.470) indicated a positive relationship between MH and SVI (β = .470, exp(β**)** = 1.600 [95% CI 1.496-1.712], p < .001). For every one-point increase in MH the mean SVI rate increased by a factor of 1.600 or 60%. School which reported fully implementing the MH intervention, there was an associated SVI increase of 60%.

MH significantly predicted lower rates of DAR as the positive slope (.244) indicated a positive relationship between MH and DAR (β = .244, exp(β**)** = 1.277 [95% CI 1.258-1.296], p < .001). This indicates that for every one-point increase in MH the mean DAR rate were predicted to increase by a factor of 1.277 or 28%. This meant if a school fully implemented the MH intervention, there was an associated increase of 87% in mean DAR scores.

Bivariate Poisson Dichotomized Covariates

Using Poisson regression modeling, the ability of the dichotomized covariate variables to predict reported SVI and DAR events was tested (Table 16). It was necessary to dichotomize the variables in order to utilize the Poisson regression model efficiently. Results from all covariates (race, urbanicity, level, size) were all significantly associated with the outcomes (SVI and DAR).

Race. The dichotomized race variable was created to distinguish between schools with populations over 50% minority and schools with populations less than 50%. This was done because Table 11 indicates schools with minority percentages of 50% or more have higher rates of SVI and DAR than schools with fewer than 50% minorities.

The dichotomized race variable significantly predicted higher levels of SVI in schools (β = .827, exp(β**)** = 2.286 [95% CI 2.115-2.472], p < .001). This indicated that for every one-point increase in Race, the mean SVI rate was predicted to increase by a factor of 2.286 or more than two times. Basically,

schools with greater than 50% minority population reported a mean SVI score more than two times what was reported by schools with fewer minority students.

The dichotomized race variable significantly predicted higher levels of DAR in schools with minority populations over 50% (β = .729, exp(β**)** = 2.073 [95% CI 2.034-2.112], p < .001). This indicated that for every one-point increase in Race the mean DAR rate increased by a factor of 2.073 or more than two times as likely to have higher levels of DAR.

Urbanicity. The dichotomized urbanicity variable was created to distinguishing between urban schools and schools not urban. This was done because Table 11 indicates urban schools have higher rates of SVI and DAR than schools outside urban areas.

The dichotomized urbanicity variable significantly predicted higher levels of SVI in urban schools (β = .661, exp(β**)** = 1.937 [95% CI 1.790-2.096], p < .001). This indicated that for every one-point increase in Urbanicity, the mean SVI rate was predicted to increase by a factor of 1.937 or 93%. In other words, urban schools reported a mean SVI score 93% higher than what was reported by schools that were not urban.

The dichotomized urbanicity variable significantly predicted higher levels of DAR in urban schools (β = .353, exp(β**)** = 1.423 [95% CI 1.395-1.452], p < .001). This indicates that for every one-point increase in the mean DAR rate in urban schools DAR increased by a factor of 1.423 or 42%. In other words, urban schools reported a mean DAR score 42% higher than what was reported by schools that were not urban.

Level. The dichotomized school level variable was created to distinguishing between middle schools and high schools and those that were not MS and HS. This was done because Table 11 indicates middle schools and high schools have higher rates of SVI and DAR than PS and COM schools. The dichotomized covariate variable Level significantly predicted higher levels of SVI (β = .881, exp(β**)** = 2.414 [95% CI 2.165-2.691], p < .001). This indicated that for every one-point increase in school level, the mean SVI rate was predicted to increase by a factor of 2.414 or two times. Alternatively, MS and HS reported a mean SVI score two times higher than what was reported by PS and COM schools.

The dichotomized school level variable significantly predicted higher levels of DAR (β = .993, exp(β**)** = 2.698 [95% CI 2.625-2.773], p < .001). This indicated that for every one-point increase in school level, the mean DAR rate was predicted to increase by a factor of 2.698 or almost three times.

Alternatively, MS and HS reported a mean DAR score almost three times higher than what was reported by PS and COM schools.

Size. The dichotomized size variable was created to distinguishing between schools with populations over 1000 students from schools with populations less than 1000. This was done because Table 11 indicates schools with populations over 1000 have higher rates of SVI (1.78) and DAR (27.03) than schools with population smaller than 1000.

The dichotomized school size variable significantly predicted higher levels of SVI (β = 1.097, exp(β**)** = 2.995 [95% CI 2.769-3.240], p < .001). This indicated that for every one-point increase in size, the mean SVI rate was predicted to increase by a factor of 2.995 or almost three times. Simply stated, schools with populations over 1000 students reported a mean SVI score almost three times higher than schools with populations under 1000.

The dichotomized school size variable significantly predicted higher levels of DAR (β = .845, exp(β**)** = 2.328 [95% CI 2.285-2.373], p < .001). Results indicated that schools with populations over 1000 students reported significantly higher rates of SVI and DAR. For every one-point increase in size, the mean DAR rate was predicted to increase by a factor of 2.328 or two times. Schools with populations over 1000 students reported a mean DAR score two times higher than schools with populations under 1000.

Multivariate Poisson Regression – Models 2 and 3

Multivariate Poisson regression modeling (Tables 17-22) was conducted to predict which main effects of interventions predicted reports of serious violent incidents (SVI) and disciplinary actions recorded (DAR) in schools, given that the other predictor variables (race, urbanicity, level, and size) in the model are held constant. Models in which an intervention type was used to predict either SVI or DAR while controlling for the four covariates was labeled as “Model 2” for each intervention type (CC, CTE, and MH). Taking that model forward and including schools’ reported use of RJ/D interventions as a predictor was then labeled as “Model 3”. Covariates all significantly predicted increases in SVI and DAR when included in the model with the exception of the model in which CC predicted SVI events (Model 3, Table 17). In this case, the covariates predicted lower rates of SVI. Tolerance scores indicated the absence of multicollinearity in the models (Tables 17-22). This indicates that the covariates are good

predictors of the outcome and not significantly associated with other independent variables in each model. Controlling for the covariates provided a better estimation of the unique contribution of the interventions predicting SVI and DAR events.

Model 2 predicting SVI. Each intervention type (Tables 17-19) significantly predicted increases in SVI controlling for other factors (covariates). CC significantly predicted higher rates of SVI as the positive slope (.091) indicated a positive relationship between CC and SVI (β = .091, exp(β**)** = 1.095 [95% CI 1.066-1.125], p < .001). This indicates that for every one-point increase in CC, the mean SVI rate increased by a factor of 1.095 or 10% after controlling for the four covariates.

Controlling for other factors (covariates), MH significantly predicted higher rates of SVI as the positive slope (.831) indicated a positive relationship between MH and SVI (β = .831, exp(β**)** = 2.295 [95% CI 1.834-2.872], p < .001). This indicated that for every one-point increase in MH, the mean SVI rate increased by a factor of 2.295 or two times.

Controlling for other factors (covariates), CTE significantly predicted lower rates of SVI as the negative slope (-.057) indicates a negative relationship between CTE and SVI (β = -.057 exp(β**)** = .945 [95% CI .873-1.023], p < .001). This indicated that for every one-point increase in CTE, the mean SVI rate decreased by a factor of .945 or 95%.

Even though the predictive power of CC is low in this model, CC cannot be totally dismissed as a significant predictor. MH and CTE interventions were significant predictors in this model indicating use of either intervention significantly predicted higher levels of SVI when using mental health interventions and lower levels of SVI using CTE interventions. This indicates that the use of students in addressing SVI was a significant predictor of SVI.

Model 2 predicting DAR. Each intervention type (Tables 20-22) significantly predicted DAR controlling for other factors (covariates). CC significantly predicted higher rates of DAR as the positive slope (.025) indicated a positive relationship between CC and DAR (β = .025, exp(β**)** = 1.025 [95% CI 1.019-1.032], p < .001). This indicated that for every one-point increase in CC, the mean DAR rate increases by a factor of 1.025 or 3%.

MH significantly predicted higher rates of DAR as the positive slope (.390) indicated a positive relationship between MH and DAR (β = .390, exp(β**)** = 1.477 [95% CI 1.413-1.543], p < .001). This

indicated that for every one-point increase in MH, the mean DAR rate increases by a factor of 1.477 or 48%.

CTE significantly predicted lower rates of DAR as the negative slope (-.048) indicates a negative relationship between CTE and DAR (β = -.048 exp(β**)** = .953 [95% CI .935-.971], p < .001). This indicated that for every one-point increase in CTE the mean DAR rate decreases by a factor of .953 or 95%. As with SVI, this model predicted lower levels of DAR using CTE interventions when controlling for the covariates. This would indicate that schools using CTE interventions experience lower rates of DAR. Further, this model indicates that schools using CC, RJ/D, and MH experience higher rates of SVI and DAR.

To a lesser degree, CC was less of a predictor for DAR than SVI. Still there was evidence of slight predictive power, MH and CTE interventions are significant predictors in this model indicating use of either intervention can significantly predict higher levels of DAR when using mental health interventions and lower levels of DAR using CTE. This indicated that the use of students in addressing DAR was a significant predictor of DAR.

Model 3 predicting SVI. Controlling for the covariates, schools' reported use of RJ/D was included in each model (Tables 17-19) and significantly predicted SVI controlling for other factors (covariates). CC significantly predicted higher rates of SVI (Model 3, Table 17) as the positive slope (.072) indicated a positive relationship between CC and SVI (β = .072, exp(β**)** = 1.074 [95% CI 1.046-1.103], p < .001). This indicated that for every one-point increase in CC the mean SVI rate increased by a factor of 1.074 or 7% controlling for other variables in the model. Further, controlling for the covariates and CC, RJ/D was a significant predictor in the model (β = .279, exp(β**)** = 1.322 [95% CI 1.270-1.377], p < .001). For every one-point increase in RJ/D, indicating schools' reported usage of an additional RJ/D intervention, mean SVI rates were predicted to increase by 32.2% after controlling for CC and the covariates in the model.

MH significantly predicted higher rates of SVI (Model 3, Table 18) as the positive slope (.753) indicated a positive relationship between MH and SVI (β = .753, exp(β**)** = 2.123 [95% CI 1.696-2.657], p < .001). This indicated that for every one-point increase in MH, the mean SVI rate increased by a factor of 2.123 or was more than two times controlling for other variables in the model. Further, controlling for the

covariates and MH, RJ/D was a significant predictor in the model (β = .282, exp(β**)** = 1.326 [95% CI 1.273-1.380], p < .001). For every one-point increase in RJ/D, indicating schools' reported usage of an additional RJ/D intervention, mean SVI rates were predicted to increase by 32.6% after controlling for MH and the covariates in the model.

CTE significantly predicted lower rates of SVI (Model 3, Table 19) as the negative slope (-.115) indicated a negative relationship between CTE and SVI (β = -.115 exp(β**)** = .891 [95% CI .823-.965], p < .001). This indicated that for every one-point increase in CTE, the mean SVI rate decreased by a factor of .891 or 89%. CTE significantly predicted lower rates of SVI in this model. This indicated that schools using CTE as an intervention reported lower levels of SVI controlling for other variables in the model. Further, controlling for the covariates and CTE, RJ/D was a significant predictor in the model (β = .297, exp(β**)** = 1.346 [95% CI 1.293-1.402], p < .001). For every one-point increase in RJ/D, indicating schools' reported usage of an additional RJ/D intervention, mean SVI rates were predicted to increase by 34.6% after controlling for the CTE intervention variable and the covariates in the model.

Model 3 predicting DAR. Controlling for the covariates, schools' reported use of RJ/D was included in each model (Tables 20-22) and significantly predicted DAR controlling for other factors (covariates). CC significantly predicted higher rates of DAR (Model 3, Table 20) as the positive slope (.072) indicated a positive relationship between CC and DAR (β = .072, exp(β**)** = 1.074 [95% CI 1.046-1.103], p < .001). This indicated that for every one-point increase in CC the mean SVI rate increased by a factor of 1.074 or 7% controlling for other variables in the model. Further, controlling for the covariates and CC, RJ/D was a significant predictor in the model (β = .126, exp(β**)** = 1.135 [95% CI 1.124-1.145], p < .001). For every one-point increase in RJ/D, indicating schools' reported usage of an additional RJ/D intervention, mean DAR rates were predicted to increase by 13.5% after controlling for the CC intervention variable and the covariates in the model.

MH significantly predicted higher rates of DAR (Model 3, Table 21) as the positive slope (.355) indicated a positive relationship between MH and DAR (β = .355, exp(β**)** = 1.426 [95% CI 1.365-1.490], p < .001). This indicated that for every one-point increase in MH, the mean DAR rate increased by a factor of 1.426 or 43% controlling for other variables in the model. Further, controlling for the covariates and CC, RJ/D was a significant predictor in the model (β = .124, exp(β**)** = 1.132 [95% CI 1.121-1.142], p < .001).

For every one-point increase in RJ/D, indicating schools' reported usage of an additional RJ/D intervention, mean DAR rates were predicted to increase by 13.2% after controlling for the MH intervention variable and the covariates in the model.

CTE significantly predicted lower rates of DAR (Model 3, Table 22) as the negative slope (-.074) indicated a negative relationship between CTE and DAR (β = -.074 exp(β**)** = .929 [95% CI 9.11-.947], p < .001). This indicated that for every one-point increase in CTE the mean DAR rate decreased by a factor of .929 or 93% controlling for other variables in the model. Further, controlling for the covariates and CC, RJ/D was a significant predictor in the model (β = .133, exp(β**)** = 1.142 [95% CI 1.131-1.153], p < .001). For every one-point increase in RJ/D, indicating schools' reported usage of an additional RJ/D intervention, mean DAR rates were predicted to increase by 14.2% after controlling for the CTE intervention variable and the covariates in the model. As with SVI, this model predicted lower levels of DAR using CTE interventions when controlling for the covariates. This would indicate that schools using CTE interventions experience lower rates of DAR.

The models labeled as "Model 3" for each intervention had predictive power is similar to the "Model 2" predictive power. With the exception of CTE, models significantly predict high levels of SVI and DAR. Both models significantly predict lower levels of SVI and DAR when CTE interventions are used. It is interesting that of all the interventions, only CTE significantly predicts lower levels of SVI and DAR.

Multivariate Poisson Regression - Interactions

From Tables 17-22, each Model 4 provides the results after including the interaction term for each intervention and RJ/D with each intervention type and covariates as tested in Model 3 for each outcome. The interaction terms indicate schools report using of one of the primary interventions (CC, CTE, and MH) and reported use of RJ/D.

The CC*RJ/D interaction term for schools reporting both CC and RJ/D significantly predicted higher reported rates of SVI (β = .108 exp(β**)** = 1.114 [95% CI 1.089-1.141], p < .001). This indicated that schools using CC and RJ/D together reported significantly higher rates of SVI (Model 4, Table 17). The MH*RJ/D interaction term for schools reporting both MH and RJ/D significantly predicted higher rates of SVI (β = .102 exp(β**)** = .840 [95% CI .674-1.049], p < .001). This indicated that schools using MH and RJ/D together reported significantly higher rates of SVI (Model 4, Table 18). The CTE*RJ/D interaction

term for schools reporting both CTE and RJ/D significantly predicted lower rates of SVI (β = -.304 exp(β**)** = .738 [95% CI .683-.796], p < .001). This indicated that schools using a combination of CTE and RJ/D interventions reported significantly lower rates of SVI (Model 4, Table 19).

Each intervention type (Model 4, Table 20-22) significantly predicted DAR controlling for other factors (covariates). CC*RJ/D interaction term for schools reporting both CC and RJ/D significantly predicted higher reported rates of DAR (β = .009 exp(β**)** = 1.003 [95% CI 1.003-1.014], p < .001). This indicated that schools using CC and RJ/D together reported significantly higher rates of DAR (Model 4, Table 20). MH*RJ/D interaction term for schools reporting both MH and RJ/D significantly predicted lower rates of DAR (β = -.062 exp(β**)** = .940 [95% CI .923-.957], p < .001). This would indicate that schools using MH and RJ/D together reported significantly lower rates of DAR (Model 4, Table 21). CTE*RJ/D interaction term for schools reporting both CTE and RJ/D was significant and predicted higher reported rates of DAR (β = .065 exp(β**)** = 1.067 [95% CI 1.049-1.086], p < .001). This would indicate that schools using a combination of CTE and RJ/D interventions reported higher levels of DAR (Model 4, Table 22).

As it relates to SVI, results indicated above show that culture change interventions and mental health interventions individually predicted lower rates of SVI. The combination of conflict transformation education and restorative justice/discipline interventions together predict lower rates of SVI. As it relates to DAR, results indicated above show that culture change interventions and conflict transformation education interventions individually predicted lower rates of DAR. The combination of mental health and restorative justice/discipline interventions together predicted lower rates of DAR.

Summary of Findings

Findings generally were demonstrated increased reported use of interventions were associated with greater reported rates of both SVI and DAR. Schools reported levels of SVI and DAR varied by school characteristic including school level, size, minority population, and urbanicity. When controlling for these factors, reported rates of SVI and DAR were higher among schools reporting greater use of interventions designed to reduce such events. However, schools which reported using both CTE and RJ/D together reported significantly lower rates of SVI. This indicated that schools using CTE and RJ/D in conjunction with each other could experience lower levels of SVI. Finally, schools which reported using both MH and RJ/D together reported lower rates of DAR. This indicated that schools using MH and RJ/D

in conjunction with each other could experience lower levels of DAR. Schools implementing either MH or CTE coupled with RJ/D interventions might then report experiencing lower levels of SVI and DAR.

Chapter VII

Discussion

This study is unique in its approach to analyzing the main effect and interaction effect of multiple interventions predicting the number of serious violent incidents and total number of disciplinary actions recorded in schools within a nationally representative sample of schools. It is the first study of its kind indicating if currently used interventions predicted school violent incidents and disciplinary actions through school culture change and use of multiple interventions. This analysis provides preliminary findings that inform school social work and establishes a foundation for future studies of violence reduction in schools and society by the possibility of using multiple interventions.

This chapter summarizes the findings beginning with the schools' reported use of interventions to reduce school violence. Second, an understanding of the relationship between culture change, conflict transformation education, restorative justice/discipline, and mental health service use compared to school's characteristics. Third, using the interventions compared to the to school's characteristics is explored. Forth, a discussion of the number of serious violent incidents and total number of disciplinary actions recorded in schools in relation to the covariates is presented. Finally, a rationalization of which interventions are significant predictors of outcomes is postulated. Limitations of the current study and findings are also discussed here.

