It Takes All of Us: An Equity-Centered Examination of Comprehensive School Safety and Youth Violence Prevention in K-12 Schools

by

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Abstract

School violence is a critical and prevalent problem in the U.S., but little is known about evidence-based strategies to improve school safety and reduce school violence. The work presented in this dissertation provides a comprehensive examination of evaluation, evidence, and measurement of school safety efforts to build the evidence base for school safety and youth violence prevention in K-12 schools.

In my first empirical paper, I found that students who attended a school-based violence prevention program (Sandy Hook Promise *Know the Signs)* reported greater school climate indicators post-programming when compared to their baseline scores. Further, I found that students who attended *Know the Signs* reported more positive school climate indicators, including school connectedness and community perceptions, than non-attendees. This information can be used to inform future school safety strategies. These findings provide additional nuance to existing evidence that a positive school climate prevents violence and improves safety.

In my second empirical paper, I systematically reviewed the literature and found limited empirical evaluations of interventions to address race disparities in school discipline practices. I discovered that school programs such as Positive Behavioral Interventions and Supports (PBIS), Social-Emotional Learning (SEL), and Restorative Practices (RP) are most likely to mitigate race-based disparities in school discipline when they are implemented with an intentional focus on race and cultural relevance. I identify a need for interventions that challenge the biases of

those with the power and authority to enforce discipline on students. This means interventions tailored to educators and school leaders, such as staff professional development opportunities, teaching training, school or district policies, or a combination of these approaches, may address the root causes of disparities.

Finally, in my third empirical paper, I examined a measurement model of social justice components (inclusion, diversity, equity, appreciation, solidarity; IDEAS) among middle school-aged youth. In a structural equation model, I found that my measure of social justice was associated with more social connections and less discrimination across diverse youth. Notably, my general measure of social justice is associated with an identify-specific assessment of relational outcomes for youth. Thus, a general but comprehensive measurement of social justice can be a valuable tool for future research on preventing youth violence. Further, my social justice measure may be used to study program effects of interventions designed to improve adolescents' positive youth development in an equity-centered way (e.g., trauma-informed programs).

The findings of this present dissertation provide novel and timely information for the field of school safety. With the research presented in this dissertation, I employed a strengths-based, comprehensive, equity-centered approach to promoting positive youth development and creating safe and equitable schools for all students.

Chapter 1 The Importance of School Safety

Dissertation Studies Overview

The topic of my dissertation is an examination of youth violence prevention and comprehensive school safety efforts through an equity lens. This involves supporting, protecting, and advocating for students of all backgrounds in K-12 educational spaces. Schools are supposed to be safe spaces for youth to learn, grow, and develop positively overall. When those spaces are unsafe, it compromises the overall goal of schools, which is a problem for positive youth development and the future of society at large. Not feeling safe at school disproportionately affects students who have minority identities, such as students of color. Therefore, it is crucial to center school safety efforts in equity. A comprehensive approach to school safety, which includes context-specific strategies and an ecological framework, is imperative to ensure that schools have the tools, resources, and knowledge to create safe learning environments for all students.

To address this problem, I will examine existing efforts in K-12 schools and their effect on preventing youth violence and promoting safe and equitable schools in three related papers. Specifically, I examine (1) the effectiveness of a school violence prevention program for high school students in an urban school district, (2) interventions to reduce racial disproportionality in school discipline practices using systematic review methodology, and (3) the psychometric properties of a self-report measure to assess social justice beliefs and actions and the relationship to behavioral outcomes for middle school youth. With these three studies, I strive to develop a

holistic understanding of comprehensive school safety and violence prevention to develop best practices for cultivating safe school environments for all students.

School Violence: Causes and Consequences

School violence is a significant problem in the U.S. During the 2017-18 school year, 80 percent of public schools reported having one or more incidents of violence, and approximately 37 instances of victimization happened at school per 1,000 students aged 12-14 (Wang et al., 2020). Specific incidents of school violence, such as shootings, injury with a weapon, and physical fights, continue to rise at alarming rates. In 2019, 7.4% of high school students were threatened or injured with a weapon at school, and 22% of high school students reported that they were involved in a physical fight (Centers for Disease Control and Prevention, 2019). In addition, 8.7% of high school students did not go to school at least once in the past month due to safety concerns during the 2019 school year (Centers for Disease Control and Prevention, 2019). School shootings have increased in prevalence from 15 occurrences in 2010 to 305 school shootings reported in 2022 (Duwe, 2020; Katsiyannis et al., 2023; Riedman, 2024). In addition, firearm injuries are now the leading cause of death among U.S. children and teens, with an 87% increase in firearm-involved fatalities over ten years (Mannix et al., 2023). Violent and aggressive behaviors (e.g., bullying, fighting, weapon carriage) can cause both emotional and physical harm to young people and may lead to serious injury and death.

Violence and victimization within school communities can have detrimental consequences for healthy youth development (Flannery et al., 2004; Sullivan et al., 2006) and the overall school climate (Cornell & Mayer, 2010; Robers et al., 2013; Thapa et al., 2013). Exposure to violence, aggressive behavior, and victimization at school have associations with subsequent internalizing outcomes (e.g., anxiety, depression) and externalizing behavior (e.g.,

substance use, physical aggression; Arseneault et al., 2010; Burdick-Will, 2013; Rigby, 2003; Salazar et al., 2004; Salmon & West, 2000; Shetgiri, 2013; Smokowski & Kopasz, 2005). School violence exposure may also lead to an increase in weapon carrying, perpetrating school shootings, and homicides (Anderson et al., 2003; Salmon & West, 2000; Smokowski & Kopasz, 2005). These effects have been shown to persist until at least young adulthood (Arseneault et al., 2010; Macmillan, 2000; Macmillan & Hagan, 2004; Turanovic et al., 2015) and can be precursors for involvement in the criminal justice system (Loeber et al., 1991; Loeber & Stouthamer-Loeber, 1998; Turanovic et al., 2015) and the development of chronic health conditions (Hsieh et al., 2017, 2020).

What is School Safety, and Why Does it Matter?

Safe schools are essential to preventing youth violence and fostering academic achievement, prosocial behavior, and overall well-being (Biglan et al., 2012; Cohen et al., 2009; Cohen & Geier, 2010; Kutsyuruba et al., 2015; Thapa et al., 2013). School safety is when students are safe from violence, including bullying, harassment, and substance use, at school and school-related activities (U.S. Department of Education Office of Safe and Supportive Schools 2024). Researchers and practitioners have studied and implemented several strategies to promote school safety. These strategies include anonymous reporting systems (Messman et al., 2022), school resource officers (Zhang, 2019), deterrent measures like metal detectors and door locks (Palmerin, 2022), climate (Thapa et al., 2013), and crisis interventions (Sokol et al., 2021).

Adolescents spend a significant amount of time at school; therefore, a better understanding of school violence and its effects is needed (Arnett, 2013). Violence exposure at school can become a source of chronic stress for youth, given the amount of time they spend in the school context. School violence can induce a constant sense of fear and perceptions of school

as an unpredictable environment, invoking anxiety among students (Oliphant et al., 2019). Further, school violence can have detrimental effects on youth's self-esteem (Frankenhuis et al., 2016). This low self-esteem and psychological stress may, in turn, deteriorate youth's connections with peers and adults (Sullivan et al., 2006), expectations about their future (Stoddard et al., 2013), and their engagement with school (Borofsky et al., 2013; Flannery et al., 2004; Schmeelk-Cone & Zimmerman, 2003), consequently increasing the risks of perpetrating victimization and aggressive behavior (Stoddard et al., 2011).

Despite the prevalence of school violence and the negative implications it can have on a school community, researchers consistently demonstrate that it is preventable (Alathari et al., 2019; Hsieh et al., 2023). In a sample of 41 occurrences of violence in K-12 schools between 2008 and 2017, most instances of targeted violence, including school shootings, were predictable and preventable (Alathari et al., 2019). Researchers suggest schools adopt a comprehensive, multidisciplinary, evidence-based approach to school safety to prevent such violence (Astor et al., 2010; Espelage et al., 2023). After a review of the literature on comprehensive school safety, Nickerson and colleagues (2021) offer several recommendations for promoting school safety. These recommendations are: (a) cultivate a positive school climate; (b) provide programming to promote social-emotional development; (c) report signs of violence and conduct threat assessments; (d) mitigate violence through training, safe school design, and security; and (e) respond appropriately to crisis. In addition to these recommendations, I argue that equitable practices (e.g., culturally relevant programs) are a foundational and essential facet of comprehensive school safety.

The Importance of Equity in School Safety Efforts

School safety efforts grounded in equity prioritize countering institutionalized privilege, inequality, and prejudice while promoting the success and well-being of students from minoritized backgrounds (Osher et al., 2020). One example is Transformative Social-Emotional Learning (SEL), which integrates culture, identity, agency, belonging, and engagement into mainstream SEL programming (Jagers et al., 2019). Without these justice-oriented principles, SEL has been described as "white supremacy with a hug" (Simmons, 2021, p. 31). Moreover, schools that strive for equity in education focus on fairness and inclusivity and minimize barriers to success so all students can have an equal opportunity to achieve their potential (OECD, 2012). For example, schools might offer fee waivers for college entrance exams to students of low socioeconomic status, eliminating the financial barrier that may not affect students from middle or upper-class families to the same degree.

When violence occurs in schools, educators and administrators often rely on exclusionary discipline practices (e.g., suspension) and zero-tolerance policies, and these approaches have been shown to disproportionately affect students belonging to marginalized racial identities (Mittleman, 2018). Alternative safety practices that schools have begun adopting instead include School-Wide Positive Behavioral Supports (SWPBIS), Social-Emotional Learning (SEL), and Restorative Practices (RP), all of which have the goal of promoting youth social skills, emotion regulation, and trust in the school community. While these strategies have the potential to be more equitable than exclusionary discipline and zero-tolerance policy, rigorous study has yet to demonstrate consistent equitable outcomes (Skiba et al., 2022). In a nationwide study of schools implementing SWPBIS, Skiba and colleagues (2011) found that racial disparities in school

suspension rates remained high even when implemented with fidelity. Similar results have been found in studies evaluating SEL (Gregory & Fergus, 2017) and RP (González, 2015).

Espelage and colleagues (2023) synthesize evidence on equity-based school safety strategies and provide recommendations for schools. They point to the need for programs and policies that are culturally relevant and specifically prioritize the safety and well-being of marginalized students (Espelage et al., 2023). Many school safety programs, such as SEL, were developed and tested for white students, thus failing to incorporate the needs of students of color (Camangian & Cariaga, 2022). This helps to explain why, even when implemented with fidelity, well-intentioned programming such as SEL does not benefit students of all racial backgrounds equally. Developing and evaluating school safety programming with equity at the center is paramount to promoting the safety of all students. Schools might do this by developing multidisciplinary safety teams that include the perspectives of students of color, providing professional development opportunities for school community members focused on implicit bias, and holding affinity groups for students to discuss their unique lived experiences (Espelage et al., 2023).

How Does Racism Influence School Safety and Violence?

Racism, which can include interpersonal discrimination and structural barriers, is a common experience for students of color (Helms et al., 2012; Seaton et al., 2008). Racism can lead to violence at school in a few ways. First, interpersonal racism, or racism that is perpetrated from one person to another, is a significant source of psychological stress (Harrell, 2000; Steele et al., 2002), which can increase the risk of violence among youth (Caldwell et al., 2004; Stewart & Simons, 2010). In addition, structural racism, defined as racially discriminatory policies and practices across multiple, interconnected social institutions (Bailey et al., 2017; Viruell-Fuentes

et al., 2012), causes students of color to be more likely to encounter community-level risk factors associated with violence compared to their white peers (Stewart & Simons, 2010; Zimmerman & Messner, 2010). A consequence of both interpersonal and structural racism is that it can cultivate interracial mistrust, fear, and hostility, leading to youth violence (Beelmann & Heinemann, 2014; Forman & Lewis, 2015). This can have implications for feeling safe at school, causing students of color to disengage or leave school altogether.

Racial disparities in school violence have been consistently documented and disproportionately affect Black and Latinx youth (Galán et al., 2021; Goldweber et al., 2013; Li et al., 2020; Peguero, 2012; Peguero & Williams, 2013). Researchers have posited that interpersonal and structural racism contribute to racial disparities in school violence (Bailey et al., 2017; Viruell-Fuentes et al., 2012). It is well documented that students who identify as racial minorities experience higher rates of school violence when compared to their white peers (Cedeno et al., 2010; Peguero, 2011; Peguero et al., 2015; Sanders-Phillips, 2009). Specifically, Black, Hispanic, and American Indian/Alaska Native youth are more likely to report physical assaults, school fights, and weapon carriage compared to non-Hispanic white youth (Centers for Disease Control and Prevention, 2019). Additionally, one recent study demonstrates that students of color are disproportionately affected by factors (e.g., stereotypes, discrimination) associated with bullying perpetration by their peers, an example of interpersonal racism (Xu et al., 2020). Being a victim of bullying may contribute to the risk of youth violence and diminished health outcomes and further factor into this ongoing public health crisis. To further understand and inform how this issue might be addressed, one of my dissertation studies (Chapter 3) will examine interventions to address racism as it relates to disciplinary practices in schools.

Social Justice Beliefs and Actions among Youth

Youth social justice beliefs and actions can help facilitate safe and equitable school environments (Bublitz et al., 2024; Conner & Rosen, 2016). More broadly, social justice values can be instrumental in cultivating positive change in society. This is encouraging given that young people will be the future leaders of society. Adolescence, in particular, is a critical developmental period in which youth shape their identities, preferences, and beliefs about the world (Erikson, 1994; Tajfel, 2010). Researchers demonstrate that adolescents are civically engaged members of society, participating in protests, advocacy efforts, and political campaigns (McIntosh & Youniss, 2010; Yates & Youniss, 1999; Youniss et al., 2002). This can lead to positive outcomes, including social connectedness and overall well-being (Bublitz et al., 2024). Further, social justice beliefs among early adolescents may also lead to fewer adverse outcomes, such as violence.

Theoretical Framework

School safety has several dimensions. First, it refers to the physical and psychological well-being of students where youth feel free from threats of teasing and bullying, fighting, or more serious violent acts. School climate programs may help to ensure this. Second, school safety refers to environments that treat all students fairly and equitably. This means interpersonal and structural racism are not operating in the school, for instance. Finally, school safety refers to appropriate and relevant measurements to accurately assess and make conclusions about the school environment. One example of this would be a developmentally appropriate survey for youth perceptions or beliefs.

School safety requires a comprehensive, evidence-based approach considering multiple factors (Astor et al., 2010). Comprehensive school safety requires that all policies and systems support all students, educators, staff, administration, and school community members while

ensuring their physical, emotional, social, and psychological security (Astor et al., 2010). Researchers and practitioners recommend a multidisciplinary and coordinated approach to school violence prevention, adopting a public health model (Fagan & Catalano, 2013; Kingston et al., 2016, 2018; Mercy & Vivolo-Kantor, 2016). A comprehensive approach to school safety is critical to unify people's perspectives across different fields to guide policy, research, and practice. Further, school safety has many dimensions, including physical, emotional, social, and psychological safety, thus necessitating a comprehensive, multifaceted approach. Individually, each of these forms of safety is imperative to a student's experience and ability to learn at school. By utilizing a comprehensive framework for school safety, we can develop data-driven, empirically backed strategies to help youth develop into healthy and productive adults. Given these considerations, I use a comprehensive conceptual model that Stilwell and colleagues (2024) posited to guide this dissertation. The model (Figure 1.1) includes four key components: 1) contextual factors, 2) school safety strategies, 3) equitable response, and 4) positive youth development, which requires psychological and physical safety.

The model begins with contextual factors, which must be considered when developing a comprehensive approach to school safety (Madfis et al., 2021). These contextual factors include school policy, capacity, and caregiver and community engagement (Stilwell et al., 2024). We have no universal policies for school safety, leaving each school community to develop its own. Examples of policies that help make up the school context may include notification technology, school resource officers, and zero-tolerance. These policies may or may not improve the school environment, which I will explore in the second empirical study of this dissertation. Capacity includes funding, number and quality of staff, students, time, community and family support, and school leadership (Stilwell et al., 2024). Adequate capacity for comprehensive school safety

requires resources (e.g., time, finances), collaboration across stakeholders, support from communities, families, and students, strong school leaders, and skilled and dedicated staff. Lastly, caregiver and community engagement influence a school or district's ability to implement and sustain school safety strategies (Stilwell et al., 2024). For example, caregivers might attend local school board meetings to voice their support (or lack thereof) of a proposed school safety measure. Schools can collaborate with community organizations, such as local law enforcement or social services, to prevent violence and improve school safety. Stilwell and colleagues (2024) argue that the school context determines which safety strategies might be implemented and, further, which have the potential to be most effective.

The next part of the model is school safety strategies focusing on the school's social, attentive, and physical environments. The social environment refers to the interactions between students, staff, caregivers, and the larger community. Attentive environment refers to what people are paying attention to and whether or how they become aware of threats at school. In the first empirical study of this dissertation, I will describe the implications of a school violence prevention program on the social and attentive school environments. The physical environment refers to the characteristics of the building access points and physical structures of the school building (Stilwell et al., 2024).

Equitable strategies and responses underpin the model and are foundational to comprehensive school safety (Espelage et al., 2023). The model suggests that school safety strategies must be equitable to avoid disproportionately excluding students based on their identity (e.g., race). Failure to attend to equity in school safety efforts may have the unintended consequence of exacerbating school violence due to some students feeling isolated, ostracized, or victimized (Stillwell et al., 2024). For example, equitable school discipline practices are crucial

given the implications of school discipline, including the school-to-prison pipeline (Gottfredson & Gottfredson, 2001).

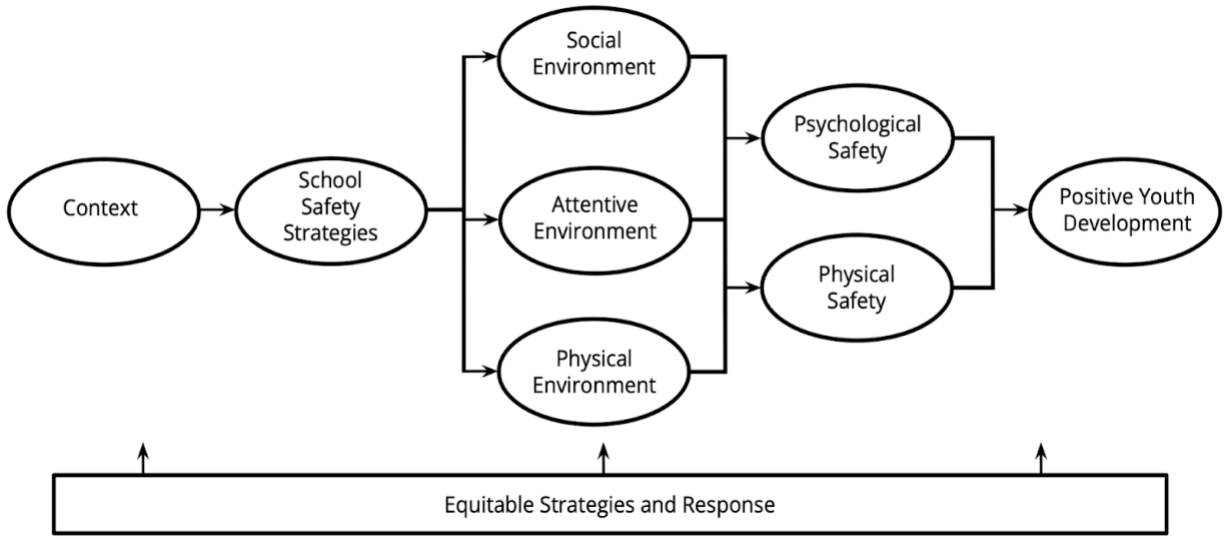
The model's outcome is positive youth development, a concept deeply rooted in the emotional well-being of students, facilitated by psychological and physical safety. A school that provides psychological safety is one where students feel respected, valued, supported, and comfortable expressing their thoughts and feelings so they can learn and grow (Stillwell et al., 2024). In addition, physical safety is essential so students do not fear bodily harm by a weapon or peer while at school. Both physical and psychological safety are critical for students to learn, grow, and flourish (Maslow, 1943). Positive youth development strives to support and empower all students' emotional, mental, and physical well-being and growth on a larger scale (Stilwell et al., 2024). In the third empirical study of this dissertation, I detail a measure of positive youth development focused on early adolescent social justice beliefs. Developing and validating scales (Weissman, 1979) that can be used to assess the outcome of positive youth development is essential.

This model guides the present dissertation and seeks to add to the literature by building the evidence base for comprehensive, equity-focused school safety strategies. In my first empirical study, I evaluate how a school-based violence prevention program (Sandy Hook Promise *Know the Signs* program) can increase feelings of safety among students, thus improving the school's social and attentive environments. This study supports evidence for school safety strategies in the model. In my second empirical study, I examine interventions to address racism in school discipline practices, attending to equitable strategy and response. This study examines how interventions prioritize students' psychological safety by challenging educators' attentive environment. This study directly relates to equitable strategies and responses

in the model and considers the larger school context. Lastly, in my third empirical study, I detail the psychometric properties of a self-report survey among youth assessing constructs of positive youth development, including social justice beliefs and actions. This can be used to understand how youth conceptualize the model's outcome (positive youth development) and how social justice beliefs can serve as a school safety strategy.

By adopting a comprehensive theoretical framework, I am not only demonstrating equitable, sustainable, and beneficial efforts to promote school safety and reduce school violence for all school community members (e.g., parents, students, teachers, and administration), but also providing a solid foundation for comprehensive, evidence-based, and equity-focused school safety. Each study in the present dissertation maps onto the theoretical framework to promote comprehensive, evidence-based, and equity-focused school safety.

Figure 1.1 Theoretical Framework (Stilwell et al., 2024)



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Chapter 2 Evaluating the Sandy Hook Promise Foundation's Know the Signs Program in Preventing School Violence in The Los Angeles Unified School District

School violence is a significant problem in the U.S. According to the CDC (2016), school violence is defined as any act of youth violence that takes place on the way to or from school or school-sponsored events, during a school-sponsored event, or on school property. During the 2017-18 school year, 80 percent of public schools reported having one or more incidents of violence, and approximately 37 instances of victimization happened at school per 1,000 students aged 12-14 (Wang et al., 2020).

Violence and victimization at school can have detrimental consequences for healthy youth development (Flannery et al., 2004; Sullivan et al., 2006) and the overall school climate (Cornell & Mayer, 2010; Robers et al., 2013; Thapa et al., 2013). Researchers have reported that exposure to violence, aggressive behavior, and victimization at school is associated with subsequent internalizing outcomes (e.g., anxiety, depression) and externalizing behavior (e.g., substance use, physical aggression; Arseneault et al., 2010; Burdick-Will, 2013; Rigby, 2005; Salazar et al., 2004; Salmon & West, 2000; Shetgiri, 2013; Smokowski & Kopasz, 2005). School violence exposure may also lead to an increase in weapon carrying, perpetrating school shootings, and homicides (Anderson et al., 2003; Salmon & West, 2000; Smokowski & Kopasz, 2005). Researchers have found that the effects of school violence perpetration and victimization can persist into adulthood (Arseneault et al., 2010; MacMillan, 2010; MacMillan, 2000; MacMillan & Hagan, 2004; Turanovic et al., 2015) and can be precursors for involvement in the

criminal justice system (Loeber et al., 1991; Loeber & Stouthamer-Loeber, 1998; Turanovic et al., 2015) as well as chronic health problems (Hsieh et al., 2017, 2020).

One form of violence that occurs in schools is firearm violence. Since the tragedy at Columbine in 1999, over 338,000 primary and secondary school students in the U.S. have experienced gun violence at school, and the nation has experienced 46 school shootings (defined as any act of gunfire during school hours) in 2022 (Cox et al., 2023). This means that more than 43,000 youth were exposed to gunfire at school in 2022 (Cox et al., 2023). A report by the U.S. Department of Education and the Secret Service indicated that 93% of school shooters planned the attack in advance (Vossekuil et al., 2004), and almost all shared concerning or threatening images or messaging prior to the attack (Alathari et al., 2020). In 4 out of 5 school shootings, at least one person was aware of the attacker's plan to perpetrate the violent act but did not report it until it was too late (Vossekuil et al., 2004). Some of the warning signs that place one at risk of perpetrating violence against themselves or others include social withdrawal, isolation, irritability, bullying perpetration, cruelty to animals, bragging about access to weapons, and communicating threats or a plan to perpetrate violence (Sandy Hook Promise Foundation, 2020).

Researchers suggest that school violence prevention programming educate students, parents, teachers, and school personnel on these warning signs and the actions to take when witnessed (Johns Hopkins University Applied Physics Laboratory, 2016). They argue that these efforts, in conjunction with building a positive school climate, will likely prevent school violence (Johns Hopkins University Applied Physics Laboratory, 2016).

School Safety Strategies and Violence Prevention

Mass school shootings have captured headlines and sparked national debates about how to prevent violence in schools. While mass shootings in schools are tragic, they are rare events

compared to other sources of school violence that occur more frequently, such as bullying, physical fighting, and relational aggression (Borum et al., 2010). Examples of school-based violence prevention strategies include the use of deterrent measures (e.g., metal detectors), early detection (e.g., anonymous reporting systems), active shooter drills, school resource officers (police), and climate intervention. Yet, empirical research on these school safety strategies is limited, and further research is needed to establish best practices. For example, in a systematic review of anonymous reporting systems (ARS), Messman and colleagues (2022) identified only one empirical evaluation of an ARS in a peer-reviewed journal. Later that year, Hsieh and colleagues (2022) published their findings demonstrating the effectiveness of the Say Something-Anonymous Reporting System (SS-ARS) in preventing school violence in schools in Miami-Dade County. While we have preliminary evidence for the efficacy of some school climate programming, such as *Shifting Boundaries* (Taylor et al., 2015) and *Social Skills Group Intervention* (DeRosier, 2004), additional research is needed to establish the evidence base for school climate interventions in diverse communities and contexts.

Safety strategies focused on improving school climate may help students develop skills to regulate their emotions, resolve conflicts peacefully, and develop healthy relationships. Individual-level prevention efforts may also include promoting prosocial behaviors, building social skills, preventing bullying, increasing bystander behaviors, and helping students recognize early signs of distress and possible subsequent violent behavior. School climate might include policies for staff and student behavioral expectations, dissemination of anonymous reporting systems, and creating multi-sectoral violence prevention, threat assessment, or mental health first aid teams. School climate can facilitate, support, or enhance other school violence prevention strategies.

School Violence and Climate

School climate is a robust predictor of school violence among other school and community characteristics (Gottfredson et al., 2005; Thapa et al., 2013). Researchers at the National School Climate Council (2007) posit that school climate is based on one's experience of school life, including norms, goals, values, interpersonal relationships, teaching and learning practices, and organization structures. Researchers have documented that various aspects of school climate are associated with school safety (Cohen & Freiberg, 2013; Thapa et al., 2013). For example, Stilwell and colleagues (2024) conducted a systematic review of school-based interventions to reduce school violence and improve climate. They found that many interventions are multi-dimensional and comprehensive, addressing multiple school climate dimensions (e.g., safety, relationships, environment).

Positive school climate factors, such as students' feelings of connectedness to their school, are associated with less violence and aggression (Karcher, 2004), less harassment (Kosciw et al., 2008), less substance use (Bond et al., 2007), and fewer reports of depressive symptoms among students (LaRusso et al., 2008). A positive school climate is also associated with students' willingness to intervene on, or report signs of, peers' plans to perpetrate violence (Syvertsen et al., 2009). A positive school climate that sustains across school years must involve students, families, and educators engaging in healthy, connected, and supportive relationships with each other (Cohen & Freiberg, 2013; National School Climate Council, 2007). Changing the school climate and increasing students' willingness to report or intervene may reduce school violence. School climate may help prevent school violence by improving mental health, social relationships, and academic success while reducing bullying, social isolation, peer aggression, and interpersonal conflict (Kutsyuruba et al., 2015; Thapa et al., 2013). Many school-related

factors associated with increased connectedness - particularly those relating to teacher behavior and the social environment - are not static and can change with intervention (Battistich, 2003). Thus, we need to develop and evaluate school-based violence prevention interventions that promote safety, provide mental health support, and build a culture of respect among school community members.

Failing to foster a safe school environment for children can have negative consequences on mental and physical health, as well as social, educational, and criminal justice outcomes. For example, Bond and colleagues (2007) found that early adolescents who were less connected to school were more likely to develop depression after graduating high school compared to peers with more school connectedness. Students' relationships with their peers, teachers, and academic learning are crucial when cultivating environments where students feel safe, connected, and engaged (e.g., trauma-informed teachers, Gay Straight Alliance). While severe incidents of violence, such as mass shootings, are rare in most schools, national school crime research suggests that 12–14-year-olds experience higher rates of violence victimization (e.g., bullying, physical fighting) at school compared to environments outside of school (Robers et al., 2013). Thus, promoting students' connectedness to school, and therefore, school climate, may be an important school violence prevention strategy.

Promoting a positive school climate shifts the emphasis from violence prevention (which can have a deficit orientation) to building positive, nurturing, and engaging relationships within the school environment (a strengths-based approach). This requires holistic strategies addressing broader school norms and practices, which can have the added benefit of more student engagement in learning and academic achievement. One such strategy is the Sandy Hook Promise *Know the Signs* program.

Sandy Hook Promise *Know the Signs* Program

Sandy Hook Promise (SHP), a national non-profit organization focused on school safety and violence prevention, has developed two programs collectively called the *Know the Signs* (KtS) Program. The KtS program has two main components: Start with Hello (SWH) and Say Something (SS). Additional program components include student clubs for promoting the KtS program (SAVE Promise Clubs) and the Say Something Anonymous Reporting System (SS-ARS).

SWH is an age-appropriate violence prevention program that teaches K-12 youth to create a more connected and inclusive culture by minimizing social isolation and empathizing with others (Masi & Heinze, 2021). The elementary curriculum has a digital, interactive storybook with games and activities. Educators use the middle and high school curriculum to create an inclusive and connected school community by empowering youth to reach out to peers experiencing social isolation.

SS is a violence prevention and early detection program that teaches school community members (e.g., students, parents, teachers, administrators) how to recognize warning signs of someone threatening themselves or others and report them to an appropriate authority before serious violence occurs. The entire SS program includes the SS-ARS and training for recognizing concerning signs of early indicators of violence, as well as SAVE Promise Clubs. SAVE Promise Clubs are after-school clubs designed to engage youth in creating a positive school climate with activities for SWH and SS to build skills for appropriate reporting. The KtS program strives to build inclusivity and respect among students and staff and encourage a positive social climate and culture of safety in school.

SHP was established by family and community members affected by the shooting at Sandy Hook Elementary School in December 2012. The organization's purpose is to protect youth from gun violence by developing and maintaining positive change within participating schools, organizations, and communities. The goal of SHP is to transform schools and communities so that no parent is faced with the traumatic loss of their child from a school shooting.

Current Study

The purpose of this study is to evaluate the SHP KtS program focused on the SWH and SS aspects of the program. I analyze a sample of high school students (N = 196) with complete (i.e., pre-and post-test) data at four schools in the Los Angeles Unified School District (LAUSD) that received SWH and SS in their schools to examine the programmatic effects of these two components of KtS. The study is guided by the following research questions:

1. Do students who participate in the *Know the Signs* program report more positive school climate indicators post-programming compared to their baseline scores?
2. Do students who participate in the *Know the Signs* program report more positive school climate indicators than students who do not participate?