School Characteristics

Degree of intervention use. Each of the intervention categories (CC, CTE, RJ/D, and MH) is identified by at least one category component (represented by the variables) as an intervention used by over 80% of the schools in this study. This would indicate these are proper variables for study. Regarding both DAR and SVI, five culture change interventions are most commonly used to reduce violence in schools, including 1) teacher training in problem behavior, 2) promote a sense of community, 3) provide prevention curriculum, instruction, and training, 4) teacher training of early warning signs, and 5) teacher training in classroom management. Most schools promote the use CTE through students resolving problems and RJ/D by promoting the loss of student privileges. MH is represented through offering student counseling/social work services and behavior modification treatment. Schools that use these interventions typically reported less than eighteen DAR and less than one SVI each year. Two additional

interventions were also found to be common among schools, including Saturday detention availability and school probation. Both of these interventions are considered RJ/D interventions. These results were expected and popularity of one intervention over another appears not to be significant

School characteristics and interventions. As expected, schools with a larger minority population have higher DAR and SVI. This is likely due to the socioeconomic risk factors associated low income minority dominated schools (Chambers & Huggins, 2014). Of the top ten interventions utilized by all schools, schools with minority populations less than 50% were observed to be less likely to use CC, CTE, RJ/D, and MH interventions than schools with minority populations greater than 50%. This was not unexpected as Neiman et al. (2015) also found that schools with smaller minority populations use fewer interventions. As Harris (2007) posits, schools with greater minority populations have more disciplinary problems that are tied to socioeconomic conditions, abuse, neglect, and environmental factors such as gangs. Urban schools tend to be minority dominant and poverty among urban schools is common (Vega, Moore, & Miranda, 2015; Chambers & Huggins, 2014; and Dymnicki, Weissberg, & Henry, 2011). This could explain the difference in intervention use between higher and lower minority populated schools as use is based on need.

Schools with minority populations greater than 50% were less likely to use community juvenile justice, Saturday school detention, prevention curriculum/instruction/training, and student counseling/social work intervention to reduce school violence. Literature provides no explanation why these interventions are not as widely used. Perhaps there is little support for community juvenile justice, limited resources could prohibit the use of Saturday detention, perhaps low academic scores require more attention to basics, and it is understandable that social workers are busy attending to immediate needs and have little time for prevention. Schools with minority populations of 50% or greater have between 7.3% and 21.2% higher DAR and SVI than schools with lesser minority populations. Perhaps a greater use of lesser used interventions may benefit large minority schools.

Regarding urbanicity, the mostly commonly reported interventions in the cities, towns, and rural school districts were RJ/D and CTE. In the suburbs, CTE was the mostly commonly reported intervention used in schools. This is surprising as many studies indicate inconclusive results using CTE (Hall & Bacon, 2005; de Anda, 1999). Still, CTE is not one of the most prevalent interventions in town or rural schools in

the study. Additionally, teacher training in early warning signs of violence and the promotion of a sense of community/integration were not common interventions used in towns and rural schools in the study. In all urbanicities, classroom management and behavior modification were prevalent interventions. Overall, a mix of all fifteen intervention components representing CC, CTE, RJ/D, and MH were utilized in all urbanicities. This was not surprising as numerous studies indicate these interventions are shown to be effective individually (Hall & Bacon, 2005; Flannery, Fenning, Kato, & McIntosh, 2014; Massey, Boroughs, & Armstrong, 2007; Pavelka, 2013). Further, MH interventions were used most often in the study followed by CC, RJ/D, and CTE interventions.

Concerning school size, school population was a factor in intervention use as large schools used the interventions discussed in this study. Additionally, while schools with populations over 1000 utilize components of RJ/D, community involvement of juvenile justice and a requirement for community components were not utilized often. Morrison and Vaandering (2012) posits that the focus is on the school community and not the community at large and suggests the possibility that other RJ/D components are more successful in reducing violence.

A review of grade levels indicated a mix of all fifteen intervention components representing CC, CTE, RJ/D, and MH were utilized at all school levels. Additionally, MH interventions were used most often followed by CC, RJ/D, and CTE interventions. PS tended to use RJ/D less than MS, HS, and COM schools in the study. In contrast, HS and COM schools use RJ/D more than PS and slightly more than MS (Scheckner & Rollin, 2003). According to Dymnicki, Weissberg, and Henry (2011), this may have been due to the perception that RJ/D is inappropriate for the lower grade level and may not be an issue considering PS were shown to have lower levels of DAR and SVI. This study confirmed lower levels of SVI and DAR in PS and a mixture of interventions was used at all grade levels.

School characteristics and outcomes. Previous studies indicate school level, size, urbanicity, and minority percentage are good measures that can predict higher levels of discipline management and lower rates of student delinquency (Dinkes, Kemp, & Baum, 2010, Gottfredson, et al. 2004). It has been demonstrated that the interventions in this study were widely used by schools in this sample. The least used intervention was the requirement for community service, yet this intervention was used by no less than 38% of the schools in the sample. It is surprising that more schools do not utilize community

resources because this aspect of reducing violence in schools is critical (Sprague, Nishioka, & Smith, 2007; Mattaini, & McGuire, 2006).

This study supported findings from prior research that PS and COM schools have fewer SVI and DAR than MS and HS (Neiman et al., 2015). Schools with populations of less than 1000 reported fewer SVI and DAR compared to schools with greater populations (Neiman et al.). Town and rural schools have fewer SVI and DAR than urban and suburban schools and schools with minority populations less than 50% reported fewer SVI and DAR each year than schools with minority populations greater than 50% (Neiman et al., 2015). Understanding the demographics of the schools reporting fewer SVI and DAR, we begin to see slight patterns in the combination of interventions that predict SVI or DAR in schools. This is discussed in the next section.

Interventions and School Violence Outcomes

Interventions and outcomes. Each culture change, conflict transformation education, restorative justice/discipline, and mental health services variables were hypothesized to predict lower total number of serious violent incidents and disciplinary actions in schools. Furthermore, it was hypothesized there would be a significant interaction effect between restorative justice/discipline and each culture change, conflict transformation education, and mental health services variables predicting the number of serious violent incidents and disciplinary actions recorded. The analyses were expected to identify those interventions or combination of restorative justice/discipline with other interventions predicting schools' lower levels of reported violence problems.

CTE and RJ/D outcomes. CTE and RJ/D had positive main effects and interaction when compared with the other interventions. The reported use of the CTE intervention was associated with lower SVI and DAR rates, even after controlling for school characteristics. Furthermore, the interaction effect of CTE with RJ/D significantly predicted lower reported SVI rates. As it relates to CTE, when attitudes and actions of everyone from administration to the child are observed through positive responses, appropriate outcomes follow (Daunic, Smith, Robinson, Landry, & Miller, 2000). Through modeling (changes derived from observing people) and observational learning (acquisition of new behaviors demonstrated through modeling) people can learn new behaviors and understand the consequences of their actions (Schunk, 2000). This was demonstrated with CTE which aims to create a

positive effect on a participant's future behavior through learning to apply positive behavior skill in future conflicts and creating a school culture of student centered problem solving (Daunic, Smith, Robinson, Landry, & Miller, 2000; Schunk, 2000).

Engaging schools using CTE has worked in numerous states and internationally with current partners in over 20 school districts across the United States reaching 4,000 teachers and over 120,000 students (Engaging Schools, 2015). Teachers indicate that when they have to deal with student social and development needs, it comes at the expense academics and CTE seems to be an effective way to remedy student's social deficiencies (Cohen, 2005).Further, teachers see value in training students to help each other in other areas such as counseling, tutoring, mentoring, and helping younger peers transition to upper grades. The growth of CTE has helped educators, parents, and school committee members become receptive to CTE.

According to Cantrell, Parks-Savage, and Rehfuss (2007), CTE programs decrease school wide violence. This outcome was observed in other studies and countries, such as in the Turkish study where some observed over 94.9% of conflicts were resolved successfully following introduction of CTE (Turnuklu, Kacmaz, Sunbul, and Ergul, 2010). In a southern state in the United States, reductions in the number of in-school suspensions, out-of-school suspensions, expulsions, and number of disciplinary actions was reduced when utilizing CTE (Wilson, 1998). Kasil and Kumcagiz (2014) indicate that developing skills in conflict resolution could prevent student violence. Finally, the number of student conflicts and average time-off teaching to manage conflict decreased significantly in the classroom through utilization of CTE processes (Hart & Gunty, 1997).

Even though longitudinal research is needed to better understand the interaction involving CTE and RJ/D, the results indicate schools utilizing these interventions have fewer incidents of SVI and DAR. Together, CTE and RJ/D are significant predictors in schools reporting fewer SVI problems and CTE separately was a significant predictor of both SVI and DAR.

MH, RJ/D, and outcomes. Schools that combine mental health services and RJ/D were found to report fewer DAR problems. The MH program works to prevent youth violence and substance use in schools and communities while promoting and improving student access to mental health services (Harris, McFarland, Siebold, Aguilar, & Sarmiento, 2007; Massey, Boroughs, & Armstrong, 2007;

Sprague, Nishioka, & Smith, 2007). The program recognizes that schools alone cannot respond effectively to violence, substance use, untreated mental illness, and a broad range of antisocial behaviors (Massey, Boroughs, & Armstrong, 2007). Therefore, MH works to strengthen the role of schools as healthy learning environments that support the academic, social, and emotional growth of students in a collaborative approach among schools and other youth-serving organizations in the community (Sprague, Nishioka, & Smith, 2007). What this means is that through a combination of in-house MH services and community mental health services, schools receive valuable help (Harris, et al., 2007). Even though MH significantly predicts lower rate of SVI, the hypotheses were not supported by the results. Mostly, Poisson regression modeling indicated that schools' increased reporting of using MH were associated with increased reports of school violence problems. This could have been due to school social workers having difficulty establishing formal and informal power bases within the school and lack legitimacy as conduits of enacting systemic change (Altshuler & Webb, 2009). Further, MH was difficult to measure as virtually every school uses some form of MH (93%).

CC, RJ/D, and outcomes. CC and RJ/D were significant predictors of higher rates of SVI independently. In other words, controlling for all other factors, CC was a significant predictor of higher rates of SVI, and controlling for all other factors RJ/D, was a significant predictor of higher rates of SVI. CC was not a significant predictor of lower rates of DAR. Essentially, these hypotheses were not supported by the results. Poisson regression modeling indicating that schools' increased reporting of using these interventions was associated with increased reports of school violence problems. While CC is considered weak environmental Tier I intervention, CC is a supported framework aimed at altering the school environment through improved systems, decision making, and implementation of evidence-based practices (Bradshaw, Waasdorp, & Leaf, 2015). This whole-school strategy applies behavioral, social learning, and organizational principles consistently across all school contexts in order to prevent disruptive behavior and enhance the schools' organizational climate (Bradshaw, Waasdorp, & Leaf, 2015). Possible explanations for these results are discussed below.

Environment, Student, Tiers

As mentioned, three paradigms define levels of behavior for intervention; Universal (Tier I) behavior interventions promote pro-social behavior among all students; Targeted (Tier II) behavior

interventions are intended for students at risk for developing serious problematic behavior; and intensive (Tier III) behavior interventions aim to support students who engage in serious challenging behavior that has not responded to other efforts (Boyd, & Anderson, 2013). Results do not indicate a need for change in the tier level approach to violence reduction; however, SCT indicates that these tier levels are appropriate if a positive approach is used to maximize positive reinforcement, build self-efficacy, and considers the effect of the environment on the problem.

Limitations and Explanations

This study offers a secondary data analysis regarding the main effects and interactions between RJ/D and each CC, CE, and MH as predictors of violence reduction in primary and secondary education. Conducting secondary analysis has its own set of limitations and advantages. Still, secondary data analysis can provide rich, worthwhile data and establish a foundation for future studies. The advantage of this study is reflected in the large sample size, cost effectiveness, and the reputation of the data provider (NCES). While the disadvantages are minimized, they are worth noting for study integrity.

It should be noted that the researcher was not a participant in the data collection process and as such did not have an opportunity to contribute to the study process. Still, the data is nationally recognized as high quality (Neiman et al., 2015). Specific racial information was to percentage of minority students and thus created a limitation in this study. It would have been beneficial to understand the data as it relates to African Americans, Hispanics, Asians, and Whites.

Ultimately, richer information would have been desirable. At the time of publication, the data used for the study (2009-2010 school year) was the most recent public data available. More recent data would have been preferred and therefore the data used could be considered outdated and considered a limitation. Another limitation is the possibly skewed dichotomous IVs (range of “yes”), could have skewed summary variables for each intervention (latent variables). Still, as Poisson regression is specifically designed to account for skewed data, it is likely skewedness had a marginal effect on the latent variables.

As this was a correlational study between variables, no establishment of causation can be claimed. Future longitudinal research and measurement of SVI and DAR events would be better suited for testing causality and perhaps establishing a level of causality. In addition, some explanations for why the results turned out as they did (i.e., many interventions predicted higher levels of school violence)

could also be seen as limitations to the study. Six possible explanations are discussed here and represent limitations in the findings of the current study.

Explanation 1: Correlational analyses and causality. The study was correlation in nature and therefore unable to establish a causal relationship between schools reporting using interventions and reported rates of SVI and DAR. It is also possible that schools using these interventions are reacting to problems that exist as opposed to utilizing these interventions as preventive measures. This would not be accounted for in the analyses or dataset.

Explanation 2: Harm. The interventions utilized by schools and studied in this analysis could be causing harm to the participants such that increased use of interventions addressing school violence contributed to increased problems. However, this is highly unlikely considering the interventions in this analysis have been studied extensively and evidence indicates their efficacy in reducing school violence (SEE, Bradshaw & Waasdorp, 2015; Massey, Boroughs, & Armstrong, 2007; Scheckner & Rollin, 2003).

Explanation 3: Timing and longitudinal data. A possible explanation might be the timing of the interventions, the timing of their implementing within individual schools, and the lack of longitudinal data. From the data reported in the national dataset, information was not collected on how and when schools implemented these interventions. Analyses were not able to account for the timing of a school's use of an intervention and the reported rates of SVI and DAR. It is possible that schools that began an intervention several years prior to the data collection might have demonstrated greater effects on the rates of SVI and DAR. Unfortunately, this was not collected in the dataset and subsequently accounted for in the data and in the analyses.

Explanation 4: Fidelity and resources. Schools reported prevalent use of interventions across the four intervention types. A vast majority of schools reporting using at least one type of intervention (96%). However, the schools' fidelity to these intervention strategies was not assessed nor was the schools' or teachers' commitment to the intervention. Fidelity could be very low as schools attempt to incorporate the interventions in the school system short term when long term implementation yields more positive results (Thompkins, Chauveron, Harel, Perkins, 2014; Sorlie, & Ogden, 2007; Schroeder, et al., 2012). Schools may lack resources to implement a school violence reduction fully, or lack commitment from faculty and staff in order to obtain full benefit from the intervention.

Explanation 5: Teacher and system awareness of issue. Training faculty and staff in schools on the issue of school violence and its reduction might have increased their awareness of the issue and their reporting of the problem. Schools reporting using certain interventions might have inadvertently increased their reporting of violent events. A poorly organized and implementing intervention in schools might increase reporting of violent events without creating any meaningful change in their frequency.

Explanation 6: Community. Feasibly, the issues mentioned are only part of the problem. Perhaps the student environment outside the schools is the main issue. The evidence in this study provides at least some support that schools are working internally to address the problem; however, the student in the environment perspective could explain why the interventions only provide for a 30% reduction of SVI and DAR (Mayer, 2002). Significant family problems, poverty, gang activity, or other system and community issues could extend into the schools forcing schools to react to the problems. In fact, problems experienced by children do not stop at the school doors and may influence the whole school environment. This is reasonable considering the interventions used in schools are not designed to affect every non-school system or the community environment. They address the internal issues schools face every day. Schools addressing SVI and DAR might possibly ignore the evidence that a much broader approach that includes the community is needed (Ansary, Elias, Greene, & Green, 2015; Teasley, 2014; Robles-Piña, & Denham, 2012).

Explanation 7: Awareness

As behavioral interventions are introduced, an increase in problem behaviors could occur as an immediate and short-term response to a newly implemented treatment (Sugai & Horner, 2002). In other words, similar to the increased awareness by teachers increases reports of problems, attention to the problem could increase a negative increased response by the students.

Future Research

The good news is that schools appeared to be putting forth effort to reduce school violence, yet more research is needed. Specifically, quasi-longitudinal and experimental longitudinal studies are needed. Even though results in this study indicated combining interventions predicted lower rates of SVI and DAR, individually, each intervention is effective at some level. More longitudinal research is needed to determine if the interaction of these variables working together reduce rates of SVI and DAR. It should be noted that

socioeconomic status could also have predictive qualities and should be evaluated as an additional covariate in future studies.

Future research should work to measure the extent to which the combinations of interventions effect the reduction of violence in schools. Experimental studies will explore the potential utility of conducting multilevel research that combines culture change strategy, CTE (Tier I), RJ/D (Tier II), and/or MH (Tier III) interventions to reduce violence, reduce reports of violence, suspension reduction, decrease absenteeism, and increase academic achievement. To strengthen rigor and validity, project studies should be longitudinal experimental in design utilizing multiple school districts and schools selected randomly. Multiple schools could be randomly assigned to receive culture intervention, restorative discipline intervention, peer mediation intervention, and mental health intervention individually while several schools could be randomly selected to incorporate all interventions simultaneously. Extensive longitudinal study is needed across school districts, schools, and across various demographic variations.

The next steps should go beyond violence reduction working toward determining if violence can be eliminated and advocating for policies that ensure diligence is given to violence reduction efforts. We do not know if utilizing multiple interventions can eliminate school violence. Therefore, testing the possibility of eliminating school violence using multiple interventions is a logical next step.

As mentioned, the researcher was not a participant in the data collection process. While this is not necessarily a disadvantage to collect data on a national level, more individualized studies by region could produce more detailed information to determine if and why different areas of the country use specific interventions. Regional studies may provide the researchers with an ability to ask follow-up questions to clarify information.