I hypothesized that students who participated in KtS would report an increase in school climate indicators (e.g., feelings of safety, school connectedness) and a decrease in violent outcomes (e.g., aggressive behavior, bullying victimization) after the program (post-test) compared to their baseline (pre-test) scores. Further, I hypothesized that students who participated in KtS would report a more positive school climate and less violent outcomes when compared to students who did not participate in the program.

Method

Study Design

The data I use for this study are part of a more extensive evaluation study using a two-group non-equivalent control group design. The purpose was to examine the effectiveness of the *Know the Signs* program in improving individual- and school-level outcomes in the LAUSD. While KtS is designed for implementation over an entire school year beginning in the fall, the program was truncated for this study; it started in the spring. Thirty middle and high schools in the LAUSD were recruited to participate in the study. Of those, 21 schools participated in the study; 10 received the program (intervention schools), and 11 did not (control schools).

For the present study, I use data from four intervention schools that collected pre- and post-test survey data to answer my first research question about students' change scores. I used a repeated measures design with two measurement points: pre-test (baseline) and post-test (time 2) two to three months after participating in the KtS program. I use two data sources collected via self-report surveys completed by the students in 4 high schools. The pre-test surveys were administered in February 2017 before the KtS programming, and the post-test survey was administered in April/May 2017 after the programming. LAUSD assigned a random participation number to each student to link the pre- and post-surveys. While these data are from intervention schools, students were equally distributed between those who attended the program and those who did not (see Table 2.3). To answer my second research question, I examined data from youths' *post-test only* scores, which increased the sample size from 158 to 196. All data received by the research team was de-identified to protect student privacy. The study was approved by the University of Michigan Institutional Review Board and the LASUD internal review board.

Procedure

I utilized two data sources: the Los Angeles Unified School District School Environment Survey (LAUSD SES) and the Sandy Hook Promise (SHP) survey. I used both sources of information as pre-test data. Post-test data were collected with a survey instrument incorporating both the LAUSD SES relevant items and the SHP survey items for a time two measurement (i.e., the measures used from these two surveys were the same).

The LAUSD SES is part of the school district's standard data collection and reporting. I extracted demographic data (gender, grade, sexual orientation, race, school) and school climate, violence, and relationship data from the 2016-17 LAUSD SES. For the SHP survey, SHP staff administered the survey to students participating in the program before (time 1; February 2017) and after (time 2; April/May 2017) the program. The pre-test survey included relevant KtS content and perspectives hypothesized to be influenced by the programming, such as school climate indicators, reporting beliefs, and other developmental outcome measures, as well as questions about the participants' demographic information. A parallel post-test survey was conducted immediately after the KtS programming and included all the questions on the pre-test survey assessing school safety perceptions and developmental outcomes. Table 2.2 provides the means, standard deviations, Cronbach alphas, and data sources for all study measures.

Participants

Pre- and post-test survey data were collected from 196 high school students at four LAUSD schools. The total sample was 65.6% female, 92.6% heterosexual, 87.9% Hispanic/Latinx, 54.4% in grade 10, and 41.3% attended school 4. The full sample demographics can be found in Table 2.1. Due to missing data in the demographics and pre-test measures, the analytic sample for the within-subjects analysis included a subsample (n = 87 to 105) of students with complete data at both time points.

Measures

Demographics

Demographic variables included gender, grade, sexual orientation, race, and school. Gender was coded as 1 = male or 2 = female, and grade was coded as 9, 10, 11, or 12. Sexual orientation was coded as 1 = LGBTQ or 2 = heterosexual. Racial identity was a self-report measure in which participants could choose one or more categories, including African American/Black, American Indian/Alaska Native, Asian, Filipino, Hispanic/Latinx, Pacific Islander, White, or unknown. For this study, race was coded as 1 = Hispanic/Latinx, 2 = non-Hispanic/Latinx as the majority (88%) of participants identified as Hispanic/Latinx. School was coded as 1, 2, 3, or 4.

Program Participation

Two items were used to assess participants' *Know the Signs* attendance ("Did you attend the Say Something program?" and "Did you attend the Start with Hello program?"). Participants marked their response as either *Yes* or *No* to both items. A sum of the two items was computed for each score. The scores were recoded to 1 = did not attend both SS and SWH, or 2 = attended both SS and SWH. To be considered an attendee, students had to participate in both SS and SWH, as this is consistent with theoretical considerations that no one program alone is sufficient for school safety (Stilwell et al., 2024) and the mission of SHP to use multiple strategies to improve school climate (Masi & Heinze, 2021).

Outcome Measures

I used data from two sources: the Los Angeles Unified School District School Environment Survey (LAUSD SES) and the Sandy Hook Promise (SHP) survey. All study

measures from both surveys were collected at both time points (pre and post-test) except for *willingness to report,* which was only collected at time 2. The means, standard deviations, and Cronbach alphas for all pre- and post-test measures are reported in Table 2.2. I grouped the outcome measures into four sets of conceptually consistent variables for multivariate analysis (i.e., MANOVA), providing a robust assessment of outcomes and reducing chance findings (Keselman et al., 1998).

School Climate. In the same analysis, I examined three variables to measure school climate: *school connectedness, feelings of safety*, and *perceptions of community* at school. I examined these variables together because they all examine students' experience of their school environment.

School Connectedness. Four items assessed participants' school connectedness (e.g., I feel close to people at my school; Fredricks et al., 2004). Participants rated their level of agreement on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). A mean of the four items was computed for each score.

Feelings of Safety. Three items assessed participants' feelings of school safety (e.g., I feel safe in my school; National Center for School Engagement, 2006). Participants rated their level of agreement on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). A mean of the three items was computed for each score.

***Perceptions of Community*.** Four items assessed participants' perceptions of community at school (e.g., This is a close-knit school where people look out for each other; The Colorado Trust, n.d.). Participants rated their level of agreement on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). A mean of the four items was computed for each score.

School Violence. I examined three variables to measure school violence in the same analysis: *aggressive behavior, bullying victimization,* and *exposure to violence* at school. I examined these variables together to gain a comprehensive understanding of students' experiences of violence at school.

Aggressive Behavior. Nine items assessed participants' aggressive behavior in the past three months (e.g., How many times have you argued with your peers?). Participants reported their responses on a 5-point Likert scale (1= 0 times, 5= 4+ times; Achenbach & Rescorla, 2001). A mean of the nine items was computed for each score.

Bullying Victimization. Five items assessed participants' bullying victimization at school during the past 12 months (e.g., How many times have other students from your school spread rumors or lies about you?) Participants reported their responses on a 4-point Likert scale (1= 0 times, 4= 4 or more times; Finkelhor et al., 2005). A mean of the five items was computed for each score.

Exposure to Violence. Five items assessed participants' exposure to violence at school (e.g., How much of a problem is kids bullying or teasing other children at your school?) Participants reported their responses on a 3-point Likert scale (1 = not a problem, 3 = a big problem; Finkelhor et al., 2011; Hamby et al., 2011). A mean of the three items was computed for each score.

School Relationships. In the same analysis, I examined two variables to measure school relationships: *peer connections* and *relationships with adults* at school. I examined these variables together because they represent students' relationships with others at school.

Peer Connections. Five items assessed participants' peer connections and relationships during the past 30 days (e.g., How well did you get along with students who are different from

you?) Participants rated their response on a 5-point Likert scale (1= not at all, 5= a tremendous amount; Los Angeles Unified School District, 2017). A mean of the six items was computed for each score.

Relationships with Adults. Three items assessed participants' relationships and trust with adults in school (e.g., Adults at my school treat students with respect; The Los Angeles Unified School District, 2017). Participants rated their level of agreement on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). A mean of the three items was computed for each score.

Reporting Beliefs. In the same analysis, I examined three variables to measure reporting beliefs: *self-efficacy for reporting*, *comfort level for reporting*, and *willingness to report*. *Willingness to report* was only measured at time 2; therefore, it is not included in the within-subjects pre-post analysis. I examined these variables together to determine students' beliefs about reporting warning signs for violence.

Self-Efficacy for Reporting. Four items assessed participants' self-efficacy for reporting warning signs (e.g., Report potential threats to a trusted adult; Bandura, 2006). Participants rated their confidence on a 5-point Likert scale (1 = not confident at all, 5 = very confident). A mean of the four items was computed for each score.

Comfort Level for Reporting. Four items assessed participants' comfort level for reporting warning signs (e.g., How comfortable are you reporting other student(s) carrying weapons to school?) Participants reported their responses on a 5-point Likert scale (1 = extremely uncomfortable, 5 = extremely comfortable; Choo et al., 2013). A mean of the four items was computed for each score.

Willingness to Report. Three items assessed participants' willingness to report warning signs (e.g., If I saw someone being teased or bullied, I would report it to a trusted adult).

Participants rated their level of agreement on a 5-point Likert scale (1= strongly disagree, 5= strongly agree; Fahlman et al., 2008). A mean of the three items was computed for each score.

Analysis Plan

First, I conducted a series of chi-square tests to determine if the proportion of KtS program attendees and non-attendees were equally distributed across groups on their demographic variables (gender, grade, sexual orientation, race). I wanted to determine if the sample sizes were proportionally equal across KtS program attendees and non-attendees on each variable to determine if it needed to be entered as a covariate. Then, I conducted a chi-square test to determine if the proportion of KtS program attendees and non-attendees across schools was the same. This analysis examined school-by-program attendance in a 4x2 crosstab analysis.

Second, to answer my first research question, I conducted repeated measures MANOVAs to examine an overall difference in means in KtS attendees' scores on the outcome variables at time 1 (baseline) and time 2 (post-test). To control for school-level effects, I entered the school variable as a between-subjects factor. I conducted four distinct analyses that grouped outcome variables based on the construct they represented. In the *school climate* analysis, I examined whether KtS attendance predicted students' school connectedness, feelings of safety, and perceptions of community. In the *school violence* analysis, I examined if KtS attendance predicted students' aggressive behavior, bullying victimization, and violence exposure. In the *school relationships* analysis, I examined if KtS attendance predicted students' peer connections and relationships with adults. Finally, in the *reporting beliefs* analysis, I examined if KtS attendance predicted students' self-efficacy for reporting, comfort level for reporting, and willingness to report warning signs. Because these are repeated measures data, they violate the

assumption of sphericity. When interpretable, I report the univariate results with a Greenhouse-Geisser correction for testing for within-subjects effects.

Third, to answer my second research question, I used MANOVA to determine mean differences between KtS attendees and non-attendees on the four groups of outcome variables in a 4x2 factorial design. I used *post-test scores only* in this analysis to supplement the findings of my first research question. I did not combine all these outcomes in one analysis because they are conceptually distinct factors that would not provide enough nuanced analysis to understand how the KtS program may improve the school climate. In addition, I included school as a factor in the analysis to control for school effects. However, my main interest was to study program effects, and I do not have hypotheses about school characteristics affecting outcomes.

Finally, I conducted a sensitivity analysis due to unequal sample sizes across the four schools. I re-ran both the within-subjects and between-subjects analyses with the two schools with the largest samples (schools 1 and 4) to ensure adequate statistical power per school, as the cell sizes for all four schools in the analysis were small for the schools with few study participants. This analysis helps to determine if the schools with smaller sample sizes (schools 2 and 3) were influencing the results and to examine if the results would essentially be the same with more stable estimates for the school-level variable.

Results

Chi-Square Results

I conducted chi-square tests to determine if the proportion of KtS program attendees and non-attendees were the same across demographic variables (gender, grade, sexual orientation, race). The chi-square results indicated that the sample sizes between attendees and non-attendees were proportionally equal regarding their grade (X^2 = 1.28, p = .73), gender (X^2 = 0.67, p = .41),

and sexual orientation (X^2 = 3.00, p = .22). There was a significant difference between KtS program attendees and non-attendees and their race (X^2 = 5.68, p = .02). However, there are unequal sample sizes between the two groups (Hispanic/Latinx and non-Hispanic/Latinx), as 87.9% of the sample identified as Hispanic/Latinx. I conclude that students in my sample were evenly distributed between KtS attendance and non-attendance across these demographic variables. Further, these variables had 15 - 30% missing data, limiting statistical power (see Table 2.1). For these reasons, demographics were not entered as covariates in the analyses.

I conducted a chi-square test to determine if the proportion of KtS program attendees and non-attendees across schools was the same. The crosstabs (see Table 2.3) indicated that the sample sizes between attendees and non-attendees at each school were proportionally equal (X^2 = 3.02, p = .39). I concluded that students in my sample were evenly distributed between KtS attendance and non-attendance across schools. I included school as a factor in the analyses below to control for school-level effects.

RQ 1: Within-Subjects Results

School Climate

I conducted a repeated measures MANOVA to examine differences in KtS attendees' pre -and post-test scores on school climate (school connectedness, feelings of safety, perceptions of community), as seen in Table 2.4. I entered school into the model as a between-subjects factor to account for differences across schools. In a subsample of 88 participants with data at both time points, I found a statistically significant difference in attendees' school climate at the two time points, *F (3, 82) = 48.97, p < .001.* Univariate results indicated differences in attendees' school connectedness *F (1, 84) = 6.27, p < .05.* Attendees reported higher school connectedness at time 2 *(M = 3.94, 95% CI, 3.79 to 4.10)* compared to time 1 *(M = 3.74, 95% CI, 3.60 to 3.89).*

Further, I also found a statistically significant difference in attendees' feelings of safety *F (1, 84) = 123.88, p < .001.* Attendees reported improved feelings of safety at time 2 *(M = 3.87, 95% CI, 3.72 to 4.02)* compared to time 1 *(M = 3.08, 95% CI, 2.98 to 3.20).*

School Violence

I conducted a repeated measures MANOVA to examine differences in KtS attendees' pre-and post-test scores on school violence (aggressive behavior, bullying victimization, exposure to violence). I entered school into the model as a between-subjects factor to account for differences across schools. In a subsample of 87 participants with data at both time points, I found no statistically significant difference in attendees' school violence at the two time points, *F (3, 81) = 1.77, p =.16.*

School Relationships

I conducted a repeated measures MANOVA to examine differences in KtS attendees' pre-and post-test scores on school relationships (peer connections and relationships with adults). I entered school into the model as a between-subjects factor to account for differences across schools. In a subsample of 87 participants with data at both time points, I found no statistically significant difference in attendees' school relationships at the two time points, *F (2, 82) = 1.85, p = .16.*

Reporting Beliefs

I conducted a repeated measures MANOVA to examine differences in KtS attendees' pre-and post-test scores on reporting beliefs (self-efficacy for reporting, comfort level for reporting, willingness to report). I entered school into the model as a between-subjects factor to account for differences across schools. In a subsample of 105 participants with data at both time

points, I found no statistically significant difference in attendees' reporting beliefs at the two time points, *F (2, 100) = 1.92, p = .15.*

RQ 2: Between-Subjects Results

School Climate

I conducted a one-way MANOVA to examine a difference in school climate (school connectedness, feelings of safety, perceptions of community) post-test scores between KtS attendees and non-attendees, as seen in Table 2.5. I included school as a factor in the analysis to control for school effects. **I** found a significant difference in school climate based on KtS attendance, $F (3, 185) = 3.27$, $p < .05$. Students who attended KtS reported higher scores on school connectedness, $F (1, 187) = 8.36$, $p < .01$, and perceptions of community, $F (3, 187) = 5.03$, $p < .05$, compared to non-attendees.

School Violence

I conducted a one-way MANOVA to examine a difference in school violence (aggressive behavior, bullying victimization, and exposure to violence) post-test scores between KtS attendees and non-attendees. I included school as a factor in the analysis to control for school effects. I found no difference in school violence based on KtS attendance, $F (3, 183) = 0.99$, $p = .79$.