Similarly, specific racial information such as the distinction between African American, Hispanic, and Asian populations was restricted. Only information regarding the percentage of minorities was available for this study. Regional data related to race may be easier to acquire and should also be a focus of future research.

Because specific interventions were not identified in the data collection process nationally, variables had to be chosen that represent the CC, CTE, RJ/D, and MH interventions in this study. The collection of regional data specifically identifying the intervention or interventions used in the schools

would have provided more precise results. Future studies should be more specific in identifying evidence based interventions and their implementation in schools.

Implications for Theory

Theory helps us to understand, explain, and predict a phenomenon of interest and helps us to make sense of a phenomenon and surmise a likely future under similar circumstances (Haugh, 2012). Knowing the theory that best explains and predicts behavior can help school social workers design specific processes to include the community and combine interventions in this study effectively. As it relates to violence reduction in schools, Social Cognitive Theory (SCT) would appear to explain student behavior and functioning through the response received, self-efficacy, and environmental influences, which suggest that students can learn proper behavior when basic experiences of symbolization, forethought, vicariousness, self-regulation, self-reflection, and plasticity work are demonstrated as suggested by SCT. Further, learning occurs through performing responses and experiencing their effects and/or observing other people's behavior and its consequences for them.

Through SCT, the capacity to learn by observation provides many opportunities for students to learn behaviors that generate positive outcomes and helps students learn how to regulate behavior avoiding disciplinary consequences. Regulating behavior is specifically relevant because the interventions discussed in this study provide learning experiences that teach students behavior regulation. As Bandura (1986) suggests, student thought and conduct can be fashioned through experience allowing proper behavior to manifest. Behavior change will occur because the combination of genetic factors with experimental and physiological factors are shown to determine positive behavior traits.

It would be difficult to teach cultural practices to students without the benefit of models to exemplify the ideas of culture change because many skills can only be mastered through modeling the actions of others and practicing the proper behavior. Modelling suggested through SCT presents opportunities for developing symbols for transforming transient experiences into guidelines for future action giving meaning, form, and continuance to lived experiences as posited by Bandura (1986) and demonstrated through CC, CTE, RJ/D, and MH interventions.

Modeling demonstrated through interventions in this study also provides an opportunity to understand the consequences of actions and supports utilization forethought, which motivates students

and guides their anticipatory action. Forethought imparts students with self-regulatory capabilities, which motivates them towards regulating internal standards and self-evaluated reactions to actions as suggested by Bandura (1986). The idea is as we adopt personal standards and identify discrepancies between performance and outcome, self-evaluation and self-directedness influences future behavior.

Through opportunities to demonstrate self-reflection utilizing study interventions, students can derive generic knowledge about themselves and the world, evaluate and alter their own thinking, monitor their ideas, act on them, or predict occurrences from them, and judge the adequacy of their thoughts from the results affording an opportunity to change those thoughts accordingly (Bandura, 1986). Additionally, social cognitive theory (SCT) suggests learning occurs if there is close identification between the observer and the model and if the observer has a good deal of self-efficacy. The interventions in this study are specifically designed to give students direct access and participation in behavior correction. Direct participation imparts high self-efficacy, helping students to believe they can master challenging problems recovering quickly from setbacks and disappointments. Students with low self-efficacy are less confident and have difficulty believing they can perform well, which leads them to avoid challenging tasks and possible delinquent behavior. Therefore, self-efficacy plays a central role in behavior performance, and can be reinforced through the interventions in this study. Proper behavior observed through CC, CTE, RJ/D, and MH could encourage higher levels of student self-efficacy and predict socially acceptable positive behaviors. As SCT appears to explain positive behavior outcomes supported by culture change combined with CTE, RJ/D, and mental health services interventions, using SCT to guide future research would be justified.

Implications for Policy

Findings indicate schools with 50% minority or higher have more SVI and DAR. Similarly, inner-city schools with populations of 1000 plus students in middle and high schools have more SVI and DAR. This could be due to SES levels in specific geographic areas as research indicates large inner-city middle schools and high schools have more problems because these areas tend to have higher poverty level populations (Cullen, & Agnew, 2006). With this understanding, legislative policies should focus on the steps needed to reduce poverty in these areas and appropriate more funds toward reducing school

populations by building more schools. Additionally, more funding is needed to address the problems in middle schools and high schools.

With concerns for reducing violence in schools continuing, social workers, researchers, and policymakers continually search for answers to what works best. There is likely a need to organize local practices through a centralized body. The adoption of policies promoting the use of the community and CTE and RJ/D processes would be beneficial based on the results. A first step would include an assessment of the community influence and these processes at the local and state level is necessary for eliciting further statutory support. In addition, school social workers should engage legislators and organizers to support advocacy efforts espousing how legislative and policy support could further positive outcomes. School social workers could be an effective force for encouraging policy change through the support of community advocacy coalitions, interest groups, and lobbyist that can influence policymakers. Further, school social workers should select legislative sponsors with a personal commitment to violence reduction, has a track record of building collaboration with legislators, school boards, community groups, and advocacy organizations.

Policymakers and advocates should develop legislation which offers structure and support for intervention practices in the school systems limiting local control. Successful policies can provide opportunities and incentives for CTE, and RJ/D processes by possibly mandating their use. Additionally, data collection requirements should be established, appropriations for fiscal support through grant programs should be initiated, minimum training requirements for school representatives, and utilization of licensed school social workers should be funded. Finally, allowances should be made for utilizing volunteer community resources.

The restructuring will require a commitment at all levels, including district officials, teachers, principals, professional associations, school boards, universities, parents, citizens, members of the community, and state and federal officials. The idea is to support a change strategy by allocating local, state, and federal funds to support school efforts in achieving positive violence reduction outcomes. It may be possible to establish centers of educational assistance through state universities and interested private universities. High-risk schools with high percentages of economically disadvantaged students could be given priority for assistance.

Policymakers could have a strong influence reducing violence in our schools through support for the use of multiple interventions shown to be effective in this study. The interventions in this study provide support the implementation of policy that affirms the right of all students to feel safe at school, promotes a supportive school environment, includes the whole school community, and ensures professional development in creating a safe and supportive school environment. Furthermore, implementation of policy that provides opportunities for students to learn through the formal curriculum the knowledge, skills, and dispositions for positive relationships, commitment to prevention/intervention, ensures evidence-based practice supports decisions, and works to protect children from all forms of abuse and neglect is supported by this study (Cross, Epstein, Hearn, Slee, Shaw, & Monks, 2001).

Implications for School Social Work

As schools with 50% minority or higher, inner-city schools with populations of 1000 plus, and middle and high schools have more SVI and DAR, social workers could focus attention in these areas. Because of the association with SES levels in specific geographic areas, advocacy efforts should receive greater attention as these areas have higher concentrations of poverty (Cullen, & Agnew, 2006). With this understanding, social workers working with legislators could have a dramatic effect reducing violence in schools by reduce poverty in these areas. Additionally, more funding is needed to address the problems in middle schools and high schools.

While working through the legislative process could take years before results can be seen, immediate efforts should focus on faculty buy-in supporting the use of interventions illustrated in this study. Results of this study suggest that fidelity in any study or program can be jeopardized is faculty buy-in is not established. As such, social workers have a unique responsibility to educate, train, and coordinate efforts to ensure interventions such as those introduced in this study have every opportunity to succeed. This begins with faculty buy-in.

School social workers have a critical role in reducing school violence. Since Columbine, we have struggled to find an answer to violence reduction in schools. As indicated by “Social Work’s Grand Challenges,” creating a stronger social fabric focuses on a number of areas that emphasize the need to strengthen social, environmental, and technological efforts to build stronger communities (Bent-Goodley, 2016). This is interesting because Grand Challenges encompasses the core of what we do as social

works (Table 2). The proposed research is also interesting because if evidence can be shown significant in violence reduction outcomes, social workers could lead community prevention efforts and advocate at local, state, and national levels to improve the well-being of all children, adolescents, and their families.

Negative school environments can increase anger, resentment, distract the wrongdoer from the effects of their behavior, and the harm done to others (Mullet, 2014). Poor behavior can perpetuate negative attitudes, attitudes drive behavior, and separation from school as punishment cultivates negative attitudes of school and reduces a commitment to learning. To discover holistic approaches that instill values of respect, responsibility, and relationship is very exciting. Just the thought of working with processes that invite full participation and consensus, fix what is not working, provide full and direct accountability, reunite what has been divided, and strengthen the school community to prevent future harms should have widespread appeal.

Results supported the use of CTE and RJ/D in predicting lower rates of SVI and DAR. MH services was seen to have a positive effect as well in predicting lower rates of school violence. The greatest success in disciplinary incident reduction can be seen when CTE are incorporated in the school curriculum and reinforced by the teaching staff (Smith, Daunic, Miller, and Robinson, 2002). The approach involves a concerted effort by administrators, faculty, and parents to reduce the trend in suspensions through CTE and they are mostly successful in their efforts (Smith et al., 2002). Sellman, (2011) indicates that cultural transformation must reach pupil empowerment by establishing initiatives for reducing conflict in schools. Whereas many school conflict resolution processes are teacher centered as in arbitration systems, CTE systems work to create stronger results with students (Sellman). According to Sellman, there needs to be a definite commitment by the administration and faculty in the school, which creates a cultural shift from traditional methods of discipline with a focus on relationship building. Supporting this idea, Smith et al. (2002) indicates that positive attitudes among teachers, students, and administration about CTE are a prerequisite for these types of programs to become part of the school culture and attain success. Social workers can play a large part in this process.

The implications of this study fit well with the research objectives suggested for the direction of school social work in the future (Kelly, Frey, Thompson, Klemp, Alvarez, & Berzin, 2015, School Social Work Association of America [SSWAA], n.d.). This study offers evidence-based educational, behavioral, mental health services, and community information that could work to promote a school climate and

culture conducive to learning, and provide knowledge for maximizing access to school and community resources.

Sellman (2011) conveys that the failure of many CTE programs can be attributed to a resistance to changing the principles of power and control. There is a psychological issue related to power shifts in authority from teachers to students. CTE must be compatible with the school's vision and approach to regulating social relations, which is characterized by a consistent process for managing conflict. This is accomplished when there is adequate support from the school staff and teachers. School social workers could further facilitate this process and the possible success of a CTE intervention. According to Smith et al., (2002), CTE programs will only work when school administrators are committed to providing responsible leadership and support, which could include teaching conflict resolution in class to reinforce the importance of solving conflict in a peaceful manner. Araki (1990) indicates that when educators support concepts that give students greater power in resolving their own conflicts frustration among students can be minimized by empowering them to do so.

Holistic modeling approaches to conflict resolution that include the involvement of school officials, faculty, students and school cultural change seem to show promise (Smith et al.). This is demonstrated when teachers and students model and reproduce behaviors that exhibit good conflict resolution skills in the school, which enhances positive social interaction (Sellman, 2011). Smith et al. found that students who learn conflict resolution skills might learn to avoid escalation of conflict and physical engagement using positive communication techniques learned in CTE. In addition, CTE programs increase self-esteem, self-respect, enhances personal responsibility, and self-discipline (Hart, 1997).

School social workers should push for greater use of RJ/D interventions in their schools, effectively altering the paradigm of school violence and student discipline in those schools. RJ/D programs seem to offer effective alternatives to standard behavioral approaches in schools (Zehr, 2015). Bazemore (1999) indicates that because of the educational value, RJ/D is useful for promoting diversionary and alternative measures that deprive youth of the ability to participate (suspensions). Support for RJ/D appears to be growing and the Obama administration brought attention to zero-tolerance policies in schools supporting the idea that these measures have led to high rates of school

suspension and the creation of the school-to-prison pipeline (Karp, 2015). The U.S. Department of Education (2015) specifically encourages the implementation of restorative practices in schools and the federal government is supporting multimillion-dollar research projects to evaluate the effectiveness of RJ/D in schools (National Institute of Justice, 2014).

RJ/D evidence-based practices have grown in schools throughout the United States (Umbreit et al., 2006). This could be attributed to the concept that responses based on a RJ/D philosophy offer school administrators a more beneficial alternative to zero-tolerance policies and retributive sanctions, which punish minor and major incidents with a high degree of severity (Pavelka, 2013). RJ/D is based on developing values that include building and strengthening relationships, showing respect, taking responsibility, repairing of harm, and restoration (Zehr, 2015). Research shows that RJ/D practices are effective. For example, city officials in San Francisco reported that suspension of African American students was down from 2,298 in 2011–2012 to 1,081 in 2013–2014 utilizing restorative practices (Teasley, 2015). The School Discipline Consensus Report indicates that RJ/D programs improve school climate (Morgan, Salomon, Plotkin, and Cohen, 2014). The report is a consensus-based and field-driven document with recommendations from over 100 advisors representing policymakers, school administrators, teachers, behavioral health professionals, police, court leaders, probation officials, juvenile correctional leaders, parents, and youth from across the country to support RJ/D in school (Morgan, Salomon, Plotkin, & Cohen, 2014). The goal of the report is to make recommendations that improve conditions for learning for students so they can feel safe, welcome and supported through 60 recommendations and two dozen policy initiatives (Teasley, 2015).

RJ/D systems in schools includes the training of educators, parents, and staff to implement positive approaches to school discipline employing peer mediation, and conflict resolution (Teasley, 2015). RJ/D programs affirm dignity and rights through mentoring and development of positive behavioral supports and practices schoolwide (Teasley, 2015). Implementing RJ/D practices means punitive school discipline would yield to a climate of student accountability for their behavior and group consensus in the decision-making process regarding school behavioral transgressions (Mullet, 2014).

There are advantages to utilizing the restorative process for all involved. According to Van Ness and Strong (2015), all participants are invited to engage, given the opportunity to meet in a safe

environment to discuss the offense and the responses. Offenders take responsibility for repairing harm, and offenders are given the means and opportunity to become contributing members of society without the stigma of the harm and offense (Van Ness & Strong, 2015). Marshall (1985) posits that RJ/D is fair, open, is a simple procedure, reduces costs, provides for restitution, and promotes no criminal stigmatization. By proposing to repair the harm within the context of maintaining the relationship, RJ/D seeks clarity for restitution and mending a broken relationship (McCluskey et al., 2008). This approach reflects greater values of the social work profession. The process presumes that relationship can and should be repaired and the offender can and should be reintegrated, which is important to the school community (McCluskey et al., 2008). RJ/D focuses on the past, present, and future and deterrence is connected more with relationships and individual accountability (McCluskey et al., 2008). In schools, RJ/D builds and nurtures relationships; children develop relational skills, the process repairs the harm done to relationship if conflict occurs or inappropriate behavior. Students develop their own skills to engage in relationship repair processes (Hopkins, 2002).

Disadvantages to RJ/D present challenges; however, challenges are not insurmountable. Popa (2012) indicates that identifying how objectives, concepts, and processes could be integrated within the school systems must be carefully considered. This is mainly because RJ/D does not rely on the same understanding of punishment as retributive justice. As retributive justice is used to address problem behavior in many justice and school systems, a closer look at policy changes would be needed to incorporate RJ/D concepts. Social workers focusing on a sense of social justice could reduce barriers to implementing RJ/D intervention strategies in schools.

RJ/D builds on confrontation between offenders and victims, which raises issues regarding the risk of humiliating offenders instead of reintegrating them or the risk of re-victimizing sufferers instead of healing them (Popa, 2012; Zehr, 2015). An additional concern is whether RJ/D processes hold offenders sufficiently accountable for their actions (Zehr, 2015). Further, Braithwaite (2002) indicates that because offenders have an alternative to a retributive process through RJ/D they may be tempted to choose RJ/D to avoid traditional punishment pretending to cooperate. Here, victims are not satisfied when they perceive an offender's apology as insincere using RJ/D as an escape for avoiding pain (Mika, Achilles, Halbert, Amstuz, & Zehr, 2004).

Another disadvantage is the concern for revictimization when asking victims to interact with offenders as victims feel revictimized when offenders fail to take responsibility for their offences (Wemmers & Cyr, 2005). Victims can become depressed when faced with the impending confrontation with their offenders, as "moral responsibility" is what matters for victims (Wemmers & Cyr, 2005: 540). Some people believe RJ/D pretends to center on the role of the victim appearing to be more offender-oriented (Mika et al., 2004). This results in victims feeling they are not helped in dealing with their trauma, seeing offenders as receiving more assistance (Mika et al., 2004).

Finally, there might be situations when having victims and offenders together is not suitable as in sexual assault cases (Mika et al., 2004). Further, some victims may not be willing to participate because the offense may have small meaning for the victims or the victim may want the offender to be severely punished (Umbreit, Coates, & Voss, 2004). Victims may fear the offender or too much time may have passed since the offence (Umbreit et al., 2004).

What does not work is the concept of zero-tolerance (Teasley, 2014; Gonzales, 2012; Reamer, 2004; Skiba, 2003; Zehr, 2015). Zero tolerance policies mandate harsh penalties such as school suspension, expulsions, and alternative schooling for problematic student behaviors (Teasley, 2014). "Even kindergartners have been suspended for minor offenses, such as bringing paper clips, toy guns, and cough drops to school" (Sumner, Silverman, & Frampton, 2010, p. 9). Gonzalez, (2012) indicates that punitive school discipline policies deprive students of educational opportunities and fail to make schools safer places. Zero tolerance increases the likelihood of future disciplinary problems and an increase of contact with the juvenile justice system (Gonzales, 2012). The frequent reliance on punitive punishment does not yield benefits for deterrence nor academic achievement (Skiba et al., 2003).

What works is a focus on relationship restoration (Gonzalez, 2012; Mullet, 2014; Pavelka, 2013; Teasley, 2014; Umbreit, Coates, & Voss, 2004; Van Ness & Strong, 2015; Zehr, 2015). Zehr (2015) indicates:

> RJ/D provides an inherently positive value system, a vision of how we can live together in a life-giving way, it reminds us that we live in relationship, that our actions impact others, that when those actions are harmful we have responsibilities (p. 79).

No single answer to school discipline exists; however, school based RJ/D programs demonstrate the positive influences of RJ/D within school communities (Gonzales, 2012).