School Relationships

I conducted a one-way MANOVA to examine a difference in post-test scores for school relationships (peer connections and relationships with adults) between KtS attendees and non-attendees. I included school as a factor in the analysis to control for school effects. I found no difference in school relationships based on KtS attendance, *F (2, 186) = 0.76, p = .47.*

Reporting Beliefs

I conducted a one-way MANOVA to examine a difference in reporting beliefs (self-efficacy for reporting, comfort level for reporting, willingness to report) post-test scores between KtS attendees and non-attendees as seen in Table 2.6. I included school as a factor in the analysis to control for school effects. I found a marginally significant difference in reporting beliefs based on KtS attendance, $F\ (3, 181) = 2.53, p = .059$. Students who attended KtS reported higher scores on their self-efficacy to report warning signs $F\ (1, 191) = 7.25, p < .01$ and their willingness to report signs of mental distress, $F\ (1, 143) = 8.54, p < .01$ compared to non-attendees.

Sensitivity Analysis Results

Two schools had 31 or fewer total cases across attendance and non-attendance conditions, making the use of school as a control variable in the analyses potentially unreliable. Further, the cell sizes for the within-subjects analysis (attendees only) across the four schools were unequal. Therefore, I conducted a sensitivity analysis using only the samples from schools 1 and 4 to determine if these two schools with the largest sample sizes per cell would yield different results than the total sample from all four schools.

I re-ran the within-subjects analyses with the two schools with the largest sample sizes (schools 1 and 4). The sensitivity analysis yielded results similar to those reported with the school variable, including all four schools for *school climate, school violence, school relationships,* and *reporting beliefs.* The within-subjects results with the two schools with the largest sample sizes did not differ from those with the total sample school variable. For the between-subjects results, the sensitivity analysis yielded similar results to those reported with the school variable, including all four schools for *school climate* and *school violence.* The results for

school relationships and *reporting beliefs* differed from those reported with the full-sample school variable. Specifically, the sensitivity analysis yielded an overall significant omnibus F for *school relationships* and *reporting beliefs.*

Discussion

This quasi-experimental study provides preliminary support for the efficacy of the KtS program in improving school climate. This is one of the first studies to provide empirical evidence that improving the school environment can help address school safety and its precursors. Students who attended the KtS program reported greater school climate indicators post-programming when compared to their baseline scores. In particular, attendees reported increased feelings of safety and connectedness to school after the program compared to their baseline scores. Further, students who attended KtS reported more positive school climate indicators, including school connectedness and perceptions of community, compared to non-attendees. Attendees also reported greater beliefs about reporting, including their comfort level, self-efficacy, and willingness to report warning signs compared to non-attendees.

These results are consistent with the goals of the KtS program and provide evidence that school programming focused on improving climate can help improve school safety, consistent with previous research on school climate (Johns Hopkins University Applied Physics Laboratory, 2016). Start with Hello (SWH) strives to build an inclusive and connected school community by empowering students to reach out to their peers, improving their emotional wellness, and reducing bullying. SWH supports the comprehensive model of school safety posited by Stilwell and colleagues (2024) by improving the school's social environment. When students and staff have access to social support programs, such as SWH, they are more likely to

feel supported and connected within the school community (Kutsyuruba et al., 2015), and the within-subjects results of the present study support this finding.

The lack of program effects on school violence and relationships for both analyses is not surprising for two reasons. First, the intervention was not fully implemented. Secondly, the KtS program was implemented for a short period of time as it is typically designed to begin at the start of the school year. The KtS implementation for this study did not include two aspects of the program: 1) the Say Something Anonymous Reporting System (SS-ARS) and 2) the student-led SAVE Promise Clubs. The ARS system is an early detection approach that might help identity violent behavior before it would occur. Violent behavior might be less likely to be affected without that program component. The *SAVE Promise Clubs* may also be expected to play a critical role in school relationships because students in the clubs are focused explicitly on the school's social environment. In addition, the effects of KtS, or any school climate-focused intervention, on violent behavior and school relationships may take more time to influence than perceptions of climate. The fact that I found reporting beliefs marginally significant for youth exposed to the intervention is also consistent with what we might expect after a brief exposure to the training on knowing the signs of potential violence (Phelps et al., 2007).

In both the within- and between-subject analyses, the results of the present study support the notion that when students are educated on the warning signs of violence and feel comfortable reporting concerns to a trusted adult, it can help ensure potential threats are addressed before escalating into a tragedy. This was the goal of the Say Something (SS) portion of the *Know the Signs* program. SS teaches students to recognize the warning signs of someone at risk of hurting themselves or others and how to say something to a trusted adult. SS supports the attentive environment of the comprehensive school safety model (Stilwell et al., 2024), which is one in

which students and school staff are aware of their surroundings, can recognize when someone is in distress, and can refer the person to help (Rapti, 2013).

The results of this study support a comprehensive approach to school safety by demonstrating that climate efforts can improve social and attentive school environments. Researchers indicate that school climate programs such as KtS can help prevent aggressive and violent youth behaviors by providing access to mental health services, building healthy student-teacher relationships, and enhancing school connectedness (Dodge & Pettit, 2003; Schmeelk-Cone & Zimmerman, 2003; Zimmerman et al., 2018). Moreover, researchers have reported evidence that suggests that often those who are considering perpetrating violence against themselves or others communicate their plans on social media, to a peer, or someone else (Meloy & O'Toole, 2011; Silver et al., 2018; Vossekuil et al., 2002). Therefore, the importance of identifying, assessing, and intervening to reduce and prevent violence should not be understated. For these reasons, the present study makes an imperative contribution to the field by building the evidence base for school violence prevention programming. Knowing the warning signs that someone may perpetrate violence helps to prevent potential violent acts before they escalate.

Limitations

This study is not without limitations. For one, the implementation of the KtS program at the schools in this sample was limited to the SWH and SS programs. Sandy Hook Promise offers additional programming components, including the Say Something Anonymous Reporting System and student-led organizations (SAVE Promise Clubs) that were not included in the implementation of KtS in this study. Even with the implementation of SWH and SS in the absence of the other program components, however, I found preliminary evidence for the efficacy of the KtS program at improving school climate and reducing school violence,

demonstrating the importance of the KtS program and its goals. One could interpret the results as solid support because I found program effects even though not all aspects of the program were implemented. In addition, the program was implemented for only half or less of the school year, so the effects may be more substantial if implemented from the start of the school year, providing both more components and a more extended KtS program.

A second limitation of this study is the relatively small sample in one large school district (LAUSD). This limits the generalizability of the results to contexts that are similar demographically (i.e., Latinx students in urban districts). Nevertheless, this is one of the few climate studies that focus on school safety-related outcomes, and the results are consistent with expectations and past research suggesting the importance of school climate for positive youth development (Cornell & Mayer, 2010; Robers et al., 2013; Thapa et al., 2013). Third, two of the schools in the study had very small samples. This may have created unstable estimates of the outcomes and could have skewed the results or provided low statistical power to detect effects. Yet, the sensitivity analysis indicated that the unequal sample sizes among the schools did not influence the within-subjects results, such that the analyses with the two largest schools and full-sample school variable yielded similar results.

Generalizability is further limited because the participants in the current study attend an urban school district (LAUSD) and are predominately students of Latinx backgrounds. Studies of the effects of school climate on school safety outcomes that expand the geographic location of the schools (e.g., rural, suburban) and with students with other racial identities, such as Black, are needed, as researchers suggest that school safety programming does not have universal benefits for students of all racial backgrounds (Peguero et al., 2011). Finally, the quasi-experimental research design of this study somewhat reduces our confidence in the results.

However, the fact that I found consistency in the within-group and between-group analyses for school climate outcomes strengthens the conclusion that the findings can be attributed to the KtS program rather than school factors. Future researchers might consider conducting randomized control trials to build a more robust evidence base for the efficacy of the KtS program. It may also be helpful to examine the effects of school culture and characteristics as these factors may also play a role in the effectiveness of school climate interventions for improving school safety and reducing school-related violence and its precursors.

Another study limitation is the use of self-report data, which has the potential to be unreliable and inaccurate. It is essential, however, to study students' perceptions of their environment to understand school safety comprehensively from students' perspectives because fear and concerns for safety can interfere with learning and psychological well-being. (Benbenishty et al., 2002; Flannery et al., 2004; Sullivan et al., 2006). Additional efficacy evaluations of KtS are needed to understand the program's effects at other school levels (elementary and middle) and the program's efficacy in these developmentally distinct groups. While the SHP KtS program has been adapted for developmental appropriateness across all grade levels (elementary, middle, and high school), additional empirical program evaluations are needed across all grade levels to build a comprehensive evidence base.

Conclusion

These limitations notwithstanding, the results of this study provide initial evidence that a school climate intervention focused on improving school safety, like the KtS program, can be effective. This conclusion is supported by consistent findings from both the within and between subjects' analyses. That is, by examining positive youth development and school climate outcomes between program attendees and non-attendees, as well as attendees' pre and post-test

change scores, I found support for the hypothesis that the KtS program can have positive changes of factors associated with school safety. Implementing the KtS program helped improve school safety and reduce school violence by improving youths' positive youth development outcomes and school climate indicators. This unique and significant contribution helps build the evidence base for school climate programming as a safety strategy. Specifically, the KtS program helps promote safety by improving social and attentive school environments (Stilwell et al., 2024) using Start with Hello and Say Something, respectively. When school community members *know the signs*, they help to promote safe and healthy futures by raising awareness, increasing recognition, and taking action. Engagement in school-based violence prevention programs, such as KtS, helps to facilitate a positive school climate, healthy relationships, and individual well-being.

Table 2.1 Demographics of Full Sample

Variable	**N (Valid %)**	**N Missing (%)**
Gender		42 (21.4%)
Male	53 (34.4%)	
Female	101 (65.6%)	
Grade		36 (18.4%)
9	56 (35%)	
10	87 (54.4%)	
11	14 (8.8%)	
12	3 (1.9%)	
Sexual Orientation		61 (31.1%)
LGBTQ	10 (7.4%)	
Heterosexual	125 (92.6%)	
Race		31 (15.8%)
Hispanic/Latinx	145 (87.9%)	
Non-Hispanic/Latinx	20 (12.1%)	
School		--
School 1	62 (31.6%)	
School 2	31 (15.8%)	
School 3	22 (11.2%)	
School 4	81 (41.3%)	

Note. N = 196

Table 2.2 Means, Standard Deviations, and Cronbach alphas for all Study Measures

Outcome variable	Description	# of items	Mean (SD)	Cronbach alpha	Data source
School Climate					
School connectedness	Feeling of acceptance at school	4	3.72(.67)[1] – 3.80(.84)[2]	0.77[1] – 0.87[2]	LAUSD SES
Feelings of safety	Perceptions of safety at school and surrounding neighborhood	3	3.12(.48)[1] – 3.79(.85)[2]	0.73[1] – 0.82[2]	LAUSD SES
Perceptions of community	Level of trust at school	4	3.50(.86)[1] – 3.38(.87)[2]	0.83[1] – 0.85[2]	SHP
School Violence					
Aggressive behavior	Frequency of perpetrating aggressive behaviors	9	1.45(.58)[1] – 1.37(.50)[2]	0.84[1] – 0.82[2]	SHP
Bullying victimization	Frequency of being the victim of bullying behaviors at school	5	1.40(.55)[1] – 1.41(.53)[2]	0.75[1] – 0.72[2]	LAUSD SES
Exposure to violence	How much of a problem violence is at school	5	1.45(.45)[1] – 1.42(.44)[2]	0.79[1] – 0.82[2]	SHP
School Relationships					
Peer connections	How well peers get along with each other	5	3.63(.68)[1] – 3.62(.64)[2]	0.72[1] – 0.73[2]	LAUSD SES
Relationships with adults	Respect and support among students and adults at school	3	3.58(.67)[1] – 3.59(.86)[2]	0.65[1] – 0.76[2]	LAUSD SES
Reporting Beliefs					
Self-efficacy for reporting	Confidence in ability to identify and report threats	4	3.62(.84)[1] – 3.64(.90)[2]	0.82[1] – 0.88[2]	SHP
Comfort level for reporting	Positive attitude toward taking actions for violence prevention	4	2.97(1.12)[1] – 3.11(1.20)[2]	0.85[1]– 0.87[2]	SHP
Willingness to report	Willingness to report signs of mental distress and threats	3	4.07(.94)	0.95	SHP

Note. [1]Pre-test; [2]Post-test; LAUSD SES = Los Angeles Unified School District School Environment Survey; SHP = Sandy Hook Promise.

Table 2.3 Crosstabs between *Know the Signs* Attendance and School

	Did not attend KtS	Attended KtS	**Total**
School 1	32	30	**62**
School 2	16	15	**31**
School 3	7	15	**22**
School 4	36	45	**81**
Total	**91**	**105**	**196**

Note. KtS = Know the Signs.

Table 2.4 Multivariate School Climate Pre-Post Assessment for *Know the Signs* Attendees

	df	Wilks' Lambda	F-value	p-value
School Climate	3, 82	48.97	0.36	<.001
School	9, 199	0.67	3.72	<.001
School Climate * School	9, 199	0.81	2.02	.04
Univariate Results				
	Pre-test		Post-test	
	Mean	SD	Mean	SD	F-test
School connectedness	3.74	.08	3.98	.66	6.27*
Feelings of safety	3.14	.47	3.91	.70	123.9**
Perceptions of community	3.83	.66	4.00	.66	2.15

Note. *p < .05; **p < .001; n = 88.

Table 2.5 Multivariate School Climate Assessment based on *Know the Signs* Attendance

	df		Wilks' Lambda	F-value			p-value
KtS Attendance	3, 185		.95	3.27			.022
School	9, 450		.85	3.40			<.001
KtS Attendance * School	9, 450		.98	0.34			.96
Univariate Results							
	Attended KtS			Did not attend KtS			
	n	Mean	SD	n	Mean	SD	F-test
School connectedness	105	3.99	.66	90	3.56	.97	8.36**
Feelings of safety	105	3.92	.69	90	3.65	.98	1.97
Perceptions of community	105	3.59	.75	90	3.14	.94	5.03*

Note. *p < .05; **p < .01; n = 195.

Table 2.6 Multivariate Reporting Beliefs Assessment based on *Know the Signs* Attendance

	df		Wilks' Lambda	F-value		p-value
KtS Attendance	3, 181		.96	2.53		.059
School	9, 440		.91	1.89		.051
KtS Attendance * School	9, 440		.98	0.33		.97
Univariate Results						
	Attended KtS			Did not attend KtS		
	n	Mean	SD	n	Mean	SD	F-test
Comfort level for reporting	105	3.31	1.25	86	2.90	1.11	4.49*
Self-efficacy for reporting	105	3.80	0.81	86	3.46	0.98	4.47*
Willingness to report	105	4.26	0.71	86	3.84	1.12	4.37*

Note. *p < .05; n = 191.

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Chapter 3 Interventions to Address Racism in Disciplinary Actions in K-12 Schools: A Systematic Review

Exclusionary discipline includes a range of punitive practices that place students outside of their learning environment based on behavioral reasons (Zinsser et al., 2022). Examples of exclusionary discipline include office discipline referrals (ODRs), in-school suspensions (ISS), out-of-school suspensions (OSS), expulsions, and referrals to the juvenile justice system (Noltemeyer & Mcloughlin, 2010). Common student behaviors that result in exclusionary discipline include physical aggression, disobedience, insubordination, attendance issues, and poor academic performance (Balfanz et al., 2015; Zinsser et al., 2022). Exclusionary discipline is common in schools, with approximately 2.7 million students receiving one or more OSS in the 2015-16 school year (Rafa, 2019). Further, over 120,000 students were expelled with or without educational services during the 2015-16 school year (Rafa, 2019). Exclusionary discipline is associated with the school-to-prison pipeline (STPP), which can be understood as the policies and practices that directly or indirectly push students out of school and on a trajectory to prison (Skiba et al., 2014).