The results of this study show the possibilities for a paradigm shift from an overemphasis on the individual with a focused emphasis on the whole school and community environment. Further, the information found in this study could provide guidance for developing new training programs and school and community policy initiatives. School social workers should take an active role in this process. According to Kelly et al. (2015), providing support to teachers with a focus on the whole school and community environment is not currently a practice incorporated in most school social work programs. Unfortunately, it is implied these practices are not integrated into the school social worker role. This needs to change.

Consider that the bachelor level social worker is prepared for practice of mental health case management and master level social workers are trained and skilled in providing services beyond case management (Frey, Alvarez, Sabatino, Lindsey, Dupper, Raines, & Norris, 2012). Licensed master level school social workers could provide strong primary prevention level services (Kelly et al., 2015). As results of this study indicate, increasing the extent to which licensed social workers engage in primary prevention strategies is critical for sustained violence reduction in schools. According to Frey et al. (2012), students should receive services, including mental health interventions like those espoused in this study, from school social workers, licensed at the clinical level or acting under appropriate supervision.

This study yields information that should prove helpful for enhancing violence reduction efforts to improve school climate and culture favorable to student learning and teaching excellence. The information contained in this study reinforces and supports the call for change with a focus on the total school environment. The study aligns well with the efforts of the SSWAA provide evidence-based educational, behavioral, and mental health services, create school climate and culture conducive to learning, and reinforce education rights and advocacy. In addition, the study aligns well with the NASW Standards for School Social Work Services of education/school reform, social justice, and using multitier interventions.

As reported by Altshuler, & Webb (2009), school social workers face challenges legitimizing themselves as school professionals because of poorly defined roles. This study proposes a paradigm

shift in how schools address the problem of violence in schools. The shift can be accomplished by redirecting some job duties of licensed masters of social work (LMSW) to create, coordinate, organize, and implement programs based on information found in this study for violence reduction prevention. This makes sense because school-based LMSW's are mental health professionals trained to serve students, teachers, families, and communities.

Conclusion

There is emerging consensus that poor behavior should be addressed through school culture, safety, relationship restoration, conflict transformation, and mental health services not punishment (Mattaini, & McGuire, 2006; Thompson, & Webber, 2010; Dwyer, 2000; Maring, & Koblinsky, 2013; Smith, Daunic, Miller, & Robinson, 2002; Flannery, Frank, & Kato, 2012; Chin, Dowdy, Jimerson, & Rime, 2012; Kelly, 2016; Nazzal, Forghany, Geevarughese, Mahmoodi, & Wong, 2014). The assessment of research findings in various states found that expulsions, misconduct, and violent acts decreased; school engagement and academic achievement increased; and absenteeism was reduced (Teasley, 2014). Further, research shows significant impact on redirecting misbehavior in adolescence and restore relationships across cultures, gender, and racial demographics (Scheckner, & Rollin, 2003; Smith, Daunic, Miller, & Robinson, 2002; Thompkins, Chauveron, Harel, Perkins, 2014).

Understanding the extent to which violence reduction can be achieve is of paramount importance to school social workers. Individual intervention programs mentioned in this manuscript work to reduce violence in primary and secondary education settings, but they do not work to reduce violence in primary and secondary education settings entirely. We do not know if utilizing multiple interventions can eliminate school violence. While numerous studies indicate a decline in school peer victimization, bullying remains a serious problem in the U.S. with approximately 1.5 million school-aged adolescents being victimized while at school (Jeong, & Hyun Lee, 2013). Further, 61% of school principals in the U. S. report violent incidents to police at least once a school year and 25 percent report occurrences of bullying regularly (Jeong, & Hyun Lee, 2013). Smith & Brain (2000) indicate that victimization can have profound effects on the mental (e.g., depression and anxiety) and physical health (e.g., depressed disease resistance) in victims including suicide. If we can show evidence that multiple approaches to violence reduction is effective, we can address the problem holistically and eliminate obstacles to creating safe and healthy learning environments. According to Jeong and Hyun Lee (2013),

through direct culture and climate change, we can improve the safety of children in schools. Further, teaching our children how to build a peaceful school environment could provide them with the knowledge for building a future peaceful society.

References

Allison, P.D. (1999). *Multiple regression: A primer*. Thousand Oaks, CA: Pine Forge Press.

Altshuler, S. J., & Webb, J. R. (2009). School social work: Increasing the legitimacy of the profession. *Children & Schools, 31*(4), 207-218. doi: 10.1093/cs/31.4.207.

Ansary, N. S., Elias, M. J., Greene, M. B., & Green, S. (2015). Guidance for schools selecting antibullying approaches: Translating evidence-based strategies to contemporary implementation realities. *Educational Researcher, 44*(1), 27-36.

American Academy of Social Work and Social Welfare (2016). *Grand challenges for social work*. Retrieved from http://aaswsw.org/grand-challenges-initiative/.

Araki, C. T. (1990). Dispute management in the schools. *Mediation Quarterly*, *8*(1), 51–62.

Armour, M. (2013). *Ed White Middle School restorative discipline evaluation: Implementation and impact, 2012/2013, sixth grade*. Austin. Retrieved from http://www.utexas.edu/research/cswr/rji/rdinschools.html.

Atkins, M. S., McKay, M. M., Frazier, S. L., Jakobsons, L. J., Arvanitis, P., Cunningham, T... Lambrecht, L. (2002). Suspensions and detentions in an urban, low-income school: Punishment or reward? *Journal of Abnormal Child Psychology, 30*(4), 361-371. doi:10.1023/A:1015765924135.

Bandura, A. (1995). *Self-efficacy in changing societies*. Cambridge, New York: Cambridge University Press.

Bandura, A. (1989). *Social cognitive theory*. In R. Vasta (Ed.), Annals of child development. Vol. 6. Six theories of child development (pp. 1-60). Greenwich, CT: JAI Press. Retrieved from https://www.uky.edu/~eushe2/Bandura/Bandura1989ACD.pdf.

Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. & Walters, R. H. (1963). *Social Learning and Personality Development*. New York, NY: Holt, Rinehart and Winston, Inc.

Bazemore, G. (1999). Crime victims, restorative justice and the juvenile court: Exploring victim needs and involvement in the response to youth crime. *International Review of Victimology, (6)*, 295–320.

Bent-Goodley, T. B. (2016). Social work's grand challenges: Mobilizing the profession. *Social Work 61*(3), 197-198. doi:10.1093/sw/sww035.

Black, S., & Washington, E. (2008). Evaluation of the Olweus bullying prevention program in nine urban schools: Effective practices and next steps. *ERS Spectrum, 26*(4), 7–19. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ869856&site=ehost-live.

Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley.

Bosworth, K., & Judkins, M. (2014). Tapping into the power of school climate to prevent bullying: One application of schoolwide positive behavior interventions and supports. *Theory Into Practice, 53*(4), 300–307. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1042951&site=ehost-live

Boyd, R. J., & Anderson, C. M. (2013). Breaks are better: A Tier II social behavior intervention. *Journal of Behavioral Education, 22*(4), 348–365. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1038127&site=ehost-live.

Bradshaw, C. P., Waasdorp, T. E., & Leaf, P. J. (2015). Examining variation in the impact of school-wide positive behavioral interventions and supports: Findings from a randomized controlled effectiveness trial. *Journal of Educational Psychology, 107*(2), 546–557. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1061883&site=ehost-live.

Braithwaite, J. (2002). Restorative justice and responsive regulation. New York: Oxford University Press.

Brock E., S., Nickerson B., A., Reeves A., M., Savage A., T., & Woitaszewski A., S. (2011). Development, evaluation, and future directions of the PREPaRE School Crisis Prevention and Intervention training curriculum. *Journal of School Violence*, *10*(1), 34–52. JOUR. http://doi.org/10.1080/15388220.2010.519268.

Brown, T. (2006). *Confirmatory factor analysis for applied research*. New York: Guildford.

Cantrell, R., Parks-Savage, A., & Rehfuss, M. (2007). Reducing levels of elementary school violence with peer Mediation. *Professional School Counseling*, *10*(5), 475-481.

Chambers, T. T. V., & Huggins, K. S. (2014). The influence of school factors on racial opportunity cost for high-achieving students of color. *Journal of School Leadership*, *24*(1), 189.

Chen, M. (2015). *Social development theory*. Victoria, Canada: University of Victoria. Retrieved from https://onlineacademiccommunity.uvic.ca/learningdesign/wp-content/uploads/sites/1178/2015/06/Mingli-Chen-ebook.pdf.

Chin, J. K., Dowdy, E., Jimerson, S. R., & Rime, W. J. (2012). Alternatives to Suspensions: Rationale and Recommendations. *Journal of School Violence, 11*(2), 156–173. Retrieved from 10.1080/15388220.2012.652912.

Choi, J. J. (2008). *Opening the "black box": A naturalistic case study of restorative justice* (THES). ProQuest Dissertations and Theses. University of Kansas, Ann Arbor. Retrieved from https://login.ezproxy.uta.edu/login?url=http://search.proquest.com/docview/304638240?accountid=7117.

Cohen, R. (2005). *Students resolving conflict: Peer mediation in schools*. Tucson, AZ: Good Year Books.

Corcoran, J. & Stephenson, M. (2001). The effectiveness of solution-focused therapy. *Families in Society, 81*(5), 468–474.

Cowan, C. D., Hauser, R., Kominski, R., Levin, H., Lucas, S., Morgan, S., & Chapman, C. (2003). *Improving the measurement of socioeconomic status for the national assessment of educational progress: A theoretical foundation*. National Center for Education Statistics. Retrieved from https://nces.ed.gov/nationsreportcard/pdf/researchcenter/Socioeconomic_Factors.pdf.

Coyle, H. E. (2008). School culture benchmarks: bridges and barriers to successful bullying prevention program implementation. *Journal of School Violence, 7*, 105–122. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=ccm&AN=2009856468&site=ehost-live.

Crawford, D. & Bodine, R. (1996). *Conflict resolution education: A guide to implementing programs in schools, youth-serving organizations, and community and juvenile justice settings*. Retrieved from https://www.ncjrs.gov/pdffiles/conflic.pdf.

Cross, D., Epstein, M., Hearn, L., Slee, P., Shaw, T., & Monks, M. (2001). National safe school's framework: Policy and practice to reduce bullying in Australian schools. *International Journal of Behavioral Development, 35*(5), 398 – 404. Doi: 10.1177/0165025411407456.

Cullen, F. T. & Agnew, R. (2006). *Criminological theory: Past to present* (3rd ed.). Los Angeles, CA: Roxbury Publishing Company.

Daunic, A. P., Smith, S. W., Robinson, T. R., Landry, K. L., & Miller, M. D. (2000). School-wide conflict resolution and peer mediation programs: Experiences in three middle schools. *Intervention In School & Clinic*, *36*(2), 94.

de Anda, D. (1999). Project Peace: The Evaluation of a Skill-Based Violence Prevention Program for High School Adolescents. *Children & Schools, 21*(3), 137–149. doi:10.1093/cs/21.3.137.

Donovan, J. E. (2005). *Problem behavior theory*. In Encyclopedia of Applied Developmental Science (Vol. 2), Fisher, C. B. & Lerner, R. M., Eds. Thousand Oaks, California: Sage, pp. 872-877.

Duarte, D., & Hatch, T. (2014). Successful implementation of a federally funded violence prevention elementary school counseling program: Results bring sustainability. *Professional School Counseling*, *18*(1), 71–81. JOUR. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eax&AN=100886710&site=ehost-live.

Durkheim, E. (1893). *The division of labor in society*. New York: Free Press.

Dwyer, K. P. (2000). Creating Responsive Schools: Contextualizing Early Warning, Timely Response. *Exceptional Children*, *66*(3), 347–365. JOUR.

Dymnicki, A. B., Weissberg, R. P., & Henry, D. B. (2011). Understanding how programs work to prevent overt aggressive behaviors: A meta-analysis of mediators of elementary school–based programs. *Journal of School Violence*, *10*(4), 315–337. https://doi.org/10.1080/15388220.2011.602599.

Engaging Schools (2015). *History*. Retrieved from http://engagingschools.org/about-us/history/.

Fabelo, T., Thompson, M. D., Plotkin, M„ Carmichael, D., Marchbanks, M. P., & Booth, E. A. (2011). *Breaking schools' rules: A statewide study of how school discipline relates to students' success and juvenile involvement.* Retrieved from the Justice Center, Council of State Governments Web site: http://csgjusticecenter.org/wp-content/uploads/2012/08/Breaking_Schools_Rules_Report_Final.pdf

Farrington, D. & Ttofi, M. (2009). School-based programs to reduce bullying and victimization: A systematic review. *The Campbell Collaboration Library of Systematic Reviews*, *5*(6), 147.

Fenning, P. A., Pulaski, S., Gomez, M., Morello, M., Maciel, L., Maroney, E., … Maltese, R. (2012). Call to Action: A Critical Need for Designing Alternatives to Suspension and Expulsion. *Journal of School Violence*, *11*(2), 105–117. JOUR. Retrieved from 10.1080/15388220.2011.646643.

Fisher, R. A. (1956). *Statistical methods and scientific inference*. New York: Hafner.

Frey, A. J., Alvarez, M. E., Sabatino, C. A., Lindsey, B. C., Dupper, D. R., Raines, J. C., Norris, M. P. (2012). The development of a national school social work practice model. *Children & Schools, 34*(3), 131-134. DOI: https://doi.org/10.1093/cs/cds025.

Flannery, K. B., Fenning, P., Kato, M. M., & McIntosh, K. (2014). Effects of school-wide positive behavioral interventions and supports and fidelity of implementation on problem behavior in high schools. *School Psychology Quarterly, 29*(2), 111–124. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1055788&site=ehost-live.

Fong, R. S., Vogel, B. L., & Vogel, R. E. (2008). The correlates of school violence: An examination of factors linked to assaultive behavior in a rural middle school with a large migrant population. *Journal of School Violence*, *7*(3), 24–47. JOUR. http://doi.org/10.1080/15388220801955521.

Goh, A. E., & Bambara, L. M. (2012). Individualized Positive Behavior Support in School Settings: A Meta-Analysis. *Remedial and Special Education*, *33*(5), 271–286. JOUR. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ977878&site=ehost-live.

Goodman, J. F. (2006). School discipline in moral disarray. *Journal of Moral Education, 35*(2), 213–230. Retrieved from http://10.1080/03057240600681736.

Gonzalez, T. (2012). Keeping kids in schools: Restorative justice, punitive discipline, and the school to prison pipeline. *Journal of Law and Education*, *41*(2), 235–281.

Gottfredson, G. D., Gottfredson, D. C., Czeh, E. R., Cantor, D., Crosse, S. B. & Hantman, I. (2004). *Toward safe and orderly schools—The national study of delinquency prevention in schools* (NCJ 205005). U.S. Departments of Education and Justice. Washington. DC: U.S. Government Printing Office.

Gumz, E. J., & Grant, C. L. (2009). Restorative justice: A systematic review of the social work literature. *Families in Society: The Journal of Contemporary Social Services*. Jour. http://doi.org/10.1606/1044-3894.3853.

Hahn, R., Fuqua-Whitley, D., Wethington, H., Lowy, J., Crosby, A., Fullilove, M., Dahlberg, L. (2007). Effectiveness of universal school-based programs to prevent violent and aggressive behavior: a

systematic review. *American Journal of Preventive Medicine, 33*(2 Suppl), S114-29. http://doi.org/10.1016/j.amepre.2007.04.012.

Hart, J., & Gunty, M. (1997). The impact of a peer mediation program on an elementary school environment. *Peace & Change*, *22*(1), 76.

Harris, E., McFarland, J., Siebold, W., Aguilar, R., & Sarmiento, A. (2007). Universal prevention program outcomes: Safe school's healthy students in a rural, multicultural setting. *Journal of School Violence, 6*(2), 75–91. doi:10.1300/J202v06n02_05.

Hall, B. W., & Bacon, T. P. (2005). Building a foundation against violence: Impact of a school-based prevention program on elementary students. *Journal of School Violence, 4*(4), 63–83. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ845785&site=ehost-live.

Hallfors, D., & Godette, D. (2002). Will the "Principles of Effectiveness" improve prevention practice'? Early findings from a diffusion study. *Health Education Research, 17,* 461-470.

Haugh, H. (2012). The importance of theory in social enterprise research. *Social Enterprise Journal, 8*(1), 7–15. doi:10.1108/17508611211226557.

Heaviside, S., Rowand, C., Williams, C. & Farris, E. (1998). *Violence and discipline problems in U. S. public schools: 1996-97*. U. S. Department of Education, National Center for Education Statistics, NCES publication #98-030.

Heinen, E., Webb-Dempsey, J., Moore, L., McClellan, C., & Friebel, C. (2007). Safety matters: How one district addressed safety concerns. *Journal of School Violence, 6*(3), 113–130. doi:10.1300/J202v06n03_07

Hopkins, B. (2002). Restorative Justice in Schools. *Support for Learning, 17*(3), 144–149. doi:10.1111/1467-9604.00254.

Hu, L, & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55.

Hyman, I. A., Bilus, F., Dennehy, N., Feldman, G., Flanagan, D., Lovoratano, J., Maital, S., & McDowell, E. (1979). Discipline in American education: An overview and analysis. *Journal of Education, 16*(2), 57-70.

Jaccard, J. & Jacoby, J. (2010). *Theory construction and model building skills: A practical guide for social scientists*. New York, NY: Guilford Press.

Jeong, S., & Hyun Lee, B. (2013). A Multilevel Examination of Peer Victimization and Bullying Preventions in Schools. *Journal of Criminology, 2013,* 1–10. Retrieved from 10.1155/2013/735397.

Jessor, R., Graves, T. D., Hanson, R. C., & Jessor, S. L. (1968). *Society, personality, and deviant behavior: A study of a tri-ethnic community*. New York: Holt, Rinehart, & Winston.

Jessor, R., Jessor, S. L., & Finney, J. A (1973). Social psychology of marijuana use: Longitudinal studies of high school and college youth. *Journal of Personality and Social Psychology, 26*, 1-15.

Jessor, R. (1987). Problem behavior theory, psychosocial development, and adolescent problem drinking. *British Journal of Addiction, 82*, 331-342.

Jessor, R. (1991). Risk behavior in adolescence: A psychosocial framework for understanding and action. *Journal of Adolescent Health, 12*, 597-605.