Despite the ubiquity of school discipline, researchers have demonstrated that exclusionary discipline results in many adverse outcomes for students, including lost instructional time (Losen & Whitaker, 2017), lowered academic outcomes (Noltemeyer et al., 2015), and increased likelihood of truancy and dropout (Balfanz et al., 2015; Fabelo et al., 2011; Rumberger & Losen, 2017). Researchers in a national study demonstrated that students who were suspended were nearly 80% more likely to drop out than those who were not (Suh & Suh,

2007). Furthermore, experiencing suspension or expulsion during adolescence increases the chances of involvement in the criminal justice system and results in the potential to earn less money during adulthood (Monahan et al., 2014; Pascoe & Smart Richman, 2009). Additionally, higher suspension and expulsion rates have been associated with reduced schoolwide academic performance (Skiba & Rausch, 2006) and perceptions of school climate (Gregory et al., 2011). Taken together, a robust body of empirical evidence demonstrates that exclusionary discipline has negative implications for students throughout their development, and even more so for students of color.

Racism in School Discipline

Researchers have reported that exclusionary discipline disproportionately affects students of color (Losen et al., 2015; Losen & Gillespie, 2012; Rausch & Skiba, 2017; Welsh & Little, 2018). This disparity has been well documented within the literature across multiple contexts and communities. Significant racial disparities in school discipline have been reported in highly resourced as well as poor school districts (Skiba & Rausch, 2014), in both public and charter schools (Losen et al., 2016), and at the elementary, middle, and high school levels (Losen et al., 2015). A robust body of evidence has documented the issue of racism in school discipline across multiple contexts, demonstrating the need for interventions to mitigate this issue (Cruz et al., 2021).

Racial disproportionality in school discipline is also observed across multiple racial minority groups (Cruz et al., 2021). For example, Black students are more likely to receive an office discipline referral (ODR) compared to their White counterparts (Skiba et al., 2011). Moreover, the ODRs that Black students receive are often for subjective infractions (e.g., those that require teacher judgment) rather than objective or behavioral (e.g., truancy, physical

aggression) compared to the ODRs that White students receive, leaving more room for bias (Skiba et al., 2002; Smolkowski et al., 2016). Skiba and colleagues (2011) demonstrate that Black and Hispanic students are at a greater risk for suspension or expulsion for the same behavior as a White peer across all grade levels. While Black students represent 15% of all students in the United States, 44% of them have been suspended more than once, and 36% have been expelled from school (U.S. Department of Education, Office for Civil Rights, 2014).

During the 2011-12 school year, Losen and colleagues (2015) found that 16% of all Black students had been suspended, a rate that is more than double that of Hispanic students (7%), and triple the rate for White students (5%) across the U.S. Further, researchers found that Hispanic students are more likely to receive a suspension compared to their White peers for comparable behavior infractions in elementary (Mendez & Knoff, 2003; Rocque, 2010; Skiba et al., 2011) and high school (Finn & Servoss, 2015) levels. These disparities represent an increasingly urgent issue given the disparities in the way students of color are being disciplined at a higher rate than others, and these disproportionate rates of exclusionary discipline create a race-based gap that is critical to understand from an evidence-based perspective (Anderson et al., 2019). This is even more noxious because the research indicates that experiencing exclusionary practices increases the likelihood of poor educational outcomes and the STPP (Skiba et al., 2014).

Consequences of Racism in School Discipline

The exclusionary discipline of students in school, many of whom are overwhelmingly students of color, has long-term consequences related to the STPP (Muñiz, 2021; Perez Jr. & Erwin, 2020). Researchers demonstrate that exclusionary discipline, including expulsion and out-of-school suspensions (OSS), are associated with several adverse outcomes often associated with

the STPP (Skiba et al., 2014). These adverse outcomes include school dropout and juvenile justice involvement (Skiba et al., 2014). Black students, in particular, are more likely to be arrested following OSS compared to peers of other racial groups (Rosenbaum, 2020). Further, OSS during adolescence predicts incarceration and probation up to 12 years later (Rosenbaum, 2020).

Higher racialized disparities are found in schools with administrators who endorse zero-tolerance approaches to discipline (Huang & Cornell, 2021; Skiba et al., 2014). Schools with overly punitive or zero-tolerance policies often rely on school resource officers (SROs) or other law enforcement to respond to student misbehavior, contributing to the pipeline (Turner & Beneke, 2020). The presence of SROs increases exclusionary discipline for Black and Latinx students disproportionately to that of White students (Crosse et al., 2022). In addition, the arrest rate increases for all students in schools with SROs, but more so for Black students than students who are White or Latinx (Fisher & Hennessy, 2016).

When a student is harshly disciplined in school, it can lead to them being officially labeled by school personnel as problematic or dangerous (Na & Gottfredson, 2013). The consequences of this label for a student of color are more severe because this action fulfills a stereotype many people have about students of color as dangerous and disobedient (Na & Gottfredson, 2013). Any future student misbehavior and discipline referrals only build the evidence among school staff that the student is a problem, and they may begin to treat the student as such. Consequently, the student may start to withdraw from school engagement and eventually drop out of school, which puts them at a high risk for future unemployment and further increases the risk of future criminal behavior (Bleakley & Bleakley, 2018; Owens et al.,

2016). This has consequences for youth both in the immediate and long term, making this a crucial issue to address to ensure positive life outcomes.

School discipline can negatively affect all students (Skiba et al., 2022). Researchers have found that even students who are not directly disciplined still experience negative collateral consequences affecting their health and overall well-being (Eyllon et al., 2022). Students who behave according to school rules may become preoccupied with avoiding discipline in a highly punitive environment, leading to anxiety and distress (Eyllon et al., 2022). Additionally, students who attend highly punitive schools may perceive the school environment as hostile, leading to disengagement or shame about their school even if they are not disciplined directly (Eyllon et al., 2022). Further, students of color experience the most severe ramifications of exclusionary discipline, affecting their academic performance, school connectedness, and well-being (Gregory et al., 2014), pointing to the need for efforts to address this problem. One way that school leaders might address this inequity is by incorporating race-conscious, culturally relevant school programming. Culturally relevant school programs are designed to uplift, value, and encourage students' diverse cultural practices, traditions, and life experiences (Ladson-Billings, 1995; Vélez-Agosto et al., 2017).

Existing Efforts to Address the Race Discipline Gap

School leaders have developed and widely adopted school discipline practices to address the race discipline gap. Examples of these practices include Schoolwide Positive Behavioral Interventions and Supports (SWPBIS), Social-Emotional Learning (SEL), and Restorative Practices (RP; Skiba et al., 2022). While researchers have reported that these practices can reduce school disciplinary actions, racial inequities persist (Sobti & Welsh, 2023). For example, researchers evaluating the efficacy of SWPBIS, a program designed to consistently recognize

and enforce student behavioral expectations, found significant reductions in suspensions and ODRs for students overall (Noltemeyer et al., 2019). Other researchers, however, have found inconclusive results on racial disparities in disciplinary practices in their evaluations of SWPBIS (Gregory et al., 2021). When SWPBIS does not include a focus on race, equity, and cultural relevance, it may do little to reduce racialized discipline practices and result in continuing to harm students of color differentially (Vincent et al., 2015).

Although school leaders develop and implement interventions with positive intentions, attention must be brought to how a student's racial identity affects their experiences with the school disciplinary system to understand and address disparities fully (Edwards, 2021; Gregory et al., 2021). Despite numerous researchers demonstrating that Black students are disciplined at a higher rate than their peers for similar infractions (Anderson & Ritter, 2016; Ksinan et al., 2019; Skiba et al., 2022; Wallace et al., 2008), interventions tend to be designed to focus on making disciplinary actions more equitable for all students, leaving out discussions of racism as a source of this disparity (Gregory et al., 2021; Skiba et al., 2022). Furthermore, interventions designed to reduce the race discipline gap tend to take a colorblind approach or remove race from the conversation about the causes of, and solutions to, disparities in discipline rates (Carter et al., 2017). Suppose disparities in disciplinary outcomes are rooted in racism, as seen with the STPP (Skiba et al., 2014). In that case, interventions that continue to take a colorblind approach are unlikely to mitigate the race discipline gap (Sobti & Welsh, 2023).

Instead, efforts to develop strategies to reduce discipline disparities must be intentional and focused on the role racism plays in causing disparities to manifest (Carter et al., 2017; Edwards, 2021; Skiba et al., 2022). School leaders must critically examine their implicit biases and use data to determine which students face the harshest consequences for their behavior and

the harmful effects of exclusionary discipline on access to learning opportunities (Bauer, 2020; Carter et al., 2017). This critical lens may help school leaders monitor the disparities resulting from their exclusionary discipline practices and recognize that racism may be a prominent cause of discipline disparities (Bauer, 2020; Carter et al., 2017).

Race-conscious interventions, or interventions that explicitly acknowledge the role of racism in discipline disparities, are critical to facilitating equitable discipline practices (Carter et al., 2017; Skiba et al., 2022). Characteristics of race-conscious interventions include culturally relevant training and instruction to help school leaders and educators recognize and address implicit biases to improve their relationships with students (Carter et al., 2017). Skiba and colleagues (2022) argue that disciplinary reform that does not reduce or eliminate racial disparities is not true disciplinary reform and that strategies demonstrating an overall reduction in discipline without a concomitant reduction in disparities (as seen with SWPBIS) should not be considered successful.

Given the ubiquity of race-based disparities in school discipline practices and its particularly pernicious effects on students of color, I chose to limit my review to only programs designed to specifically address *racial* disparities in discipline, rather than those that address disparities among other identities (e.g., gender, ability status, socioeconomic status) in the absence of, or in addition to, race. Given the importance of, and need for, race-conscious programming and interventions (Edwards, 2021; Espelage et al., 2023; Gregory et al., 2021; Skiba et al., 2002, 2022), I further identify which interventions in this review are described by the authors as culturally relevant and draw conclusions based on the findings of those interventions.

Current Study

Racial disparities exist in school discipline, and a plethora of evidence demonstrates this problem. To begin understanding the state of evidence, a few systematic reviews have been conducted to address this issue. For example, Cruz and colleagues (2021) conducted a best-evidence synthesis examining the effectiveness of school-based interventions in reducing disproportionality based on student gender, race, ability status, and socioeconomic status in discipline practices. To expand on this work by Cruz and colleagues (2021) and adopt a more nuanced approach toward understanding the role of student *race* in discipline, I conducted a systematic review of the literature on interventions that address racism in disciplinary practices. This review included quantitative and qualitative studies to gain the most comprehensive understanding of interventions to address this issue. Further, I focus this review on the disparity based on *racial* identity rather than examining multiple intersecting identities as done by Cruz and colleagues (2021). In my data extraction, I consider whether the authors name their intervention as being culturally relevant, as this is crucial in reducing the race discipline gap (Edwards, 2021; Espelage et al., 2023; Gregory et al., 2021; Skiba et al., 2002, 2022).

My review also includes an additional three years of research, which is notable because several studies have been published since Cruz and colleagues (2021) published their study, given the lag between the search, review, and publication. This three-year difference is critical because we have seen a shift in the sociopolitical context of racial disparities across domains that highlight race and racism, its historical underpinnings, and its consequences (Bauer, 2020; Skiba et al., 2022). This has resulted in increasing attention to the disparate effects of exclusionary discipline in school and the school-to-prison pipeline (Cruz & Firestone, 2023; Sanders, 2024; Sobti & Welsh, 2023; Zinsser et al., 2022) over the last few years.

With these questions and considerations in mind, I conducted a systematic review of the literature on interventions that address racism in disciplinary practices. The research questions guiding this systematic review are:

1. What interventions exist to address racism in disciplinary practices in K-12 schools, and to what extent have those interventions been evaluated?
2. What types of interventions reduced racial disparities in discipline, and what research designs have been used to test the efficacy of these interventions?

This research is a critical step for summarizing the evidence for best practices for reducing racial disproportionality in discipline in K-12 schools and identifying the gaps that may need to be addressed to provide a comprehensive effort to reduce these disparities.

Method

Search Strategy

I used a protocol informed by the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines to search research databases, screen published studies, apply inclusion and exclusion criteria, and select relevant literature for review. The comprehensive electronic search of publications used the following databases: PsycINFO, ERIC, PubMed, Socioabs, and Scopus. I restricted the search to English-only studies and collected all database results published in the past 23 years (January 2000 - July 2023). The original search spanned 20 years, and I re-ran the search a second time to include additional articles published between 2020 and 2023. The search terms addressed the main concepts of the search strategy: schools AND discipline AND intervention AND racism. After the full-text review, I assessed the reference lists of included studies to identify any additional studies for inclusion, a process known as snowball sampling (Hiebl, 2023).

Inclusion Criteria

To be included in this review, empirical studies must report on an intervention related to racism as the independent variable and disciplinary outcomes in K-12 schools as the dependent variable. I included quantitative and qualitative studies that are descriptive (e.g., describe an intervention) as well as experimental designs (e.g., implements and reports on the efficacy of an intervention). Furthermore, articles must be peer-reviewed, conducted in the U.S., and published in English. Following these inclusion criteria, I excluded articles that: 1) Did not report on race or racism as the independent variable, 2) Did not report on discipline as the outcome variable, 3) Did not report on an intervention (i.e., program, policy) for racism and discipline; 4) Were not conducted in a K-12 school; 5) Was conducted outside of the United States; 6) Were not published in English; 7) Were not a peer-reviewed journal article; or 8) Were not a dissertation, review, editorial, opinion piece, or commentary.

Study Selection

I used Covidence, an online platform, to manage the screening and selection of articles. Two research team members independently screened each title and abstract to determine whether the study fit the criteria and establish inter-rater reliability. Full-text screening was completed for relevant articles to determine whether the paper should be included in the final sample. After reviewing the full texts, the research team developed criteria and procedures for what information to extract from the included studies. Two research assistants or colleagues performed the initial data extraction, and a third reviewed these results to establish the quality and accuracy of the data. At each step, the research team met to discuss any discrepancies until a unanimous decision was reached regarding the inclusion or exclusion of a particular study from the final sample.

Data Extraction

I developed a data extraction procedure for information from the articles that passed full-text review and met the inclusion criteria. The data I extracted from the articles depended on the study design: descriptive (e.g., observational, case study) or experimental (e.g., quasi-experimental, randomized control trial). I extracted the following data from all studies: author, publication year, school level (elementary, middle, or high school), and geographical location (state or region represented). I also extracted details of the study design, including if the study was quantitative (randomized control trial, observational research design, or quasi-experimental design) or qualitative (case study, ethnography, action research, or critical race theory). I further extracted the intervention's unit of analysis (school, district, classroom, individual, state, or nation), the audience (educators, school leaders, school community, or students), and the racial demographics of the students (e.g., majority students of color). For the experimental studies, I extracted the sample size, percent female, and whether the intervention reduced racial disparities (yes or no). To be coded "yes", an intervention must report a comparison group. A disparity presupposes that one group is treated differently than another group, in this case, concerning school discipline practices (Okonofua & Eberhardt, 2015). Therefore, researchers that examine an intervention for one group of students, such as in the study by Gibson and colleagues (2019), are not considered successful in reducing racial disparities in discipline.

Drawing from the work by Skiba and colleagues (2022) outlining the widely adopted practices for school discipline, I describe the intervention using the following mutually exclusive categories: Positive Behavioral Interventions and Supports (PBIS), Restorative Practices (RP), Social-Emotional Learning (SEL), Policy, Professional Development (PD), Learning Lab, and Other. In addition, I provide a brief description of the intervention (Tables 3.1 and 3.2). To

operationalize the outcome variable (the discipline measure), I extracted the variable the authors reported on (e.g., office discipline referral, expulsion).

Finally, I indicated whether the intervention was culturally relevant. To determine this, I identified whether the authors explicitly referred to their intervention as culturally relevant and coded it as *yes* or *no*. For example, authors that described the intervention as equity-focused, culturally relevant, culturally responsive, or race-conscious were coded as *yes*. Authors who only discussed the cultural implications of an intervention as a secondary goal, afterthought, implication, or future direction were coded as *no*. For an intervention to be considered culturally relevant in this review, authors must describe cultural relevance as a primary aspect of the intervention.