Jessor, R. (2014). *Problem behavior theory: A half century of research on adolescent behavior and development.* In Lerner, Petersen, Silbereisen, & Brooks-Gunn, (Eds.). The developmental science of adolescence: History through autobiography. New York: Psychology Press. Pp. 239-256.

Karp, D. R., & Frank, O. (2015). Anxiously Awaiting the Future of Restorative Justice in the United States. *Victims & Offenders, 11*(1), 50-70. doi:10.1080/15564886.2015.1107796

Kasik, N. C., & Kumcagiz, H. (2014). The effects of the conflict resolution and peer mediation training program on self-esteem and conflict resolution skills. *International Journal Of Academic Research*, *6*(1), 179-186.

Kelly, D. R. (2016). Stopping the bully: An analysis of Texas house bill 1942. *Children & Schools*. http://doi.org/10.1093/cs/cdw024.

Kelly, D. R. (2017) Effective methods for reducing school violence: A systematic review. *Journal of Educational and Developmental Psychology, 5*(4), 200-209.

Kelly, M. S., Frey, A., Thompson, A., Klemp, H., Alvarez, M., & Berzin, S. C. (2016). Assessing the National School Social Work Practice Model: Findings from the Second National School Social Work Survey. *Social Work, 61*(1), 17–28. DOI: https://doi.org/10.1093/sw/swv044.

Kline, R.B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York: Guildford Press.

Kohn, A. (2006). *Beyond discipline: From compliance to community* (10th ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Komro, K. A., Perry, C. L., Veblen-Mortenson, S., Stigler, M. H., Bosma, L. M., Munson, K. A., & Farbakhsh, K. (2004). Violence-Related Outcomes of the D.A.R.E. Plus Project. *Health Education & Behavior, 31*(3), 335–354. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ828135&site=ehost-live.

Krug, E. G., Dahlberg, L. L., Mercy, J. A., Zwi, A. B. & Lozano, R. (2002). *World report on violence and health*. Geneva: Switzerland: World Health Organization.

Lane-Garon, P. S., & Richardson, T. (2003). Mediator mentors: Improving school climate, nurturing student disposition. *Conflict Resolution Quarterly*, *21*(1), 47–67. JOUR. http://doi.org/10.1002/crq.48.

Lederach, J. P. (2003). *The little book of conflict transformation*. Intercourse, PA: Good Books.

Lemert, C. (2013). *Social theory*: *The multicultural, global, and classic readings* (5th ed.). Philadelphia, PA: Westview Press.

Lund, E. M., Blake, J. J., Ewing, H. K., & Banks, C. S. (2012). School counselors' and school psychologists' bullying prevention and intervention strategies: A look into real-world practices. *Journal of School Violence, 11*(3), 246–265. Retrieved from 10.1080/15388220.2012.682005.

Maag, J. W. (2001). Rewarded by punishment: Reflections on the disuse of positive reinforcement in schools. *Exceptional Children, 67*(2), 173-186.

Mika, H., Achilles, M., Halbert, E., Lorraine, S. A., & Zehr, H. (2004). Listening to victims: A critique of restorative justice policy and practice in the United States. *Federal Probation*, 68(1), 32-38.

Maring, E. F., & Koblinsky, S. A. (2013). Teachers' Challenges, Strategies, and Support Needs in Schools Affected by Community Violence: A Qualitative Study. *Journal of School Health*, *83*(6), 379–388. JOUR. http://doi.org/10.1111/josh.12041.

Marshall, T. (1985). *Alternatives to criminal courts: The potential for non-judicial dispute resolution*. Brookfield, Ver.: Gower Publishing Co.

Massey, O. T., Boroughs, M., & Armstrong, K. H. (2007). School violence interventions in the safe schools/healthy student's initiative: evaluation of two early intervention programs. *Journal of School Violence, 6*(2), 57–74. doi:10.1300/J202v06n02_04.

Mattaini, M. A., & McGuire, M. S. (2006). Behavioral strategies for constructing nonviolent cultures with youth: A review. *Behavior Modification*, *30*(2), 184–224. doi:10.1177/0145445503259390

May, D. C. (2014). *School safety in the United States: A reasoned look at the rhetoric*. Durham, North Carolina: Carolina Academic Press.

Mayer, G. R. (2002). Behavioral Strategies to Reduce School Violence. *Child & Family Behavior Therapy*, *24*(1–2), 83–100. JOUR. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ655116&site=ehost-live.

McCluskey, G., Lloyd, G., Stead, J., Kane, J., Ridell, S., & Weedon, E. (2008). 'I was dead restorative today': from restorative justice to restorative approaches in school. Cambridge Journal of Education, 38(2), 199-216.

McLeod, S. A. (2007). *Edward Thorndike*. Retrieved from www.simplypsychology.org/edward-thorndike.html.

McLeod, S. A. (2015). *Skinner: Operant Conditioning*. Retrieved from www.simplypsychology.org/operant-conditioning.html.

Mead, G. H. (ca.1929). *The Self, the I, and the Me*. Pp. 162-165 in Social Theory: The Multicultural, Global, and Classic Readings (2013) edited by C. Lemert. Philadelphia: Westview Press.

Menard, S., & Grotpeter K., J. (2014). Evaluation of bully-proofing your school as an elementary school antibullying intervention. *Journal of School Violence, 13*(2), 188–209. doi:10.1080/15388220.2013.840641.

Merton, R. K. (1936). The unanticipated consequences of purposive social action. *American Sociological Review 1*(6): 894–904. doi:10.2307/2084615.

Merton, R. (1957). *Social theory and social structure*. New York: Free Press.

Michail, S. (2011). Understanding school responses to students' challenging behavior: A review of literature. *Improving Schools*, *14*(2), 156–171. JOUR. http://doi.org/10.1177/1365480211407764.

Milkman, H. B., & Wanberg, K. W. (2012). *Criminal conduct and substance abuse treatment for adolescents: Pathways to self-discovery and change*: The provider's guide (2nd ed.). Thousand Oaks, Calif: Sage.

Miller, N. E., & Dollard, J. (1941). *Social learning and imitation*. New Haven: Yale University Press.

Miller, N. E., & Dollard, J. (1950). *Personality and psychotherapy: An analysis in terms of learning, thinking, and culture*. McGraw-Hill Book Company.

Morgan, R. E., Kemp, J., Rathbun, A., Robers, S., & Synder, T.D. (2014). *Indicators of School Crime and Safety, 2013*. Retrieved from http://www.bjs.gov/index.cfm?ty=pbdetail&iid=5008.

Morgan, E., Salomon, N., Plotkin, M., & Cohen, R. (2014). *The school discipline consensus report: Strategies from the field to keep students engaged in school and out of the juvenile justice system*. New York, NY: Council of State Governments Justice Center. Retrieved from file:///D:/The_School_Discipline_Consensus_Report.pdf.

Morrison, B. E., & Vaandering, D. (2012). Restorative justice: pedagogy, praxis, and discipline. *Journal of School Violence, 11*(2), 138–155. Retrieved from 10.1080/15388220.2011.653322.

Mullet, J. H. (2014). Restorative Discipline: From Getting Even to Getting Well. *Children & Schools, 36*(3), 157–162. doi:10.1093/cs/cdu011.

Nazzal, K. H., Forghany, M., Geevarughese, M. C., Mahmoodi, V., & Wong, J. (2014). An innovative community-oriented approach to prevention and early intervention with refugees in the United States. *Psychological Services*, *11*(4), 477–485. JOUR. Retrieved from 10.1037/a0037964.

Neiman, S., Murphy, C., Swaim, N.L., Thomas, T.L., Parmer, R.J., and Chaney, B.W. (2015). *2009–10 School survey on crime and safety: Public-use user's manual (NCES 2015-061)*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from http://nces.ed.gov/pubsearch.

Nobel Media (2014). *Ivan Pavlov: Biographical*. Retrieved from http://www.nobelprize.org/nobel_prizes/medicine/laureates/1904/pavlov-bio.html.

Nocera, E. J., Whitbread, K. M., & Nocera, G. P. (2014). Impact of school-wide positive behavior supports on student behavior in the middle grades. RMLE Online: *Research in Middle Level Education, 37*(8). Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1032366&site=ehost-live.

Noss, E. I. (2013). *Peer mediation in Massachusetts public middle & high schools: Perceptions of educators* (THES). ProQuest Dissertations and Theses. University of New Hampshire, Ann Arbor. Retrieved from https://login.ezproxy.uta.edu/login?url=http://search.proquest.com/docview/1436967063?accountid=7117.

Oliver R, Wehby J, & Daniel J. (2011) *Teacher classroom management practices: Effects on disruptive or aggressive student behavior*. Oslo, Norway: Campbell Systematic Reviews. DOI: 10.4073/csr.2011.4.

Orpinas, P., Parcel, G. S., Mcalister, A., & Frankowski, R. (1995). Violence prevention in middle schools: A pilot evaluation. *Journal of Adolescent Health*, *17*(6), 360–371. JOUR. http://doi.org/http://dx.doi.org/10.1016/1054-139X(95)00194-W.

Osher, D., Bear, G. G., Sprague, J. R., & Doyle, W. (2010). How Can We Improve School Discipline? *Educational Researcher, 39*(1), 48–58. doi:10.3102/0013189X09357618

Parsons, T. (1937). *The structure of social action*. New York: McGraw-Hill.

Parsons, T. (1971). *The system of modern societies*. Englewood Cliffs, NJ: Prentice-Hall.

Pavelka, S. (2013). Practices and Policies for Implementing Restorative Justice within Schools. *Prevention Researcher, 20*(1), 15–17. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1006578&site=ehost-live.

Popa, C. N. (2012). Restorative justice: a critical analysis. *Law Review (Romania), 2*(3).

Reamer, F. G. (2004). Social work and criminal justice: The uneasy alliance. *Journal of Religion & Spirituality in Social Work, 23*(1/2), 213-231.

Rieber, R. W. (1997). *The Collected Works of L. S. Vygotsky: The History of the Development of Higher Mental Functions*. New York, NY: Springer.

Robbins, S.P., Chatterjee, P., & Canda, E.R. (2012). *Contemporary human behavior theory: A critical perspective for social work* (3rd ed.). Boston: Allyn and Bacon.

Robles-Piña, R. A., & Denham, M. A. (2012). School resource officers for bullying interventions: A mixed-methods analysis. *Journal of School Violence, 11*(1), 38–55. Retrieved from 10.1080/15388220.2011.630311.

Rotter, J. B. (1954). *Social learning and clinical psychology*. New York: Prentice-Hall.

Scheckner, S. B., & Rollin, S. A. (2003). An elementary school violence prevention program. *Journal of School Violence, 2*(4), 3–42. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ843308&site=ehost-live.

School Social Work Association of America. (n.d.). *School social work practice model overview*. Retrieved from http://www.sswaa.org/?page=459.

Schroeder, B. A., Messina, A., Schroeder, D., Good, K., Barto, S., Saylor, J., & Masiello, M. (2012). The implementation of a statewide bullying prevention program: Preliminary findings from the field and the importance of coalitions. *Health Promotion Practice, 13*(4), 489–495. doi:10.1177/1524839910386887.

Schunk, D. H. (1987). Peer models and children's behavioral change. *Review of Educational Research, 57*(2), 149–174.

Sellman, E. (2011). Peer mediation services for conflict resolution in schools: What transformations in activity characterize successful implementation? *British Educational Research Journal*, *37*(1), 45–60.

Sharkey, J. D., & Fenning, P. A. (2012). Rationale for designing school contexts in support of proactive discipline. *Journal of School Violence, 11*(2), 95–104. doi:10.1080/15388220.2012.646641.

Skiba, R., Simmons, A., Staudinger, L., Rausch, M., Dow, G., & Feggins, L. R. (2003). *Consistent removal: Contributions of school discipline to the school-prison pipeline*. In School-to-Prison Pipeline Conference (p. 53).

Skinner, B. F. (1938). *The behavior of organisms*. Cambridge, MA: Copley Publishing Group.

Skinner, B. F. (1953). *Science and human behavior*. London: Collier-MacMillan Limited.

Skinner, B. F. (1974). *About behaviorism*. New York, NY: Alfred A, Knoff.

Smith, P. K., & Brain, P. (2000). Bullying in schools: Lessons from two decades of research. *Aggressive Behavior, 26*(1), 1–9. doi:10.1002/(SICI)1098-2337(2000)26:1<1::AID-AB1>3.0.CO;2-7.

Smith, S. W., Daunic, A. P., Miller, M. D., & Robinson, T. R. (2002). Conflict resolution and peer mediation in middle schools: Extending the process and outcome knowledge base. *The Journal of Social Psychology, 142*(5), 567–586. doi:10.1080/00224540209603919.

Sorlie, M.-A., & Ogden, T. (2007). Immediate impacts of PALS: A school-wide multi-level program targeting behavior problems in elementary school. *Scandinavian Journal of Educational Research, 51*(5), 471–492. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ777693&site=ehost-live.

Sprague, J., Nishioka, V., & Smith, S. G. (2007). Safe schools, positive behavior supports, and mental health supports: Lessons learned from three safe schools/healthy student's communities. *Journal of School Violence, 6*(2), 93–115. doi:10.1300/J202v06n02_06.

St. Pierre, T. L., & Kaltreider, L. (2004). Tales of refusal, adoption, and maintenance: Evidence-based substance abuse prevention via school-extension. collaborations. *American Journal of Evaluation, 25*, 479-491.

Stuart-Cassel, V., Bell, A., & Springer, J. F. (2011). *Analysis of state bullying laws and policies*. Folsom, CA: Springer.

Sugai, G. & Horner, R. (2002). The evolution of discipline practices: School-Wide positive behavior supports. *Child & Family Behavior Therapy, 24*(1-2), 23-50. DOI: 10.1300/J019v24n01_03.

Sumner, M. D., Silverman, C. J., & Frampton, M. L. (2010). *School-based restorative justice as an alternative to zero tolerance policies: Lessons from West Oakland*. Retrieved from https://www.law.berkeley.edu/files/thcsj/10-2010_School-based_Restorative_Justice_As_an_Alternative_to_Zero-Tolerance_Policies.pdf.

Teasley, M. L. (2014). Shifting from zero tolerance to restorative justice in schools. *Children & Schools, 36*(3), 131–133. Retrieved from http://cs.oxfordjournals.org.

Teasley, M. L. (2015). Social work grand challenges: An opportunity to increase student success. *Children & Schools, 37*(3), 131–133.

Thompkins, A., Chauveron, L., Harel, O., Perkins, D. (2014). Optimizing violence prevention programs: An examination of program effectiveness among urban high school students. *Journal of School Health, 84*(7), 435–443. Retrieved from 10.1111/josh.12171.

Thompson, A. M., & Webber, K. C. (2010). Realigning student and teacher perceptions of school rules: A behavior management strategy for students with challenging behaviors. *Children & Schools*, *32*(2), 71–79. JOUR. http://doi.org/10.1093/cs/32.2.71.

Turnuklu, A., Kacmaz, T., Sunbul, D., & Ergul, H. (2010). Effects of conflict resolution and peer mediation training in a Turkish high school. *Australian Journal of Guidance & Counselling*, *20*(1), 69–80.

Umbreit, M.S., Coates, R.B., & Voss, B. (2004). Victim-offender mediation: Three decades of practice and research. *Conflict Resolution Quarterly, 22*(1-2), 279–303.

Umbreit, M., Vos, B., Coates, R., Lightfoot, E. (2006). Restorative justice in the twenty-first century: A social movement full of opportunities and pitfalls. *Marquette Law Review*, 89(2), 251-304.

Umbreit, M. S., Coates, R. B., & Vos, B. (2007). Restorative Justice Dialogue: A Multi-Dimensional, Evidence-Based Practice Theory. *Contemporary Justice Review*, *10*(1), 23–41. JOUR. Retrieved from 10.1080/10282580601157521.

U.S. Department of Education. (2015). *Rethink school discipline: Resource guide for superintendent action*. Washington, DC: U. S. Department of Education. Retrieved from https://www2.ed.gov/policy/gen/guid/school-discipline/rethink-discipline-resource-guide-supt-action.pdf.

Van Ness, D. W., & Strong, K. H. (2015). 3 - *Restorative Justice: Justice That Promotes Healing BT - Restoring Justice* (Fifth Edition) (pp. 43–60). Boston: Anderson Publishing, Ltd. doi:http://dx.doi.org/10.1016/B978-1-4557-3139-8.00003-0.

Vega, D., Moore, J., Miranda, A. (2015). In their own words: Perceived barriers to achievement by African American and Latino high school students. *American Secondary Education*, *43*(3), 36–59. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eax&AN=108991088&site=ehost-live.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Cambridge, Massachusetts: Harvard University Press.

Vygotsky, L.S. (1962). *Thought and language*. Cambridge, MA: MIT Press.

Weller, B. E., Bowen, N. K., & Bowen, G. L. (2013). Linking students to appropriate interventions: A typology for social workers based on general strain theory. *Journal of Social Work*, *13*(4), 361–381. https://doi.org/10.1177/1468017311435446

Wemmers, J. A. & Cyr, K. (2005). Can mediation be therapeutic for crime victims? An evaluation of victims, experiences in mediation with young offenders. *Canadian Journal of Criminology and Criminal Justice*, *47*(3), 527-544.

Wertsch, J.V. (1985). *Cultural, communication, and cognition: Vygotskian perspectives*. United Kingdom: Cambridge University Press.

Whitted, K. S., & Dupper, D. R. (2005). Best Practices for Preventing or Reducing Bullying in Schools. *Children & Schools, 27*(3), 167–175. doi:10.1093/cs/27.3.167

Wilson, L. J. (1998). *Conflict resolution programs and the Houston independent school district: Peer mediation vs. non-peer mediation approaches for resolving student conflict in elementary and middle schools.* (Master's thesis) Available from ProQuest Dissertations and Theses database. (UMI No. 1393022).

Yu, C. (2002). *Evaluating cutoff criteria of model fit indices for latent variable models with binary and continuous outcomes*. Los Angeles: University of California.

Zehr, H. (2015). *The little book of restorative justice*. New York: Good Books.