Results

Figure 3.1 depicts my systematic review process. The initial database search identified 5,418 articles, of which 777 were identified as duplicate records and removed. Next, 4,641 records were examined during the initial title/abstract screening, of which 4,465 were excluded due to not meeting the identified inclusion/exclusion criteria. A total of 169 records were examined for full-text review. Of these records, 131 were excluded due to not meeting the established inclusion/exclusion criteria. In total, the final sample consisted of 38 studies that were included in the review. Below, I report on these 38 studies and discuss them based on whether they were descriptive or experimental research designs. Further, I critically analyze a subsample of experimental interventions that reduced racial disparities.

Descriptive Studies

Sixteen articles reported an intervention description, as detailed in Table 3.1. In Figure 3.2, I detail each intervention based on the intended audience described in these studies. Among these descriptive studies, the most frequent intervention reported was Positive Behavioral Interventions and Supports (PBIS; n = 5). Of the five studies on PBIS, the intended audience varied from school community (n = 3), educators (n = 1), and school leaders (n = 1). For example, Zakszeski and colleagues (2021) examined ODR trajectories using secondary district-level data from 27 schools that had implemented school-wide PBIS over three years. They found that ODRs among Black and Latinx students remained overrepresented across the years of PBIS implementation (Zakszeski et al., 2021). Another intervention described was policies (n = 4), all four intended for school leaders. The studies on Learning Lab (n = 3) and social-emotional learning (n = 1) described the audience as the whole school community. Articles on restorative practices (n = 2) described the intended audience as educators (n = 1) and school leaders (n = 1), while the article on staff professional development (n = 1) described educators as the audience.

All the descriptive quantitative studies use observational research designs (n = 11). While these studies provide valuable information about interventions and their potential to help address this problem, observational research designs do not yield causal results, thus precluding conclusions about program effectiveness in reducing disparities (Campbell & Stanley, 2011). The five qualitative studies included an ethnographic case study (n = 1), case study (n = 2), critical race theory (n = 1), and action research (n = 1) approach. While these qualitative studies are limited in generalizability due to the in-depth analysis of one specific school (or grade in the article by Stephens, 2021), the findings may be insightful or applicable in developing and implementing equity-focused interventions in other contexts. For example, in the ethnographic case study by Bal and colleagues (2014), they discuss the process of engaging local stakeholders

in implementing school-wide equity-focused PBIS (called *Learning Lab*) in an elementary school in Wisconsin to address racial disparities in student outcomes, including discipline. They provide critical considerations for the formation of equity-focused interventions that provide systemic transformation, including "how families' cultural practices, histories, and goals are included; and ultimately how such a knotworking builds the institutional capacity for sustained coalitions among schools, families, community-based organizations, and local educational agencies" (p. 337). Thus, the value of these qualitative studies is not to be understated.

Interestingly, the researchers in all five qualitative studies described the interventions as culturally relevant in their respective studies. The researchers described none of the eleven quantitative (observational) studies as culturally relevant, but they did examine racial disparities. Most interventions among these descriptive studies took place across all three school levels (elementary, middle, high; n = 7), with others focusing on the elementary (n = 3), elementary and middle (n = 1), middle (n = 2), and high (n = 3) school levels. The units of analysis included school-wide (n = 8), district-wide (n = 5), classroom-wide (n = 1), state-wide (n = 1), and nationwide (n = 1). In addition, the studies represented a wide range of geographic locations in the U.S. where these interventions take place (see Table 3.1).

Experimental Studies

I identified 22 studies with an experimental methodology to evaluate the intervention (see Table 3.2). In Figure 3.3, I detail each intervention based on the intended audience described in each of these studies. The most commonly reported interventions among these experimental studies were focused on staff professional development (n = 6). Among the six studies on staff professional development, the intended audience included educators (n = 5) and school leaders (n = 1). Knochel and colleagues (2022), for example, examined the use of behavior-specific praise

with self-monitoring and performance feedback among four female educators in an elementary school in the Southeast U.S. Using a multiple baseline design, they found that disparities in educators' use of behavior-specific praise persisted across student racial groups with an overall reduction in reprimands (Knochel et al., 2022). These findings may be attributed to the lack of focus on addressing implicit bias and racial inequities as part of the intervention.

Another type of intervention described was social-emotional learning (SEL; n = 6). The intended audience of the six articles on SEL included students (n = 3) and educators (n = 2). Authors of articles on PBIS (n = 3) described the audience as educators (n = 1), school leaders (n = 1) and broader school community (n = 1). The audience for articles on RP (n = 2) included educators (n = 1) and school leaders (n = 1), and the audience for the article on a policy was school leaders (n = 1). Articles with interventions that did not fit into one of these categories were described as other (n = 4), and these interventions were for educators (n = 2), students (n = 1), and school leaders (n = 1).

Most interventions among experimental studies occurred at the elementary school level (n = 6), followed by those at all three grade levels (elementary, middle, high; n = 5). Other school levels in these experimental studies include interventions at elementary and middle (n = 3), middle (n = 4), middle and high (n = 3), and high (n = 1) school levels. The units of analysis included district-wide (n = 4), school-wide (n = 9), classroom-wide (n = 6), and individual-level (n = 3).

The researchers in all 22 studies used quantitative methods; twelve articles used quasi-experimental designs (QED), and 10 used randomized control trials (RCTs). Of the twelve QEDs, one article had an intervention that both reduced racial disparities and was culturally relevant (Gion et al., 2020); two articles had interventions that did not mitigate racial disparities

but were culturally relevant (Gibson et al., 2019; McIntosh et al., 2021b); three articles had interventions that reduced racial disparities but were not culturally relevant (Cook et al., 2018; Lee et al., 2021; Okonofua et al., 2022); and six articles had interventions that neither reduced racial disparities nor were culturally relevant (Anderson & McKenzie, 2023; Ash et al., 2023; Davison et al., 2022; Knochel et al., 2022; Lo & Cartledge, 2006; Rila et al., 2022).

Of the ten RCTs, one article had an intervention that both reduced racial disparities and was culturally relevant (McIntosh et al., 2021a); one article had an intervention that did not mitigate racial disparities but was culturally relevant (Bradshaw et al., 2018); six articles had an intervention that reduced racial disparities but was not culturally relevant (Borman et al., 2022; Goyer et al., 2019; Gregory et al., 2014, 2016, 2019; Okonofua et al., 2020); and two articles had an intervention that neither reduced racial disparities nor was culturally relevant (Huang et al., 2023; McIntosh et al., 2020). In addition, the studies represented a wide range of geographic locations in the U.S. where these interventions take place (see Table 3.2).

Reduction in Racial Disproportionality

Eleven of the 22 experimental studies report results of an intervention that reduced racial disparities in school discipline. Researchers suggest that interventions tailored to those enacting discipline practices will most likely successfully reduce disparities (Skiba et al., 2022; Tobin & Vincent, 2011). Therefore, I focus the following sections on a subsample of interventions designed for educators (n = 7) and school leaders (n = 1).

Of these eight articles with interventions for educators and school leaders, there were four randomized control trials (RCTs) and four quasi-experimental designs (QEDs). For example, Okonofua and colleagues (2020) used an RCT to evaluate an individual-level psychological intervention for educators designed to alleviate racial bias in school discipline practices. While

the authors report that the intervention reduced racial inequality in teachers' discipline of Black and White students, the intervention was a host of hypothetical scenarios presented to participants on a computer screen. While the preliminary evidence is promising, researchers may consider replicating this study in a real-world classroom setting to increase confidence in the findings. Further, the sample in this study was majority white educators, limiting the generalizability of these findings. However, data suggest that 80 percent of public school teachers identify as white (U.S. Department of Education, 2022).

These intervention types included professional development (n = 3), PBIS (n = 2), SEL (n = 1), and other (psychological and behavioral interventions; n = 2). The three articles on professional development for educators all tested the same intervention, *My Teaching Partner,* in different middle and high school samples using RCTs (Gregory et al., 2014, 2016, 2019). In all three studies, Gregory and colleagues (2014, 2016, 2019) found that the intervention reduced the race discipline gap in office discipline referrals (ODRs) for Black and White students. While these findings are promising, I identify a few areas for future research.

First, the sample sizes for these studies are small (N = 58 to 86), limiting the confidence in the results. Future researchers may consider replicating this program evaluation with a larger sample of educators. Second, these studies were conducted in middle and high schools in the Southeast U.S., limiting the generalizability of the findings. Researchers suggest the race discipline gap is ubiquitous across all school levels and geographic regions. Thus, future researchers may consider replicating this study in other contexts. Third, while race disparities exist in all school discipline practices, including suspensions, expulsions, arrests, and school transfers, the outcome for all three studies is limited to only ODRs. While ODRs are informative for documenting student behavioral issues, future researchers may consider examining the effect

of *My Teaching Partner* on other discipline outcomes. Finally, while researchers demonstrate that the race discipline gap affects Black and Latinx students, these studies only examine the disparities between Black and White students. Future researchers may consider replicating this study with Latinx students to test the effect of the intervention in addressing the disparity for these students.

Culturally Relevant

Two articles detailed the results of a culturally relevant intervention that reduced race disparities in school discipline with an experimental methodology. Gion and colleagues (2020) utilized a concurrent multiple-baseline, single-case design across four elementary and middle school teachers to evaluate a classroom-based behavior systems intervention to increase cultural responsiveness and address racism in teacher behavior. The intervention is an adaptation of the evidence-based *Classroom Check-Up* model, which includes tools for educators to reflect on their implicit biases and coaching with visual performance feedback on the inequitable treatment of students. They found that implementing the intervention was associated with increased praise and decreased reprimands for all students, the most substantial being for Black students. Thus, Gion and colleagues (2020) concluded that changing teacher use of praise and reprimands may help to increase racial equity in schools. However, the scale of this intervention is limited to the classroom. It does not consider the larger school context vital for systemic change and sustaining intervention effects beyond the classroom (Engeström & Sannino, 2011; Wiltsey Stirman et al., 2012).

McIntosh and colleagues (2021a) conducted a randomized control trial to see if multicomponent, equity-focused, school-wide PBIS would reduce the rate of ODRs between Black students and their peers in 13 elementary schools. They used a framework called *ReACT*

(*Racial equity through Assessing data for vulnerable decision points, Culturally responsive behavior strategies, and Teaching about implicit bias and how to neutralize it*) to leverage the intervention. McIntosh and colleagues (2021a) found that intervention schools had significant decreases in rates of office discipline referrals (ODRs) for Black students, while the control schools had minimal change. They conclude that equity-focused, multi-tiered systems of support implemented with fidelity can help reduce racial disparities in school discipline. However, this finding has limited generalizability; this study examined ODR rates for Black students in a sample of eight elementary schools from one school district. Thus, these findings cannot be generalized to students of other marginalized racial backgrounds. Further, additional research is needed to examine the effects of the *ReACT* framework on other longitudinal outcomes, such as academic achievement, given the adverse effects of discipline disparities on academic achievement (Morris & Perry, 2016; Noltemeyer et al., 2019).

Discussion

Expanding on the work by Cruz and colleagues (2021), my findings suggest that, despite the ubiquity of racial disparities in school discipline, we have limited empirical research that evaluates interventions to address racial disproportionality in school discipline. While I found nine articles that overlap between the present review and the one by Cruz and colleagues (2021), my study included 23 articles published after May 2019, the last year of their search. Moreover, my review included articles that utilized qualitative research designs to ensure complete coverage of the interventions that have been published. In contrast, Cruz and colleagues (2021) restricted their search to only articles with quantitative research designs. Nevertheless, I found few studies with rigorous evaluation designs (i.e., quasi-experimental, randomized control trial) focused on reducing the race discipline gap, demonstrating the need for additional research to

establish the generalizability of intervention effects and best practices for reducing discipline disparities.

The limited evaluation research on racism and school discipline practices leaves school leaders with minimal guidance on what evidence-based best practices may help reduce the race discipline gap in their schools. Based on my findings, I draw several recommendations for addressing the race discipline gap in practice. Culturally relevant professional development for educators and school leaders is likely more effective than programs (e.g., social-emotional learning) for students. Components of culturally relevant professional development for educators may include opportunities to challenge implicit biases, learn about the history of structural racism in education, and commit to increasing equitable discipline practices and classroom management strategies. Existing strategies in schools, such as Positive Behavioral Intervention and Supports (PBIS), Restorative Practices (RP), and Social-Emotional Learning (SEL), may help reduce race disparities in discipline when the principles are valued by the school community and implemented with an equity focus. For example, practitioners implementing equity-focused (transformative) SEL in schools provide opportunities for youth to use their voices to create positive change and developmentally appropriate activities to engage students and adults in examining how social issues, such as racism, impact society (Jagers et al., 2019).

The findings of my study suggest that when traditional programs like PBIS, SEL, and RP are implemented with an intentional focus on race and cultural relevance, they may mitigate race-based disparities in school discipline. These findings are consistent with previous research that successful school interventions for reducing racial disparities value diversity in student cultures rather than those designed to assimilate students into the majority culture. Interventions that do not explicitly focus on cultural relevance are unlikely to mitigate race disparities in

school discipline because they fail to honor cultural differences among youth, allowing disparities to persist (Anyon et al., 2016; Curran, 2016; Hashim et al., 2018; Knochel et al., 2022; Zakszeski et al., 2021) and sometimes even widen (Davison et al., 2022). Further, interventions that do not intentionally prioritize cultural relevance as a primary aspect of the program are less likely to address the root causes of disparities than those that prioritize cultural relevance. Interventions addressing root causes of inequalities, such as structural and personal biases, may be most effective at mitigating the discipline gap.

The field has yet to make significant progress in replicating empirical research on interventions that reduce the race discipline gap. While researchers demonstrate that disproportionate discipline affects Latinx students (Crosse et al., 2022), no RCTs in my review examined this disparity among a sample of Latinx students. Further, the three evaluations of the *My Teaching Partner-Secondary* (MTP-S) intervention by Gregory and colleagues (2014, 2016, 2019) had relatively small sample sizes of students (N = 58 to 82) and were specific to the middle and high school levels. In addition, these researchers evaluated the same intervention approach (MTP-S), but they replicated their findings across studies and settings. Future research is needed to address these gaps in the literature to develop a comprehensive, holistic evidence base for school-based interventions that reduce the race discipline gap.

Limitations

This study has some limitations. I only included studies that were peer-reviewed and published in English, excluding articles published in languages other than English, as well as gray literature or other work of less scientific rigor. School districts or other entities may complete internal evaluations of their efforts to mitigate the race discipline gap without disseminating findings. Because this review only included peer-reviewed literature, I did not

include unpublished program evaluations. I included qualitative and quantitative research articles to gain the most data about race discipline gap intervention descriptions and evaluations. However, these inclusion criteria introduced heterogeneity into the rigor and, thus, the quality of the studies included in this review. Due to this heterogeneity and the limited RCTs identified, I do not endorse any particular intervention in this review. Instead, I recognize the need for future researchers to conduct rigorous evaluations of interventions to address racism in school discipline.

The interventions in the final sample may be considered culturally relevant by others that I did not identify as such because the authors did not use key the keywords that I used in my search for culturally relevant interventions (equity-focused, culturally relevant, culturally responsive, or race-conscious). This is a practical conclusion given the plethora of research on the importance of culturally relevant programming for equitable school practices and my finding that nine of the 22 experimental studies reported reduced racial disparities and were not identified as culturally relevant interventions. Nevertheless, extant researchers demonstrate the necessity of culturally relevant practices for reducing race disparities in school discipline (Carter et al., 2017; Skiba et al., 2022; Skiba & Rausch, 2014; Sobti & Welsh, 2023). Thus, I recommend that future researchers and practitioners develop and implement interventions with an explicit and intentional focus on anti-racism, equity, and cultural relevance to maximize the validity, reliability, replicability, and sustainability of program effects.

Conclusion

Exclusionary school discipline practices can lead to a host of negative consequences for all students, especially for students of color, as they are disciplined at higher rates than their White peers for similar behavior infractions. This review of the literature demonstrates that the

field has made little progress in establishing an evidence base for interventions to reduce race disparities in school discipline since Cruz and colleagues published their best-evidence synthesis in 2021. Based on their findings, Cruz and colleagues (2021) concluded that efforts to mitigate the race discipline gap have lacked data on "the extent to which embedded structural and personal biases affect intervention effectiveness" (p. 417). My present findings build on this conclusion by further identifying culturally relevant interventions. I identified only two interventions tested with an experimental design and reduced the race discipline gap. Given these considerations, I identify a need for interventions that challenge the biases of those with the authority to enact discipline measures. Interventions designed for students may not be most effective at reducing disparities given that student behavior is not the root cause of racial disparities. Future researchers may consider tailoring interventions to school leaders and educators whose actions ultimately perpetuate or mitigate disparities. Finally, this review supports a comprehensive, positive youth development approach to school safety. In the conceptual model posited by Stilwell and colleagues (2024), they identify equitable strategy and response as essential and foundational to holistic school safety and positive youth development outcomes. This review has the potential to make school environments more equitable and safe for all students by helping to build the evidence base for interventions to reduce race disparities in school discipline so that all students have the opportunity to develop positively overall.

Figure 3.1 PRISMA Flow Chart for Systematic Review Process

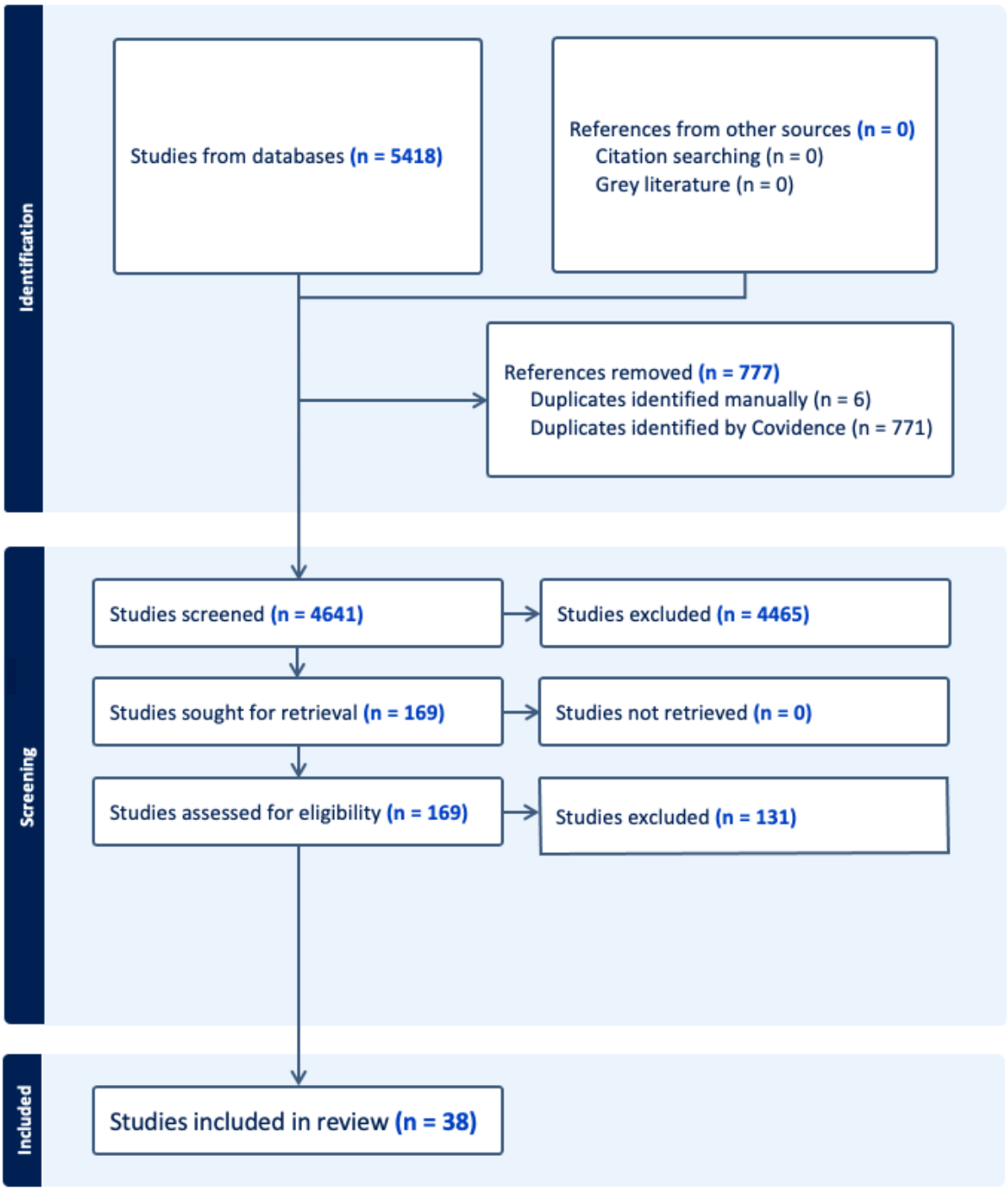
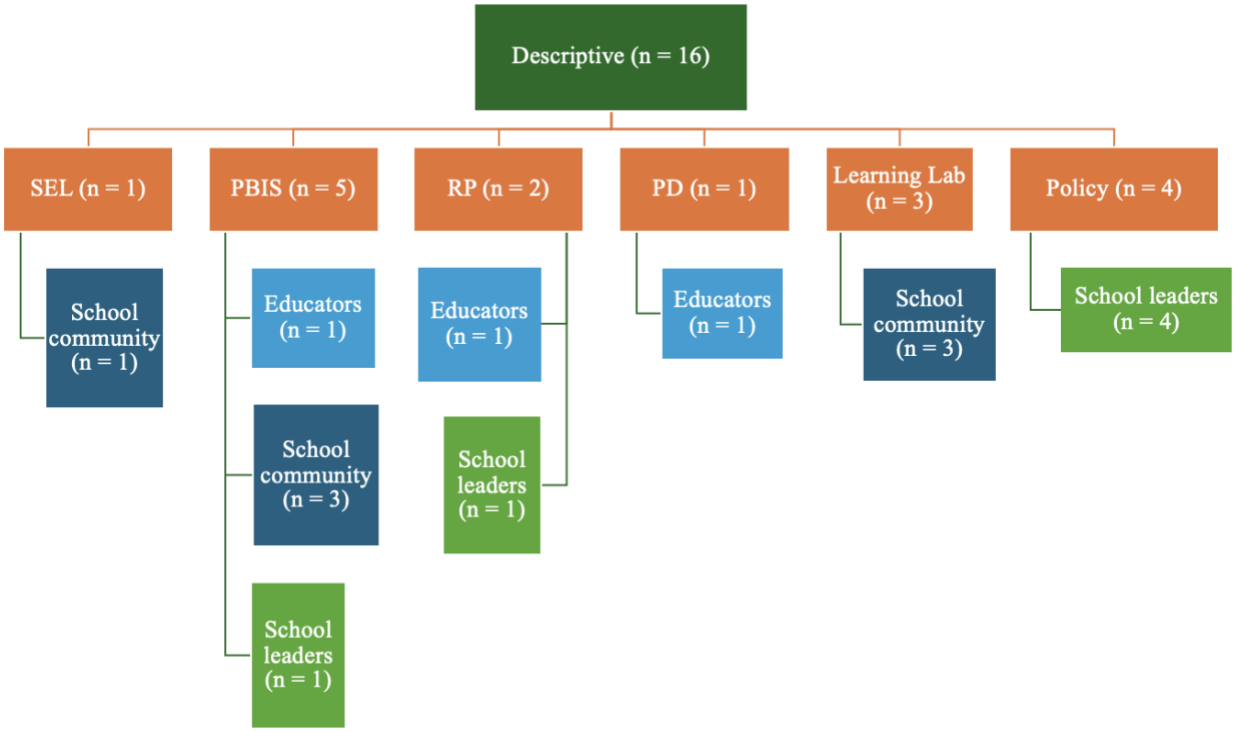
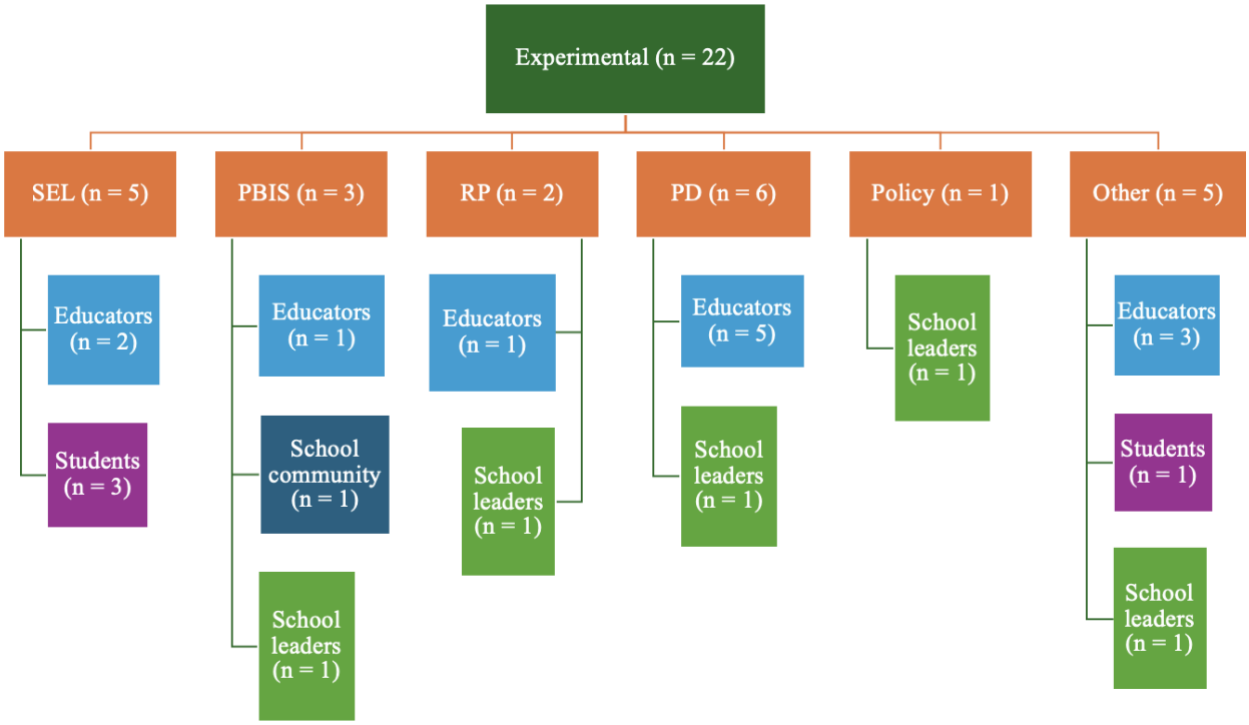


Figure 3.2 Flow Chart of Descriptive Studies Detailing Audience by Intervention Type



Note. SEL = Social-Emotional Learning; PBIS = Positive Behavioral Interventions and Supports; RP = Restorative Practices; PD = Professional Development. No articles described students as the audience of the intervention.

Figure 3.3 Flow Chart of Experimental Studies Detailing Audience by Intervention Type



Note. SEL = Social-Emotional Learning; PBIS = Positive Behavioral Interventions and Supports; RP = Restorative Practices; PD = Professional Development.

Table 3.1 Study Characteristics of Descriptive Interventions (n = 16)

Author (year)	School Level and Location	Study Design	Unit of Analysis	Racial Demographics	Intervention Description	Outcome Variable	Culturally Relevant	Results
Amiot et al. (2020)	Middle school in UT	QUAL: CRT	School-wide professional development for educators	Majority students of color	CRT-informed intervention to challenge deficit framing toward students of color and re-orient disciplinary actions	Equity audits; School data on discipline infractions and suspensions	Yes	Educators interrogate their racial biases in school discipline.
Anyon et al. (2016)	Elementary, Middle, High school in CO	QUANT: ORD	District-wide restorative practice for educators	Majority students of color	Voluntary staff trainings and recommendations to offer RP to students in conjunction with, or in replace of, suspensions	ODRs; Suspensions	No	Students who participated in RP in semester 1 were less likely to receive ODRs and suspensions in semester 2. Suspension gap between Black and White students persisted.
Bal et al. (2014)	Elementary school in WI	QUAL: Ethnographic Case Study	School-wide Learning Lab for school community	Majority White school community	LL focused on providing opportunities for school community to examine and address disproportionality in student outcomes	School culture	Yes	Implementation barriers include building inclusivity within a bureaucratic institution and shifting from a deficit to expansive discourse.
Bal et al. (2019)	Middle school in WI	QUAL: Case study	School-wide Learning Lab for school community	Majority White and Black students	LL to design and address racial disproportionality in discipline through a culturally responsive school discipline system	Cultural responsiveness of school discipline	Yes	The process of creating LL was examined through needs, interest, and resources within the school community
Cornell et al. (2018)	Elementary, Middle High school in VA	QUANT: ORD	State-wide policy for school leaders	Majority White students	Threat assessment teams	Suspensions; Expulsions; School transfer; Law enforcement action	No	No disparities among Black, Hispanic, and White students in OSS, school transfers, or legal actions.

Curran (2016)	Elementary, Middle, High schools: Nationally representative	QUANT: ORD	National policy focused on school-level behaviors and district-level outcomes for school leaders	Majority White students	Zero-tolerance laws mandating expulsion across all 50 states	Exclusionary discipline; Racial discipline gaps; Student behavior	No	Laws are predictive of a 0.5 percentage point increase in district suspension rates, more so for Black students than White students, contributing to the suspension gap.
Hashim et al. (2018)	Elementary, Middle, High school in CA	QUANT: ORD	District-wide policy for school leaders	Racially diverse students	Suspension bans for willful defiance and programs to train educators in restorative justice to address disproportionate suspension rates	Suspensions	No	Overall decline in suspension rates; Suspension gaps between Black and non-Black students persisted.
Heidelburg (2022)	Elementary, Middle school on U.S. East Coast	QUANT: ORD	District-wide PBIS for school leaders	Majority Black students	Analysis of SWPBIS implementation and ODRs for Black students	ODRs	No	No linear relationship was found between SWPIBS implementation and reduction of ODRs among Black students
Ko et al. (2022)	High school in WI	QUAL: Case Study	School-wide Learning Lab for school community	Racially diverse students	Cultural-historical activity theory-based intervention where school community members analyze systemic challenges in the community and develop context-specific solutions	Types of transformative agency utilized by participants	Yes	Participants developed a culturally responsive behavioral support system to address racial disproportionality in discipline outcomes
Mansfield et al. (2018)	High school in VA	QUANT: ORD	School-wide restorative practice for school leaders	Racially diverse students	*SaferSanerSchools* is a comprehensive, multitiered preventative and responsive RP	Suspensions	No	Reduction in the race discipline gap
Stephens (2021)	Elementary school location NR	QUAL: Action Research	Classroom-wide SEL for school community	Black and Latinx students	Three phase student-led effort on the impact of a restorative justice-inspired responsive SEL program	Student response to SEL program; OSS	Yes	Violent classroom disputes and OSS decreased

Tobin & Vincent (2011)	Elementary, Middle, High school from CO, IL, MD, & MI	QUANT: ORD	School-wide PBIS analysis for educators	Majority White students	Analysis of disproportionate exclusion of Black students using educators self-reported implementation of SWPBIS and RRI	Relative Rate Index (RRI)	No	SWPBIS strategies were associated with reductions in disproportionate exclusionary discipline
Vincent & Tobin (2011)	Elementary, Middle, High school in CO, IL, MD, MI, OH, OR, & SC	QUANT: ORD	School-wide PBIS analysis for school community	Majority students of color	Analysis between SWPBIS implementation, student ethnicity, and ODR	OSS; Effective Behavior Support (EBS)	No	SWPBIS was associated with decreased exclusions in elementary and high schools. Black students remained overrepresented in exclusions.
Vincent et al. (2011)	Elementary schools in IL, OR, CO, IA	QUANT: ORD	School-wide PBIS analysis for school community	Majority students of color	Analysis identifying patterns of ODR with SWPBIS	ODR	No	SWPBIS schools had smaller race discipline gap compared with non-SWPBIS schools
Wang (2022)	High schools in CA	QUANT: ORD	District-wide policy for school leaders	Racially diverse students and educators	Willful defiance suspension ban (WDB)	OSS	No	OSS decreased for willful defiance, but not for other infractions; OSS increased among Black students
Zakszeski et al. (2021)	Elementary, Middle, High school in Mid-Atlantic U.S.	QUANT: ORD	District-level SWPBIS analysis for school community	Majority students of color	Analysis of SWPBIS by student race and ODR	ODRs; Risk indices; Risk ratios; Risk differences	No	ODRs remained overrepresented among Black and Latinx students

Note. CRT = Critical Race Theory; PBIS = Positive Behavioral Intervention and Supports; RP = Restorative Practices; SEL = Social-Emotional Learning; OSS = out-of-school suspensions; ISS = in-school suspensions; ORD = observational research design.