Biographical Information

Don R. Kelly, PhD, LMSW, earned his undergraduate degree in social work from New Mexico State University with minors in philosophy and Child Advocate Studies. He graduated from the University of Texas at Arlington (UTA) in 2014 with his Masters in Social Work and earned his Social Work PhD at UTA in 2017. His research interests include peer mediation, restorative justice, cultural diversity, and violence reduction in primary and secondary education. He has served as President of the board of directors of Dispute Resolution Services of North Texas, Inc. in Fort Worth, Texas, was recognized as Mediator of the year and was inducted into that organization's Millennium Mediators Hall of Fame. He has served as a member of the board for the College of Texas Mediators, a Councilman with the City of Watauga, President of the Tarrant County Association of Mediators, and is a United States Navy veteran. In addition, Mr. Kelly currently holds memberships with the Texas Association of Mediators (TAMS), Association for Conflict Resolution (ACR), Tarrant County Association of Mediators (TCAM), and National Association of Social Workers (NASW).

Appendix

Table 1: Intervention and Dependent Variable Description

Variable	Description	Operationalized/Purpose
Variables Representing Culture		
C0174	Prevention Curriculum/Instruction/Training	Yes or No/ Determine if provided
C0266	Teacher Training-Classroom Management	Yes or No/ Determine if provided
C0268	Teacher Training-Discipline Policies	Yes or No/ Determine if provided
C0272	Teacher Training-Early Warning Signs for Violent Behavior	Yes or No/ Determine if provided
C0276	Teacher Training-Positive Behavioral Intervention	Yes or No/ Determine if provided
C0186	Promote Sense of Community/Integration	Yes or No/ Determine if provided
Variables Representing Conflict Transformation Education		
C0184	Student Involvement Resolving Problems	Yes or No/ Student Involvement
Variables Representing Restorative J/D		
C0442	School Probation Available	Yes or No/ Determine if provided
C0446	Detention/Saturday School Available	Yes or No/ Determine if provided
C0450	Loss of Student Privileges Available	Yes or No/ Determine if provided
C0454	Require Community Service Available	Yes or No/ Determine if provided
C0208	Community Involvement-Juvenile Justice	Yes or No/ Determine if provided
Variables Representing Mental Health Services		
C0176	Behavioral Modification for Students	Yes or No/ Determine if provided
C0178	Student Counseling/Social Work	Yes or No/ Determine if provided
C0212	Community Involvement-Mental Health	Yes or No/ Determine if utilized
Dependent Variables		
SVINC10	Total Number of Serious Violent Incidents	This variable counts the number of serious violent crime incidents defined as suicide, rape, sexual battery, robbery, and fights with a weapon.
DISATT10	Total Number of Disciplinary Actions Recorded	This variable counts the number of disciplinary actions taken for less serious crime defined as fights without a weapon, theft, larceny, and vandalism.
Control Variables		
FR_SIZE	School Size	Control for the number of students in four categories: 1 = less than 300, 2 = 300–499, 3 = 500–999, and 4 = 1,000 or more students.
FR_URBAN	Urbanicity	Control for schools in the city, suburb, town, and rural areas.
FR_LVEL	School Grade Level	Control for categories of primary, middle, high school, and combined.

Table2: Intervention Rating Chart

Intervention	Evidence
Olweus Bully Prevention Program (OBPP)	Strong/Positive
Schoolwide Positive Behavior Interventions & Support (SWPBIS)	Strong/Positive
Safe Schools Healthy Students (SS/HS)	Strong/Positive
Conflict Resolution Peer Mediation (CR/PM)	Strong/Positive
Skill Based Violence Prevention Program (VPP)	Strong/Positive
Solutions Focused Therapy (SFT)	Limited Research/Weak
Breaks are Better (BrB)	Limited Research/Weak
Skill Based Violence Prevention Program	Limited Research/Weak
Too Good for Violence Prevention Program (TGFV)	Limited Research/Weak
D.A.R.E Plus	Limited Research/Weak
Bully-Proofing Your School (BPYS)	Limited Research/Weak
Students Managing Anger Resolution Together (SMART)	Limited Research/Weak

Table 3: Intervention Support Chart

Author(s)	Yr.	N	Study Outcome	Intervention	Study Design	Tier Level	Change Type	Variable Strength
Black & Washington	08	13 Schools 10,269 Students	Reduction Bullying Events	Olweus Bully Prevention Program (OBPP)	Quasi	I & II	Behavior	Reliability
Boyd & Anderson	13	1 School 3 Student	Reduction in Office Discipline Referrals (ODRs)	Breaks are Better (BrB)	Quasi	III	Behavior	Reliability Quality
Bradshaw & Waasdorp	15	37 Schools 11,738 Students	Reduction ODRs	Schoolwide Positive Behavior Interventions & Support (SWPBIS)	Quasi	I & II	System	Reliability Quality Validity
Corcoran & Stephenson	01	1 District 136 Students	Reduction in Impulsivity	Solutions Focused Therapy (SFT)	Quasi	II & III	Skills	Not Determined
de Anda	99	1 HS 157 Students	Feelings of Safety	Skill Based Violence Prevention Program	Quasi	I & II	Skills	Reliability
Flannery, Fenning, Kato, & McIntosh	14	12 HS 36,653 Students	Reduction ODRs	SWPBIS	Quasi	I & II	System	Reliability Validity
Hall & Bacon	05	10 Elem. Schools 46 Faculty 999 Students	Enhanced Communication Skills	Too Good for Violence Prevention Program (TGFV)	Expr.	I & II	Skills	Reliability Quality
Harris, McFarland, Siebold, Aguilar, & Sarmiento	07	3 Native Amer. Schools Districts 900 Students	Decreased Absenteeism, Fighting	Safe Schools Healthy Students (SS/HS)	Quasi	I, II & III	System	Quality
Komro, Perry, Veblen-Mortenson, Stigler, Bosma, Munson, & Farbakhsh	04	24 Middle Schools 6,728 Students	Reduction of Physical and Verbal Violence	D.A.R.E Plus	Expr.	II & III	Behavior	Reliability Validity
Lund, Blake, Ewing, & Banks	12	762 School Clinicians	Use of Antibullying Programs	OBPP	Descript	N/A	Behavior	Reliability Quality
Massey, Boroughs, & Armstrong	07	14 School Districts 110,000 Students	Reduction of Disruptive Behavior	SS/HS	Quasi	I, II & III	System	Reliability Quality
Menard & Grotpeter	14	6 Schools 3,497 Students	Reduction in Bullying	Bully-Proofing your School (BPYS)	Quasi	II & III	Behavior	Reliability Quality

								Validity
Nocera, Whitbread, & Nocera	14	1 School 300 Students	Reduction ODRs	SWPBIS	Mixed	I & II	System	Quality
Scheckner & Rollin	03	1 Elementary School 40 Students	Use of Nonviolent Strategies	Conflict Resolution Ed (CRE)	Expr.	I & II	Skills	Reliability Quality Validity
Schroeder, Messina, Schroeder, Good, Barto, Saylor, & Masiello	12	107 schools in 49 counties 2,400 teachers 56,137 students	Reductions in Student Reports of Bullying	OBPP	Quasi	I & II	Behavior	Reliability
Smith, Daunic, Miller, & Robinson	02	3 Middle schools 1700 students	Reduction ODRs	CRE	Quasi	I & II	Skills	Quality Validity
Sorlie & Ogden	07	4 Elementary Schools 82 Teachers 735 Students	Reductions in observed problem behavior	SWPBIS	Quasi	I & II	System	Quality Validity
Sprague, Nishioka, & Smith,	07	3 School Districts 53,019 Students	Reduction of Problem Behaviors	SS/HS & SWPBIS	Explore	I & II	System	Reliability Quality Validity

Tier I - Behavior interventions promoting pro-social behavior among all students. Tier II - Behavior interventions intended for risk for developing serious problematic behavior. Tier III - Behavior interventions for serious challenging behavior nonresponsive to other efforts.

Table 4: Social Work's Grand Challenges

Three Organizing Areas	12 Grand Challenges
Individual and Family Well-Being	1. Ensure Healthy Development for all Youth
	2. Close the Health Gap
	3. Stop Family Violence
	4. Advance Long and Productive Lives
Stronger Social Fabric	5. Eradicate Social Isolation
	6. End Homelessness
	7. Create Social Responses to a Changing Environment
	8. Harness Technology for Social Good
Just Society	9. Promote Smart Decarceration
	10. Build Financial Capability for All
	11. Reduce Extreme Economic Inequality
	12. Achieve Equal Opportunity and Justice

Source: American Academy of Social Work and Social Welfare (2016). *Grand challenges for social work.* Retrieved from http://aaswsw.org/grand-challenges-initiative/

Table 5: Intervention and Support Studies

Intervention	References
Variables Representing Culture	
C0174 Prevention Curriculum/Instruction/Training	Orpinas, Parcel, Mcalister, & Frankowski, (1995) Brock, Nickerson, Reeves, Savage, & Woitaszewski, (2011) Mattaini, & McGuire, (2006)
C0266 Teacher Training-Classroom Management	Farrington, & Ttofi, (2009) Maring, & Koblinsky, (2013) Thompson, & Webber, (2010)
C0268 Teacher Training-Discipline Policies	Dwyer, (2000) Maring, & Koblinsky, (2013) Mayer, (2002) Skiba, Simmons, Staudinger, Rausch, Dow, & Feggins, (2003)
C0272 Teacher Training-Early Warning Signs for Violent Behavior	Fong, Vogel, & Vogel, (2008) Dwyer, (2000)
C0276 Teacher Training-Positive Behavioral Intervention	Goh, & Bambara, (2012) Farrington, & Ttofi, (2009) Dwyer, (2000) Orpinas, Parcel, Mcalister, & Frankowski, (1995)
C0186 Promote Sense of Community/Integration	Orpinas, Parcel, Mcalister, & Frankowski, (1995) Dwyer, (2000)
Variables Representing Conflict Transformation Education	
C0184 Student Involvement Resolving Problems	Maring, & Koblinsky, (2013) Noss, (2013) Hahn, Fuqua-Whitley, Wethington, Lowy, Crosby, Fullilove, & Dahlberg, (2007) Crawford, & Bodine, (1996) Smith, Daunic, Miller, & Robinson, (2002)
Variables Representing Restorative J/D	
C0442 School Probation Available	Armour, (2013) Choi, (2008) Gonzalez, (2012)
C0446 Detention/Saturday School Available	Michail, (2011) Vega, Moore, Miranda, (2015) Fenning, Pulaski, Gomez, Morello, Maciel, Maroney, & Maltese, (2012)
C0450 Loss of Student Privileges Available	Mullet, (2014) Mullet, (2014) Goh, & Bambara, (2012) Michail, (2011) Flannery, Frank, & Kato, (2012)
C0454 Require Community Service Available	Stuart-Cassel, Bell, & Springer, (2011) Michail, (2011)
C0208 Community Involvement-Juvenile Justice	Umbreit, Coates, & Vos, (2007) Gumz, & Grant, (2009) Crawford, & Bodine, (1996) Dwyer, (2000)
Variables Representing Mental Health Services	
C0176 Behavioral Modification for Students	Chin, Dowdy, Jimerson, & Rime, (2012)

	Thompson, & Webber, (2010) Osher, Bear, Sprague, & Doyle, (2010)
C0178 Student Counseling/Social Work	Massey, Boroughs, & Armstrong, (2007) Kelly, (2016) Lane-Garon, & Richardson, (2003) Duarte, & Hatch, (2014)
C0212 Community Involvement-Mental Health	Maring, & Koblinsky, (2013)
Massey, Boroughs, & Armstrong, (2007)	Nazzal, Forghany, Geevarughese, Mahmoodi, & Wong, (2014)

Table 6: Descriptive Statistics for Intervention Types

Intervention	N(%)	DAR, M (SD)	SVI, M (SD)
Culture Change			
C0174 Prevention Curriculum/Instruction/Training			
Yes	2234 (84.4%)	16.46 (41.79)	1.02 (4.88)
No	414 (15.6%)	15.58 (24.41)	.65 (1.71)
C0266 Teacher Training-Classroom Management			
Yes	2101 (79.3%)	17.02 (42.57)	1.04 (4.91)
No	547 (20.7%)	13.65 (24.781)	.66 (2.61)
C0268 Teacher Training-Discipline Policies			
Yes	1707 (64.5%)	18.19 (46.40)	1.10 (5.20)
No	941 (35.5%)	12.93 (22.03)	.70 (2.96)
C0272 Teacher Training-Early Warning Signs for Violent Behavior			
Yes	1285 (48.5%)	16.82 (36.98)	1.13 (5.76)
No	1363 (51.5%)	15.85 (41.88)	.80 (2.93)
C0276 Teacher Training-Positive Behavioral Intervention			
Yes	2047 (77.3%)	16.35 (37.92)	.98 (4.88)
No	601 (22.7%)	16.23 (44.80)	.90 (3.08)
C0186 Promote Sense of Community/Integration			
Yes	2194 (82.9%)	16.42 (41.49)	.96 (4.35)
No	454 (17.9%)	15.84 (28.60)	.98 (5.36)
Conflict Transformation Education			
C0184 Student Involvement Resolving Problems			
Yes	1375 (51.9%)	17.39 (40.30)	1.03 (4.81)
No	1273 (48.1%)	15.17 (38.77)	.88 (4.22)
Restorative Justice/Discipline			
C0442 School Probation Available			
Yes	1719 (64.9%)	18.73 (45.64)	1.13 (5.12)
No	929 (35.1%)	11.87 (24.09)	.65 (3.15)
C0446 Detention/Saturday School Available			
Yes	2129 (80.4%)	18.28 (42.62)	1.06 (4.85)
No	519 (19.6%)	8.28 (21.52)	.56 (2.84)
C0450 Loss of Student Privileges Available			
Yes	2541 (96.0%)	16.52 (40.07)	.99 (4.62)
No	107 (4.0%)	11.67 (24.75)	.26 (1.05)
C0454 Require Community Service Available			
Yes	1004 (37.9%)	19.87 (47.08)	1.39 (6.48)
No	1644 (62.1%)	14.15 (34.03)	.69 (2.70)
C0208 Community Involvement-Juvenile Justice			
Yes	1357 (51.2%)	19.0 (41.79)	1.22 (5.69)
No	1291 (48.8%)	13.50 (36.91)	.69 (2.83)
Mental Health			
C0176 Behavioral Modification for Students			
Yes	2411 (91.0%)	16.93 (41.23)	1.00 (4.73)
No	237 (9.0%)	10.16 (13.06)	.51 (1.50)
C0178 Student Counseling/Social Work			
Yes	2486 (93.9%)	16.59 (40.38)	.99 (4.66)
No	162 (6.1%)	12.23 (23.78)	.55 (1.56)
C0212 Community Involvement-Mental Health			
Yes	1535 (58.0%)	17.97 (35.96)	1.16 (4.92)
No	1113 (42.0%)	14.04 (44.00)	.68 (3.93)

Dependent Variables - Serious Violent Incidents (SVI), Disciplinary Actions Reported (DAR)
Independent Variables – Culture Change (CC), Conflict Education (CE), Restorative Justice/Discipline (RJ/D), Mental Health Services (MH)

Table 7: Intervention Type Usage by School Race/Ethnicity (percentage of minority students)

Intervention	Percentage of Minority Students: Less Than 5%, *n(%)*	5 - 20%, *n(%)*	20 - 50%, *n(%)*	More Than 50% , *n(%)*	Total, *n(%)*	X^2 Sig.
Culture Change						
C0174 Prevention Curriculum/Instruction/Training						
Yes	272 (12.5%%)	607 (27.2%)	606 (27.1%)	749 (33.5%)	2234 (84.3%)	.16
No	64 (15.5%)	108 (26.1%)	97 (23.4%)	145 (35.0%)	414 (15.6%)	
C0266 Teacher Training-Classroom Management						
Yes	230 (10.9%)	551 (26.2%)	568 (27.0%)	752 (35.8%)	2101 (79.3%)	<.001
No	106 (19.4%)	164 (30.0%)	135 (24.7%)	142 (26.0%)	547 (20.7%)	
C0268 Teacher Training-Discipline Policies						
Yes	183 (10.7%)	420 (24.6%)	469 (27.5%)	635 (37.2%)	1707 (64.5%)	<.001
No	153 (16.3%)	295 (31.3%)	234 (24.9%)	259 (27.5%)	941 (35.5%)	
C0272 Teacher Training-Early Warning Signs for Violent Behavior						
Yes	134 (10.4%)	344 (26.8%)	339 (26.4%)	468 (36.4%)	1285 (48.5%)	.002
No	202 (14.8%)	371 (27.2%)	364 (26.7%)	426 (31.3%)	1363 (51.5%)	
C0276 Teacher Training-Positive Behavioral Intervention						
Yes	225 (11.0%)	545 (26.6%)	563 (27.5%)	714 (34.9%)	2047 (77.3%)	<.001
No	111 (18.5%)	170 (28.3%)	140 (23.3%)	180 (30.0%)	601 (22.7%)	
C0186 Promote Sense of Community/Integration						
Yes	259 (11.8%)	591 (26.9%)	589 (26.8%)	255 (34.4%)	2194 (82.9%)	.02
No	77 (17.0%)	124 (27.3%)	114 (25.1%)	139 (30.6%)	454 (17.1%)	
Conflict Transformation Education						
C0184 Student Involvement Resolving Problems						
Yes	139 (10.1%)	356 (25.9%)	355 (25.8%)	525 (38.2%)	1375 (51.9%)	<.001
No	197 (15.5%)	359 (28.2%)	348 (27.3%)	369 (29.0%)	1273 (48.1%)	
Restorative Justice/Discipline						
C0442 School Probation Available						
Yes	202 (11.8%)	471 (27.4%)	455 (26.5%)	591 (34.4%)	1719 (64.9%)	.24
No	134 (14.4%)	244 (26.3%)	248 (26.7%)	303 (32.6%)	929 (35.1%)	
C0446 Detention/Saturday School Available						
Yes	279 (13.1%)	583 (27.4%)	562 (26.4%)	562 (33.1%)	2129 (80.4%)	.32
No	57 (11.0%)	132 (25.4%)	132 (27.2%)	141 (36.4%)	519 (19.6%)	
C0450 Loss of Student Privileges Available						
Yes	324 (12.8%)	701 (27.6%)	668 (26.3%)	848 (33.4%)	2541 (96.0%)	.01
No	12 (11.2%)	14 (13.1%)	35 (32.7%)	46 (43.0%)	107 (4.0%)	

C0454 Require Community Service Available						
Yes	106 (10.6%)	271 (27.0%)	250 (24.9%)	377 (37.5%)	1004 (37.9%)	.01
No	230 (14.0%)	444 (27.0%)	453 (27.6%)	517 (31.4%)	1644 (62.1%)	
C0208 Community Involvement-Juvenile Justice						
Yes	201 (14.8%)	375 (27.6%)	358 (26.4%)	423 (31.2%)	1357 (51.2%)	<.001
No	135 (10.5%)	340 (26.3%)	345 (26.7%)	471 (36.5%)	1291 (48.8%)	
<u>Mental Health</u>						
C0176 Behavioral Modification for Students						
Yes	289 (12.0%)	641 (26.6%)	649 (26.9%)	832 (34.5%)	2411 (91.0%)	<.001
No	47 (19.8%)	74 (31.2%)	54 (22.8%)	62 (26.2%)	237 (9.0%)	
C0178 Student Counseling/Social Work						
Yes	307 (12.3%)	670 (27.0%)	658 (26.5%)	851 (34.2%)	2486 (93.9%)	.09
No	29 (17.9%)	45 (27.8%)	45 (27.8%)	43 (26.5%)	162 (6.1%)	
C0212 Community Involvement-Mental Health						
Yes	198 (12.9%)	409 (26.6%)	383 (25.0%)	545 (35.5%)	1535 (58.0%)	.07
No	138 (12.4%)	306 (27.5%)	320 (28.8%)	349 (31.4%)	1113 (42.0%)	

Table 8: Intervention Type Usage by School Urbanicity

Intervention	Urbanicity of School: Urban, *n(%)*	Suburban, *n(%)*	Town, *n(%)*	Rural, *n(%)*	X^2 Sig.
Culture Change					
C0174 Prevention Curriculum/Instruction/Training					
Yes	609 (27.3%)	752 (33.6%)	311 (13.9%)	562 (25.2%)	.02
No	94 (22.7%)	129 (31.2%)	80 (19.3%)	111 (26.8%)	
C0266 Teacher Training-Classroom Management					
Yes	590 (28.1%)	701 (33.4%)	298 (14.2%)	512 (24.4%)	<.001
No	113 (20.7%)	180 (32.9%)	93 (17.0%)	161 (29.4%)	
C0268 Teacher Training-Discipline Policies					
Yes	498 (29.2%)	555 (32.5%)	236 (13.8%)	418 (24.5%)	<.001
No	205 (21.8%)	326 (34.6%)	155 (16.5%)	255 (27.1%)	
C0272 Teacher Training-Early Warning Signs For Violent Behavior					
Yes	373 (29.0%)	435 (33.9%)	177 (13.8%)	300 (23.3%)	.01
No	330 (24.2%)	446 (32.7%)	214 (15.7%)	373 (27.4%)	
C0276 Teacher Training-Positive Behavioral Intervention					
Yes	583 (28.5%)	677 (33.1%)	301 (14.7%)	485 (23.7%)	<.001
No	1209 (20.0%)	204 (33.9%)	90 (15.0%)	187 (31.1%)	
C0186 Promote Sense of Community/Integration					
Yes	605 (27.6%)	771 (35.1%)	303 (13.8%)	515 (23.5%)	<.001
No	98 (21.6%)	110 (24.2%)	88 (19.4%)	158 (34.8%)	
Conflict Transformation Education					
C0184 Student Involvement Resolving Problems					
Yes	396 (28.8%)	505 (36.7%)	174 (12.7%)	300 (21.8%)	<.001
No	307 (24.1%)	376 (29.5%)	217 (17.0%)	373 (29.3%)	
Restorative Justice/Discipline					
C0442 School Probation Available					
Yes	444 (25.8%)	567 (33.0%)	263 (15.3%)	445 (25.9%)	.48
No	259 (27.9%)	314 (33.8%)	128 (13.8%)	228 (24.5%)	
C0446 Detention/Saturday School Available					
Yes	557 (26.2%)	721 (33.9%)	323 (15.2%)	528 (24.8%)	.20
No	146 (28.1%)	160 (30.8%)	68 (13.1%)	145 (27.9%)	
C0450 Loss of Student Privileges Available					
Yes	672 (26.4%)	845 (33.3%)	382 (15.0%)	642 (25.3%)	.23
No	31 (29.0%)	36 (33.6%)	9 (8.4%)	31 (29.0%)	
C0454 Require Community Service Available					
Yes	311 (31.0%)	342 (34.1%)	147 (14.6%)	204 (20.3%)	<.001
No	392 (23.8%)	539 (32.8%)	244 (14.8%)	469 (28.5%)	
C0208 Community Involvement-Juvenile Justice					
Yes	344 (25.4%)	422 (31.1%)	246 (18.1%)	345 (25.4%)	<.001
No	359 (27.8%)	459 (35.6%)	145 (11.2%)	328 (25.4%)	
Mental Health					
C0176 Behavioral Modification for Students					
Yes	650 (27.0%)	825 (34.2%)	356 (14.8%)	580 (24.1%)	<.001
No	53(22.4%)	56 (23.6%)	35 (14.8%)	93 (39.2%)	
C0178 Student Counseling/Social Work					
Yes	663 (26.7%)	838 (33.7%)	369 (14.8%)	616 (24.8%)	.03
No	40(24.7%)	43 (26.5%)	22 (13.6%)	57 (35.2%)	
C0212 Community Involvement-Mental Health					
Yes	426 (27.8%)	493 (32.1%)	252 (16.4%)	364 (23.7%)	.002
No	277 (24.9%)	388 (34.9%)	139 (12.5%)	309 (27.8%)	

Table 9: Intervention Type Usage by School Size

Intervention	School size and number of students: <300 students, *n(%)*	300-499 students, *n(%)*	500-999 students, *n(%)*	1000+ students, *n(%)*	X^2 Sig.
Culture Change					
C0174 Prevention Curriculum/Instruction/Training					
Yes	246 (11.0%)	464 (20.8%)	868 (38.8%)	656 (29.4%)	.001
No	58 (14.0%)	62 (15.0%)	141 (34.1%)	153 (37.0%)	
C0266 Teacher Training-Classroom Management					
Yes	227 (10.8%)	412 (19.6%)	807 (38.4%)	655 (31.2%)	.12
No	77 (14.1%)	114 (20.8%)	202 (36.9%)	154 (28.2%)	
C0268 Teacher Training-Discipline Policies					
Yes	177 (10.4%)	320 (18.7%)	642 (37.6%)	568 (33.3%)	<.001
No	127 (13.5%)	206 (21.9%)	367 (39.0%)	241 (25.6%)	
C0272 Teacher Training-Early Warning Signs For Violent Behavior					
Yes	134 (10.4%)	250 (19.5%)	466 (36.3%)	435 (33.9%)	.003
No	170 (12.5%)	276 (20.2%)	543 (39.8%)	374 (27.4%)	
C0276 Teacher Training-Positive Behavioral Intervention					
Yes	228 (11.1%)	428 (20.9%)	778 (38.0%)	613 (29.9%)	.07
No	76 (12.6%)	98 (16.3%)	231 (38.4%)	196 (32.6%)	
C0186 Promote Sense of Community/Integration					
Yes	229 (10.4%)	425 (19.4%)	853 (38.9%)	687 (31.3%)	<.001
No	75 (16.5%)	101 (22.2%)	156 (34.4%)	122 (26.9%)	
Conflict Transformation Education					
C0184 Student Involvement Resolving Problems					
Yes	127 (9.2%)	257 (18.7%)	504 (36.7%)	487 (35.4%)	<.001
No	177 (13.9%)	269 (21.1%)	505 (39.7%)	322 (25.3%)	
Restorative Justice/Discipline					
C0442 School Probation Available					
Yes	181 (10.5%)	310 (18.0%)	621 (36.1%)	607 (35.3%)	<.001
No	123 (13.2%)	216 (23.3%)	388 (41.8%)	202 (21.7%)	
C0446 Detention/Saturday School Available					
Yes	224 (10.5%)	375 (17.6%)	792 (37.2%)	738 (34.7%)	<.001
No	80 (15.4%)	151 (29.1%)	217 (41.8%)	71 (13.7%)	
C0450 Loss of Student Privileges Available					
Yes	284 (11.2%)	503 (19.8%)	970 (38.2%)	784 (30.9%)	.07
No	20 (11.2%)	23 (21.5%)	39 (36.4%)	25 (23.4%)	
C0454 Require Community Service Available					
Yes	100 (10.0%)	172 (17.1%)	347 (34.6%)	385 (38.3%)	<.001
No	204 (12.4%)	354 (21.5%)	662 (40.3%)	424 (25.8%)	
C0208 Community Involvement-Juvenile Justice					
Yes	109 (8.0%)	232 (17.1%)	480 (35.4%)	536 (39.5%)	<.001
No	195 (15.1%)	294 (22.8%)	529 (41.0%)	273 (21.1%)	
Mental Health					
C0176 Behavioral Modification for Students					
Yes	255 (10.6%)	495 (20.5%)	926 (38.4%)	735 (30.5%)	<.001
No	49 (20.7%)	31 (13.1%)	83 (35.0%)	74 (31.2%)	
C0178 Student Counseling/Social Work					
Yes	267 (10.7%)	495 (19.9%)	946 (38.1%)	778 (31.3%)	<.001
No	37 (22.8%)	31 (19.1%)	63 (38.9%)	31 (19.1%)	
C0212 Community Involvement-Mental Health					
Yes	144 (9.4%)	302 (19.7%)	551 (35.9%)	538 (35.0%)	<.001
No	160 (14.4%)	224 (20.1%)	458 (41.2%)	271 (24.3%)	

Table 10: Intervention Type Usage by School Level

	School level				
Intervention	PS, *n(%)*	MS, *n(%)*	HS, *n(%)*	COMS, *n(%)*	X^2 Sig.
Culture Change					
C0174 Prevention Curriculum/Instruction/Training					
Yes	620 (27.7%)	818 (36.6%)	708 (31.7%)	88 (4.0%)	<.001
No	64 (15.5%)	91 (22.0%)	240 (58.0%)	19 (4.5%)	
C0266 Teacher Training-Classroom Management					
Yes	557 (26.5%)	729 (34.7%)	738 (35.1%)	77 (3.7%)	.07
No	127 (23.2%)	180 (32.9%)	210 (38.4%)	30 (5.5%)	
C0268 Teacher Training-Discipline Policies					
Yes	412 (24.1%)	609 (35.7%)	626 (36.7%)	60 (3.5%)	.01
No	272 (28.9%)	300 (31.9%)	322 (36.7%)	47 (5.0%)	
C0272 Teacher Training-Early Warning Signs for Violent Behavior					
Yes	295 (23.0%)	460 (35.8%)	485 (37.7%)	45 (3.5%)	.003
No	389 (28.5%)	449 (32.9%)	463 (34.0%)	62 (4.5%)	
C0276 Teacher Training-Positive Behavioral Intervention					
Yes	576 (28.1%)	733 (35.8%)	671 (32.8%)	67 (3.3%)	<.001
No	108 (18.0%)	176 (29.3%)	277 (46.1%)	40 (6.7%)	
C0186 Promote Sense of Community/Integration					
Yes	582 (26.5%)	774 (35.3%)	761 (34.7%)	77 (3.5%)	<.001
No	102 (22.5%)	135 (29.7%)	187 (41.2%)	30 (6.6%)	
Conflict Transformation Education					
C0184 Student Involvement Resolving Problems					
Yes	324 (23.6%)	483 (35.1%)	522 (38.0%)	46 (3.3%)	.004
No	360 (28.3%)	426 (33.5%)	426 (33.5%)	61 (4.8%)	
Restorative Justice/Discipline					
C0442 School Probation Available					
Yes	297 (17.3%)	614 (35.7%)	738 (42.9%)	70 (4.1%)	<.001
No	387 (41.7%)	295 (31.8%)	210 (22.6%)	37 (4.0%)	
C0446 Detention/Saturday School Available					
Yes	373 (17.5%)	807 (37.9%)	862 (40.5%)	87 (4.1%)	<.001
No	311 (59.9%)	102 (19.7%)	86 (16.6%)	20 (3.9%)	
C0450 Loss of Student Privileges Available					
Yes	636 (25.0%)	875 (34.4%)	924 (36.4%)	106 (4.2%)	<.001
No	48 (44.9%)	34 (31.8%)	24 (22.4%)	1 (.9%)	
C0454 Require Community Service Available					
Yes	162 (16.1%)	364 (36.3%)	450 (44.8%)	28 (2.8%)	<.001
No	522 (31.8%)	545 (33.2%)	498 (30.3%)	79 (4.8%)	
C0208 Community Involvement-Juvenile Justice					
Yes	147 (10.8%)	496 (36.6%)	655 (48.3%)	59 (4.3%)	<.001
No	537 (41.6%)	413 (32.0%)	293 (22.7%)	48 (3.7%)	
Mental Health					
C0176 Behavioral Modification for Students					
Yes	649 (26.9%)	852 (35.3%)	818 (33.9%)	92 (3.8%)	<.001
No	35 (14.8%)	57 (24.1%)	130 (54.9%)	15 (6.3%)	
C0178 Student Counseling/Social Work					
Yes	644 (25.9%)	873 (35.1%)	871 (35.0%)	98 (3.9%)	.002
No	40 (24.7%)	36 (22.2%)	77 (47.5%)	9 (5.6%)	
C0212 Community Involvement-Mental Health					
Yes	293 (19.1%)	534 (34.8%)	642 (41.8%)	66 (4.3%)	<.001
No	391 (35.1%)	375 (33.7%)	306 (27.5%)	41 (3.7%)	

Intervention (INT), Primary School (PS), Middle School (MS, High School (HS), Combined Schools (COMS)

Table 11: ANOVA Analyses of Covariates with SVI and DAR, n=2648

Covariates	n(%) of Schools	SVI, *M (SD)*	F Sig.	DAR, *M (SD)*	F Sig.
School level					
PS	684 (25.8%)	.48 (2.23)		6.44 (15.95)	
MS	909 (34.3%)	1.04 (6.37)		20.48 (44.88)	
HS	948 (35.8%)	1.28 (3.78)		19.73 (43.97)	
COM	107 (4.0%)	.48 (1.80)	< .001	13.90 (45.34)	< .001
School size, number of students					
<300	304 (11.5%)	.30 (1.37)		4.35 (8.62)	
300-499	526 (19.9%)	.60 (3.21)		7.71 (12.42)	
500-999	1009 (38.1%)	.68 (2.86)		15.83 (41.29)	
1000+	809 (30.6%)	1.78 (6.98)	< .001	27.03 (51.56)	< .001
School urbanicity					
Urban	703 (26.5%)	1.49 (6.25)		20.88 (41.45)	
Suburban	881 (33.3%)	1.01 (4.74)		18.62 (51.06)	
Town	391 (14.8%)	.64 (2.63)		12.38 (19.43)	
Rural	673 (25.4%)	.53 (2.49)	< .001	10.84 (25.97)	< .001
Minority student population					
Less than 5% Minority	336 (12.7%)	.42 (1.80)		8.46 (16.61)	
Between 5 & 20% Minority	715 (27.0%)	.51 (2.65)		9.98 (37.22)	
20 % to 50% Minority	703 (26.5%)	.95 (3.25)		15.70 (21.06)	
Over 50% Minority	894 (33.8%)	1.53 (6.72)	< .001	24.83 (54.36)	< .001

Table 12: Bivariate Poisson Regression – SVI Main Effects of Intervention Types

Intervention	AIC	BIC	Omnibus Likelihood Ratio X^2	Predictor Wald X^2	β	Exp β/CI 95%
Culture Change						
Prevention Curriculum/Instruction/Training	13274.7	13286.4	55.1 ***	48.9 ***	.452	1.571 (1.384-1.783) ***
Teacher Training-Classroom Management	13261.2	13272.9	68.6 ***	61.8 ***	.446	1.561 (1.397-1.745) ***
Teacher Training-Discipline Policies	13218.0	13229.7	111.8 ***	104.4 ***	.464	1.590 (1.454-1.738) ***
Teacher Training-Early Warning Signs for Violent Behavior	13254.4	13266.2	75.3 ***	74.4 ***	.346	1.413 (1.306-1.529) ***
Teacher Training-Positive Behavioral Intervention	13326.9	13338.6	2.9	2.8	.081	1.085 (.987-1.193)
Promote Sense of Community/Integration	13329.6	13341.3	.156	.157	-.021	.980 (.884-1.085)
Conflict Transformation Education						
Student Involvement Resolving Problems	13313.9	13325.7	15.8 ***	15.8 ***	.159	1.172 (1.084-1.267) ***
Restorative Justice/Discipline						
School Probation Available	13178.0	13189.7	151.8 ***	139.0 ***	.549	1.732 (1.581-1.898) ***
Detention/Saturday School Available	13208.3	13220.1	121.4 ***	130.4 ***	.633	1.884 (1.667-2.129) ***
Loss of Student Privileges Available	13250.9	13262.7	78.8 ***	48.9 ***	1.329	3.778 (2.603-5.483) ***
Require Community Service Available	13024.8	13036.5	305.0 ***	304.0 ***	.695	2.005 (1.854-2.168) ***
Community Involvement-Juvenile Justice	13131.7	13143.5	198.0 ***	189.3 ***	.573	1.773 (1.634-1.924) ***
Mental Health						
Behavioral Modification for Students	13264.9	13276.6	64.9 ***	52.6 ***	.676	1.965 (1.637-2.359) ***
Student Counseling/Social Work	13294.3	13306.1	35.4 ***	29.4 ***	.585	1.795 (1.453-2.217) ***
Community Involvement-Mental Health	13168.8	13180.5	160.9 ***	151.3 ***	.533	1.705 (1.566-1.856) ***

Table 13: Bivariate Poisson Regression – DAR Main Effects of Intervention Types

Intervention	AIC	BIC	Omnibus Likelihood Ratio X^2	Predictor Wald X^2	β	Exp β/CI 95%
Culture Change						
Prevention Curriculum/Instruction/Training	93651.860	93663.623	16.5 ***	16.3 ***	.055	1.056 (1.028-1.084) ***
Teacher Training-Classroom Management	93353.785	93365.549	314.6 ***	300.0 ***	.220	1.247 (1.216-1.178) ***
Teacher Training-Discipline Policies	92602.147	92613.910	1066.2 ***	1018.2 ***	.341	1.407 (1.378-1.437) ***
Teacher Training-Early Warning Signs for Violent Behavior	93630.459	93642.222	37.9 ***	37.9 ***	.059	1.061 (1.041-1.081) ***
Teacher Training-Positive Behavioral Intervention	93667.987	93679.751	.402	.401	.007	1.007 (.985-1.030)
Promote Sense of Community/Integration	93660.666	93672.429	7.7 *	7.7 *	.036	1.036 (1.010-1.063) **
Conflict Transformation Education						
Student Involvement Resolving Problems	93467.833	93479.596	200.6 ***	199.7 ***	.137	1.147 (1.125-1.168) ***
Restorative Justice/Discipline						
School Probation Available	91842.152	91853.915	1826.2 ***	1705.3 ***	.456	1.577 (1.543-1.612) ***
Detention/Saturday School Available	90674.389	90686.152	2994.0 ***	2426.1 ***	.792	2.207 (2.139-2.278) ***
Loss of Student Privileges Available	93505.018	93516.781	163.4 ***	146.2 ***	.347	1.415 (1.338-1.497) ***
Require Community Service Available	92448.611	92460.374	1219.8 ***	1236.2 ***	.339	1.404 (1.378-1.431) ***
Community Involvement-Juvenile Justice	92431.355	92443.118	1237.0 ***	1215.8 ***	.342	1.408 (1.381-1.435) ***
Mental Health						
Behavioral Modification for Students	92978.261	92990.024	690.1 ***	591.6 ***	.510	1.665 (1.598-1.735) ***
Student Counseling/Social Work	93475.375	93487.138	193.0 ***	175.7 ***	.305	1.357 (1.297-1.419) ***
Community Involvement-Mental Health	93047.826	93059.589	620.6 ***	608.0 ***	.247	1.280 (1.255-1.305) ***

Akaike's Information Criterion (AIC), Bayesian Information Criterion (BIC)
$p < .05$*, $p < .01$**, $p < .001$***

Table 14: CFA and Creation of Intervention Factor Scores

Variable	RMSEA	RMSEA 95% CI	Chi-square	CFI	TLI	Sig.
Culture Change	.076	.065-.087	145.640	.958	.930	<.001
Conflict Transformation Education	n/a	n/a	n/a	n/a	n/a	n/a
Restorative Justice/Discipline	.024	.007-.041	12.421	.988	.977	.03
Mental Health	.000	.000-.000	.000	1.00	1.00	<.001

Table 15: Bivariate Poisson Latent Variables – Intervention Factor Scores and Outcomes

Intervention	AIC	BIC	Omnibus Likelihood Ratio X^2	Predictor Wald X^2	β	Exp β/CI 95%
Serious Violent Incidents (SVI)						
Culture Change	13225.3	13237.1	104.4 ***	97.8 ***	.137	1.147 / 1.116-1.179 ***
Conflict Transformation Education	13313.9	13325.7	15.8 ***	15.8 ***	-.159	.853 / .789-.923 ***
Restorative Justice/Discipline	12783.9	12795.7	545.8 ***	492.7 ***	.422	1.525 / 1.469-1.583 ***
Mental Health	13117.6	13129.4	212.1 ***	185.5 ***	.470	1.600 / 1.496-1.712 ***
Disciplinary Actions Recorded (DAR)						
Culture Change	93337.5	93349.3	330.9 ***	322.6 ***	.57	1.059 / 1.052-1.065 ***
Conflict Transformation Education	93467.8	93479.6	200.6 ***	199.7 ***	-.137	.872 / .856-.889 ***
Restorative Justice/Discipline	89309.3	89321.1	4359.1 ***	4101.7 ***	.280	1.323 / 1.312-1.335 ***
Mental Health	92569.5	92581.3	1098.8 ***	1025.6 ***	.244	1.277 / 1.258-1.296 ***

Akaike's Information Criterion (AIC), Bayesian Information Criterion (BIC)
$p < .05$*, $p < .01$**, $p < .001$***

Table 16: Bivariate Poisson Dichotomized Covariate Main Effect

Variable	AIC	BIC	Omnibus Likelihood Ratio X^2	Predictor Wald X^2	β	Exp β/CI 95%
Serious Violent Incidents (SVI)						
Race % (50% + Minority)	12901.033	12912.796	428.700 ***	431.764 ***	.827	2.286 (2.115-2.472) ***
Urbanicity (Urban)	13075.147	13086.910	254.587 ***	268.957 ***	.661	1.937 (1.790-2.096) ***
Level (MS-HS)	13024.191	13035.954	305.543 ***	251.463 ***	.881	2.414 (2.165-2.691) ***
Size (1000+ students)	12579.449	12591.212	750.284 ***	749.722 ***	1.097	2.995 (2.769-3.240) ***
Disciplinary Actions Recorded (DAR)						
Race % (50% + Minority)	88019.837	88031.600	5648.552 ***	5734.609 ***	.729	2.073 (2.034-2.112) ***
Urbanicity (Urban)	92510.691	92522.454	1157.698 ***	1207.067 ***	.353	1.423 (1.395-1.452) ***
Level (MS-HS)	87365.147	87376.910	6303.242 ***	5013.475 ***	.993	2.698 (2.625-2.773) ***
Size (1000+ students)	86147.607	86159.370	7520.782 ***	7715.659 ***	.845	2.328 (2.285-2.373) ***

Akaike's Information Criterion (AIC), Bayesian Information Criterion (BIC)
$p < .05$*, $p < .01$**, $p < .001$***

Table 17: Multivariate Poisson Latent Variable and Covariate Interaction – SVI and CC

Model	AIC	BIC	Omnibus Likelihood Ratio X^2	Predictor Effect Wald X^2	β	Exp β (CI 95%)	Tolerance
Model 1 (Bivariate)							
CC	13225.326	13237.090	104.407***	97.769***	.137	1.147 (1.116 – 1.179)	N/A
Model 2 (Covariates)	12053.990	12089.279	1283.743***				
CC				44.102***	.091	1.095 (1.066 - 1.125)	.986
Race				227.414***	.652	1.920 (1.764-2.090)	.871
Level				80.598***	.538	1.713 (1.523-1.926)	.863
Urbanicity				40.360***	.279	1.321 (1.212-1.440)	.842
Size				374.258***	.842	2.320 (2.130-2.526)	.849
Model 3 (With RJ/D)	11864.692	11905.863	1475.041***				
CC				27.325***	.072	1.074 (1.046-1.103) ***	.978
Race				224.456***	-.649	.523 (.480-.569) ***	.849
Level				14.900***	-.244	.783 (.692-.887) ***	.735
Urbanicity				38.001***	-.271	.763 (.700-.831) ***	.842
Size				307.818***	-.768	.464 (.426-.506) ***	.851
RJ/D				181.951***	.279	1.322 (1.270-1.377) ***	.781
Model 4 (With Interaction)	11789.035	11836.087	1552.699***				
CC				52.725***	-.325	.723 (.662-.789) ***	.113
Race				210.887***	.631	1.879 (1.726-2.046) ***	.735
Level				15.944***	.253	1.288 (1.138-1.458) ***	.851
Urbanicity				39.027***	.275	1.316 (1.208-1.435) ***	.842
Size				308.765***	.771	2.161 (1.983-2.356) ***	.847
RJ/D				14.416***	-.221	.802 (.715-.899) ***	.101
CC* RJ/D				82.472***	.108	1.114 (1.089-1.141) ***	.053

Akaike's Information Criterion (AIC), Bayesian Information Criterion (BIC)
$p < .05$*, $p < .01$**, $p < .001$***

Table 18: Multivariate Poisson Latent Variable & Dichotomized Covariate Interaction – SVI and MH

Model	AIC	BIC	Omnibus Likelihood Ratio X^2	Predictor Effect Wald X^2	β	Exp β (CI 95%)	Tolerance
Model 1 (Bivariate)							
MH	13231.483	13243.247	98.250***	71.453***	.966	2.628 (2.100-3.288) ***	N/A
Model 2 (Covariates)	12031.022	12066.311	1306.712***				
MH				52.742***	.831	2.295 (1.834-2.872) ***	.996
Race				232.133***	.657	1.929 (1.773-2.099) ***	.849
Level				83.578***	.548	1.729 (1.538-1.944) ***	.871
Urbanicity				47.309***	.301	1.351 (1.240-1.472) ***	.846
Size				373.037***	.839	2.314 (2.125-2.520) ***	.863
Model 3 (With RJ/D)	11837.912	11879.083	1501.821***				
MH				43.202 ***	.753	2.123 (1.696-2.657) ***	.991
Race				229.883 ***	.654	1.924 (1.768-2.093) ***	.849
Level				15.558 ***	.250	1.283 (1.134-1.453) ***	.735
Urbanicity				43.119 ***	.288	1.333 (1.224-1.453) ***	.846
Size				304.173 ***	.763	2.144 (1.968-2.336) ***	.851
RJ/D				185.862 ***	.282	1.326 (1.273-1.380) ***	.784
Model 4 (With Interaction)	11865.914	11912.966	1475.820***				
MH				1.254	-.172	4.006 (1.701-9.439) **	.107
Race				232.253***	.659	1.923 (1.767-2.092) ***	.732
Level				15.570***	.250	1.285 (1.135-1.455) ***	.846
Urbanicity				40.789***	.280	1.332 (1.223-1.452) ***	.846
Size				297.772***	.757	2.145 (1.968-2.223) ***	.849
RJ/D				142.273***	.207	1.569 (1.261-1.952) ***	.088
MH*RJ/D				6.525**	.102	.840 (.674-1.049)	.042

Akaike's Information Criterion (AIC), Bayesian Information Criterion (BIC)
$p < .05$*, $p < .01$**, $p < .001$***

Table 19: Multivariate Poisson Latent Variable & Dichotomized Covariate Interaction – SVI and CTE

Model	AIC	BIC	Omnibus Likelihood Ratio X^2	Predictor Effect Wald X^2	β	Exp β (CI 95%)	Tolerance
Model 1 (Bivariate)							
CTE	13313.888	13325.651	15.845***	15.764***	.159	1.172 (1.084-1.267) ***	N/A
Model 2 (Covariates)	12098.207	12133.497	1239.526***				
CTE				1.961	-.057	.945 (.873-1.023) ***	.978
Race				244.963***	.679	1.972 (1.811-2.147) ***	.845
Level				82.241***	.543	1.722 (1.531-1.936) ***	.870
Urbanicity				45.614***	.296	1.344 (1.234-1.465) ***	.846
Size				386.469***	.857	2.356 (2.163-2.566) ***	.858
Model 3 (With RJ/D)	11885.014	11926.185	1454.719***				
CTE				8.020*	-.115	.891 (.823-.965) *	.974
Race				245.684***	.680	1.975 (1.814-2.150) ***	.845
Level				13.885***	.235	1.265 (1.118-1.432) ***	.736
Urbanicity				40.918***	.280	1.324 (1.215-1.443) ***	.846
Size				317.268***	.782	2.185 (2.005-2.381) ***	.847
RJ/D				204.306***	.297	1.346 (1.293-1.402) ***	.784
Model 4 (With Interaction)	11825.276	11872.329	1516.457***				
CTE				45.724***	1.047	2.848 (2.103-3.858) ***	.115
Race				255.094***	.693	2.000 (1.837-2.178) ***	.735
Level				11.498***	.214	1.239 (1.095-1.402) ***	.844
Urbanicity				35.910***	.263	1.301 (1.194-1.418) ***	.845
Size				326.779***	.793	2.210 (2.028-2.409) ***	.844
RJ/D				232.496***	.474	1.606 (1.510-1.707) ***	.091
CTE*RJ/D				61.160***	-.304	.738 (.683-.796) ***	.050

Akaike's Information Criterion (AIC), Bayesian Information Criterion (BIC)
$p < .05$*, $p < .01$**, $p < .001$***

Table 20: Multivariate Poisson Latent Variable & Dichotomized Covariate Interaction – DAR and CC

Model	AIC	BIC	Omnibus Likelihood Ratio X^2	Predictor Effect Wald X^2	β	Exp β (CI 95%)	Tolerance
Model 1 (Bivariate)							
CC	93337.540	93349.303	330.849***	322.623***	.057	1.059 (1.052-1.065) ***	N/A
Model 2 (Covariates)	78013.708	78048.997	15662.681***				
CC				64.563***	.025	1.025 (1.019-1.032) ***	.986
Race				4547.231***	.702	2.018 (1.977-2.060) ***	.849
Level				2847.544***	.791	2.205 (2.142-2.270) ***	.871
Urbanicity				.027	.002	1.002 (.980-1.024) ***	.842
Size				3038.221***	.565	1.759 (1.724-1.795) ***	.863
Model 3 (With RJ/D)	77318.445	77359.616	16359.944***				
CC				27.656***	.017	1.017 (1.010-1.023) ***	.978
Race				4533.635***	.701	2.016 (1.976-2.058) ***	.849
Level				1756.44***	.656	1.926 (1.868-1.986) ***	.735
Urbanicity				.032	-.002	.998 (.977-1.020)	.842
Size				2636.835***	.530	1.699 (1.665-1.734) ***	.851
RJ/D				683.711***	.126	1.135 (1.124-1.145) ***	.781
Model 4 (With Interaction)	77311.481	77358.534	16368.908***				
CC				1.769	-.014	.986 (.965-1.007)	.113
Race				4509.199***	.700	2.014 (1.973-2.055) ***	.735
Level				1756.506***	.656	1.926 (1.868-1.986) ***	.851
Urbanicity				.020	-.002	.998 (.977-1.020) ***	.842
Size				2638.582***	.531	1.700 (1.666-1.735) ***	.847
RJ/D				39.660***	.087	1.091 (1.062-1.121) ***	.101
CC* RJ/D				8.990**	.009	1.003 (1.003-1.014) **	.053

Akaike's Information Criterion (AIC), Bayesian Information Criterion (BIC)
$p < .05$*, $p < .01$**, $p < .001$***

Table 21: Multivariate Poisson Latent Variable & Dichotomized Covariate Interaction – DAR and MH

Model	AIC	BIC	Omnibus Likelihood Ratio X^2	Predictor Effect Wald X^2	β	Exp β (CI 95%)	Tolerance
Model 1 (Bivariate)							
MH	93084.201	93095.964	584.188***	500.840***	.500	1.649 (1.579-1.723) ***	N/A
Model 2 (Covariates)	77738.158	77773.447	15938.231***				
MH				302.794***	.390	1.477 (1.413-1.543) ***	.996
Race				4512.221***	.698	2.010 (1.970-2.051) ***	.849
Level				2871.142***	.794	2.212 (2.149-2.277) ***	.871
Urbanicity				.833	.010	1.010 (.989-1.032) ***	.846
Size				2995.125***	.561	1.752 (1.717-1.787) ***	.863
Model 3 (With RJ/D)	77067.755	77108.926	16610.634***				
MH				250.314***	.355	1.426 (1.365-1.490) ***	.991
Race				4496.476***	.697	2.008 (1.967-2.049) ***	.849
Level				1785.466***	.661	1.937 (1.879-1.998) ***	.735
Urbanicity				.137	.004	1.004 (.983-1.026) ***	.846
Size				2594.738***	.526	1.692 (1.658-1.727) ***	.851
RJ/D				660.007***	.124	1.132 (1.121-1.142) ***	.784
Model 4 (With Interaction)	77275.128	77322.181	16405.261***				
MH				63.524***	.276	1.318 (1.232-1.411) ***	.107
Race				4561.103***	.702	2.019 (1.978-2.060) ***	.732
Level				1707.506***	.647	1.910 (1.852-1.969) ***	.846
Urbanicity				.003	.001	1.001 (.979-1.022)	.846
Size				2643.356***	.532	1.703 (1.669-1.738) ***	.849
RJ/D				642.790***	.157	1.170 (1.154-1.186) ***	.088
MH*RJ/D				44.875***	-.062	.940 (.923-.957) ***	.042

Akaike's Information Criterion (AIC), Bayesian Information Criterion (BIC)
p < .05*, p <.01**, p < .001***

Table 22: Multivariate Poisson Latent Variable & Dichotomized Covariate Interaction – DAR and CTE

Model	AIC	BIC	Omnibus Likelihood Ratio X^2	Predictor Effect Wald X^2	β	Exp β (CI 95%)	Tolerance
Model 1 (Bivariate)							
CTE	93467.833	93479.596	200.556***	199.739***	.137	1.147 (1.125-1.168) ***	N/A
Model 2 (Covariates)	78054.622	78089.912	15621.767***				
CTE				24.449***	-.048	.953 (.935-.971) ***	.978
Race				4657.141***	.713	2.039 (1.998-2.082) ***	.845
Level				2863.626***	.793	2.211 (2.147-2.276) ***	.870
Urbanicity				.429	.007	1.007 (.986-1.029)	.846
Size				3106.037***	.573	1.774 (1.738-1.810) ***	.858
Model 3 (With RJ/D)	77289.966	77331.137	16388.423***				
CTE				56.488***	-.074	.929 (9.11-.947) ***	.974
Race				4661.499***	.713	2.041 (1.999-2.083) ***	.845
Level				1747.634***	.654	1.922 (1.864-1.982) ***	.736
Urbanicity				.004	.001	1.001 (.979-1.022) ***	.846
Size				2698.945***	.538	1.713 (1.678-1.748) ***	.847
RJ/D				751.254***	.133	1.142 (1.131-1.153) ***	.784
Model 4 (With Interaction)	77239.659	77286.712	16440.730***				
CTE				82.626***	-.311	.733 (.685-.783) ***	.115
Race				4615.586***	.710	2.035 (1.994-2.077) ***	.735
Level				1774.152***	.660	1.935 (1.876-1.995) ***	.844
Urbanicity				.112	.004	1.004 (.982-1.026	.845
Size				2661.407***	.535	1.707 (1.673-1.743) ***	.844
RJ/D				704.478***	.097	1.101 (1.086-1.116) ***	.091
CTE*RJ/D				52.289***	.065	1.067 (1.049-1.086) ***	.050

Akaike's Information Criterion (AIC), Bayesian Information Criterion (BIC)
$p < .05$*, $p < .01$**, $p < .001$***