Table 3.2 Study Characteristics of Experimental Interventions (n = 22)

Author (year)	School Level and Location	Unit of Analysis	Racial Demographics	Intervention Description	Outcome Variable	Reduced Racial Disparity	Culturally Relevant	Percent Female	Sample Size	Results
Quasi-Experimental Designs *(n = 12)*										
Anderson & McKenzie (2023)	Elementary school in AR	District-wide policy for school leaders	Majority White students	Policy enforcing limits on exclusionary discipline	Infraction types and frequency	No	No	NR	NR	The policy reduced the risk of suspension or expulsion for all students. Black students had the least reduction in risk compared to other racial groups.
Ash et al. (2023)	Elementary, Middle, High schools across the U.S.	Individual-level SEL for educators	Majority White educators	Online survey to assess mindfulness practices and the relationship to anti-Black bias and disciplinary decisions among educators	Adapted version of the Disciplinary Practices Survey	No	No	61.5%	179	Educator self-reported mindfulness moderated responses to a disciplinary action as a function of student signaled race.
Cook et al. (2018)	Elementary school in western U.S.	School-wide PBIS for educators	Majority students of color	*Greet Stop Prompt* (GSP) aims to mitigate exclusionary discipline through classroom management, self-regulation, and empathetic responses to student behavior	Relative Risk Ratios	Yes	No	76%	40	GSP led to reductions in risk ratios. The likelihood of Black students receiving an ODR was cut by two-thirds.

Davison et al. (2022)	Elementary, Middle, High schools in western U.S.	District-wide restorative practice for school leaders	Majority White students	Difference-in-difference estimates of the effects of RP on student discipline based on race	Suspensions	No	No	49.7%	7,282	Students in RP schools experienced a decline in suspension rates. However, disciplinary outcomes for Black students were largely unchanged; racial disproportionality widened.
(Gibson et al., 2019)	Middle school in TN	School-wide SEL for students	Black boys	Culturally responsive group intervention to improve behavior and increase social and emotional skills for Black boys	ODRs	No	Yes	0%	8	73.68% decrease in ODRs among the group of Black boys.
Gion et al. (2020)	Elementary, Middle school in Pacific Northwest U.S.	Classroom-wide behavioral intervention for educators	Racially diverse students	Classroom-based behavior systems intervention to increase cultural responsiveness and address racial disparities in teacher behavior	Praise and reprimands	Yes	Yes	75%	4	Increase in praise for all groups and decrease in reprimands, more so for Black students than other racial groups.
Knochel et al. (2022)	Elementary school in Southeast U.S.	Classroom-wide professional development for educators	Majority students of color	Behavior-specific praise (BSP) with self-monitoring and written performance feedback	BSP and reprimands	No	No	100%	4	Overall reduction in reprimands; Disparities in BSP across student racial groups persisted
Lee et al. (2021)	Elementary, Middle	School-wide PBIS for	Majority students of color	A multitiered system of	ISS; OSS; Expulsions;	Yes	No	51.7%	1,403	Reduction in exclusionary

	schools in GA	school leaders		support for school-wide expectations and student behavior	School transfers; Law enforcement action					discipline, especially for Black students apart from arrests
Lo & Cartledge (2006)	Elementary school in Midwest U.S.	Individual-level behavioral intervention for students	Black students and White educators	Behavioral intervention plans (BIP) include skill training, differential reinforcement, and self-monitoring of behavior for Black boys	Off-task behavior	No	No	0%	4	BIP reduced off-task behavior to a level comparable to their peers
McIntosh, et al. (2021b)	Elementary, Middle, High school in Southeast U.S.	School-wide professional development for school leaders	Majority students of color	4 days of PD for school leaders focused on PBIS to improve equity in school discipline	Exclusionary discipline	No	Yes	NR	NR	Improvements in school exclusionary discipline when compared to comparable non-participating schools
Okonofua et al. (2022)	Middle school in Southeast U.S.	Classroom-wide SEL for educators	Majority students of color and White educators	“Empathic mindset” intervention to refocus selected teacher perspectives to understand student behavior	ODRs	Yes	No	79%	66	Reduced suspension rates for Black and Hispanic students compared to their peers
Rila et al. (2022)	High school in Midwestern U.S.	School-wide behavioral intervention for educators	Majority White students	Visual Performance Feedback (VPF) for teacher's equitable delivery of BSP and student reprimands.	BSP; reprimands; ODRs	No	No	53%	99	VPF decreased frequency of reprimands and increased BSP for participating teachers

Randomized Control Trials *(n = 10)*										
Borman et al. (2022)	Middle school in WI	District-wide SEL for students	Majority White students	A self-affirmation exercise asking students to identify values and why they are important to them	Suspensions	Yes	No	50%	2,149	Reduction in the Black-White suspension gap by 67%.
Bradshaw et al. (2018)	Elementary, Middle school in MD	School-wide professional development for educators	Majority students of color	A coaching approach utilized as an element of the *Double Check* cultural responsivity and student engagement model	ODRs; Relative Risk Ratios	No	Yes	85.4%	158	Teachers who received the coaching decreased use of ODRs for Black students.
Goyer et al. (2019)	Middle schools in Northeast and Western U.S.	School-wide SEL for students	Majority students of color	Social-belonging, values-affirmation, and growth-mindset intervention intended to promote identity safety for negatively stereotyped boys	Discipline citations	Yes	No	49.6%	669	Reduced citations of negatively stereotyped boys; closed disparity between Black and White boys over seven years.
Gregory et al. (2014)	Middle, High school in Southeast U.S.	Classroom-wide professional development for educators	Majority students of color	*My Teaching Partner-Secondary* (MTP-S), provide teachers with ongoing personalized coaching and	ODRs	Yes	No	52%	82	Black students had a similarly low probability of receiving ODRs compared with students of other racial groups.

				feedback to improve teacher-student interactions						
Gregory et al. (2016)	Middle, High school in VA	Classroom-wide professional development for educators	Majority Black students	*My Teaching Partner-Secondary* (MTP-S), provide teachers with ongoing personalized coaching and feedback to improve teacher-student interactions	ODRs	Yes	No	65%	86	Reduced racial discipline gap in ODRs.
Gregory et al. (2019)	Middle, High School in Southeast U.S.	Classroom-wide professional development for educators	Majority Black students	*My Teaching Partner-Secondary* (MTP-S), provide teachers with ongoing personalized coaching and feedback to improve teacher-student interactions	ODRs	Yes	No	NR	58	Reduced the racial gap in ODRs; sustained one year post-intervention.
Huang et al. (2023)	Elementary, Middle, High schools in Northeast U.S.	District-wide restorative practice for educators	Majority Black students	*Whole School Restorative Practices Project* is a restorative practice model that centers racial equity and SEL	OSS	No	No	50%	5,878	No suspension differences found among students in the intervention and control schools; Reductions in OSS for students with previous suspensions.

McIntosh et al. (2020)	Elementary, Middle, High school in Pacific Northwest U.S.	School-wide discipline information system for school leaders	Black and White students	Disciplinary equity reports	District discipline data	No	No	NR	NR	No meaningful change in disciplinary equity.
McIntosh et al. (2021a)	Elementary school in Southeast U.S.	School-wide PBIS for school community	Black students	Multicomponent, equity focused SWBPIS	ODRs	Yes	Yes	NR	9,600	Decrease in racial disparities in discipline and ODRs.
Okonofua et al. (2020)	Elementary, Middle, High school in Southern U.S.	Individual-level psychological intervention for educators	Majority White educators	In Bias Consequence Alleviation (BCA), educators report how they would react in hypothetical situations based on perceived student racial identity	Consequences of educator self-reported bias and perceptions of student behavior	Yes	No	88.6%	246	BCA reduced racial inequality in teachers' hypothetical discipline of Black and White students.

Note. NR = Not Reported; PBIS = Positive Behavioral Intervention and Supports; RP = Restorative Practices; SEL = Social-Emotional Learning; OSS = Out-of-School Suspensions; ISS = In-School Suspensions.

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Chapter 4 These Are My IDEAS: Development and Validation of the Social Justice Beliefs and Actions Scale for Early Adolescents

Young people have been at the forefront of social justice movements for decades. In May of 1963, thousands of children and teens ages 7 to 18 took to the streets of Birmingham, Alabama, to protest racial segregation in the city following the arrest of Dr. Martin Luther King, Jr. (Clark, 2020; Dixon, 2021; Franklin, 2021; Gilmore, 2021). Although the demonstrations remained peaceful, over two thousand protesters were brutalized by law enforcement officers and police dogs, sprayed with water hoses, and arrested and transported to jail in busloads (Franklin, 2021). Knowing these risks, children and teens marched on, bringing national attention to the segregation in Birmingham and the oppression of Black people in the South more broadly. This historic movement, known as the Birmingham Children's Crusade, reignited the Civil Rights Movement and inspired public officials such as the President of the United States at the time, John F. Kennedy, to act, issuing a public statement of support for federal civil rights legislation in June of 1963 (Dixon, 2021; Franklin, 2021). The brave actions of these young people in the Birmingham Children's Crusade would eventually lead to the passage of the Civil Rights Act in 1964 (Clark, 2020; Dixon, 2021; Franklin, 2021; Gilmore, 2021).

Today, we frequently see young people in the media advocating for social issues such as racial equality, gun control, and climate justice, and participating in respective movements, including Black Lives Matter, March for Our Lives, and Climate Action, to name a few (Bublitz et al., 2021; Conner & Rosen, 2016; Earl et al., 2017). In fact, many of these movements are organized and led by young people. For example, X (formerly Emma) González, survivor of the

deadliest high school shooting in U.S. history in Parkland, Florida in 2018, became a spokesperson and co-organizer for March for Our Lives, a youth-led organization that formed after the tragedy in Parkland to lead advocacy efforts for sensible gun control legislation (Bublitz et al., 2021; Kruse, 2018). Since the inception of March for Our Lives in 2018, positive changes have been made to improve firearm safety nationwide. U.S. President Joe Biden passed The Bipartisan Safer Communities Act in 2022 and created the White House Office of Gun Violence Prevention in 2023, two enormous wins for firearm safety advocates and "every young person who has hidden under a desk during a lockdown drill, and every parent who has lost a child at the hands of a gun" (March for Our Lives, 2022).

Given young people's passion, drive, and involvement in social change movements and their positive effect on society, it is crucial to understand social justice beliefs and values among youth. Social justice values can be instrumental in cultivating positive change in society, especially among young people. To date, we have no developmentally appropriate measures to evaluate social justice beliefs and actions among middle school-aged youth, despite extant evidence that they are engaging in civic responsibility and social action (Bublitz et al., 2021, 2024; Conner & Rosen, 2016; Earl et al., 2017; Kruse, 2018; Sloan Morgan et al., 2024). One way to address this is with standardized measurement, including developing and validating surveys. Survey validation is essential for advancing research in the social and behavioral sciences (Weissman, 1979). To that end, the first step is to define social justice; this also requires an overview of the social justice research literature focused on young people.

Defining Social Justice

While many conceptualizations of social justice are adopted by researchers across ecological levels (e.g., corporations, schools, individuals), most definitions contain a shared

understanding of making society more equal for harmonious living for all (Crethar et al., 2008; Fietzer & Ponterotto, 2015; Goodman et al., 2004). Further, some have operationalized social justice to include concepts of diversity, equity, and inclusion, commonly known as DEI (Gomez et al., 2021). *Diversity* can be understood as the variation in the characteristics of people, places, or things in a given context (Gomez et al., 2021). At the individual level, one may demonstrate belief in the value of diversity if one takes the initiative to learn about people from various cultures and identities (Borge, 2023; Gomez et al., 2021). *Equity* is often described as fairness in experience, access, and opportunity (Bolger, 2020; Gomez et al., 2021). Equity, as a personal value, may manifest in the belief that people should be treated fairly, regardless of their racial, gender, sexual, or other identities. Research by Gomez and colleagues (2021) demonstrates that equity can include people who may otherwise be perceived at the margins of society based on their held identities. *Inclusion* refers to the cultivation of welcoming and accessible spaces for all different people (Killermann & Bolger, 2016). People who belong to inclusive spaces may enjoy getting to know people who are different from them.

While those implementing DEI initiatives intend to cultivate a socially just society, some DEI initiatives have been criticized as appeasing the public without accountability for actions to promote DEI (Engram & Mayer, 2023). Bolger (2020) suggests that efforts to increase diversity without attention to equity and inclusion will never succeed. Therefore, some scholars have suggested expanding DEI to include appreciation (Borge, 2023) and solidarity (Milner et al., 2024). *Appreciation*, as it relates to DEI and social justice, is the respect, affirmation, and value of diverse people and their perspectives (Borge, 2023; Gomez et al., 2021). Someone who demonstrates appreciation values people's differences and treats all people with dignity and respect. *Solidarity* is the act of joining people to stand up for something you believe in for the

greater good (Boucher, 2020). Someone who demonstrates solidarity may question the status quo or advocate for a social issue that they deem important (Boucher, 2020; Waring, 2024). The values of diversity, equity, and inclusion, when paired with appreciation and solidarity, can provide a comprehensive operationalization of social justice. These constructs can be reordered to spell IDEAS (Inclusion, Diversity, Equity, Appreciation, Solidarity), and taken together, they form a conceptualization that can be referred to as *social justice* beliefs and actions.

Social Justice and Youth Outcomes

Early adolescence (i.e., 10 – 13 years old) is a critical life stage for examining social justice beliefs and actions. Youth begin exploring and developing their social and political identities as early as age 12 (Erikson, 1994). Tajfel (2010) posits that the construction of in and out-groups during early developmental periods may play an essential role in developing a social identity. In- and out-group biases may shape prejudicial attitudes, leading to acts of discrimination against members of outgroups or people who are different than those in the "in-group". Moreover, Raabe & Beelmann (2011) found that racial prejudice can develop in children as early as 3- and 4- years of age. Social justice beliefs among early adolescents may also lead to less discrimination and less racially motivated violence. Several researchers have reported that racism in adolescence is associated with aggression and violence, particularly among youth of color (Borders & Liang, 2011; Caldwell et al., 2004; Park et al., 2013; Sanders-Phillips, 2009; Stevenson et al., 2002; Stewart & Simons, 2010; Tobler et al., 2013). Thus, it is plausible that anti-racism beliefs among youth may lead to less discrimination and greater social connections across diverse youth.

Many researchers have demonstrated that adolescents are civically engaged members of society, participating in protests, advocacy efforts, and political campaigns (McIntosh &

Youniss, 2010; Yates & Youniss, 1999; Youniss et al., 2002). Further, efforts to address social issues are associated with positive youth development outcomes, including well-being, academic achievement, and social connectedness (Bublitz et al., 2024; Youniss et al., 2002). For example, researchers of one longitudinal study found that participation in social action improved grade point averages for Black and Latinx high school students (Seider et al., 2019). In addition, youth organizing can lead to acts of solidarity and the inclusion of peers with diverse racial and gender identities (Serrano, 2022).

Current Study

In this study, I assess the factor structure and construct validity of a measure of social justice for middle school-aged youth that includes items representing inclusion, diversity, equity, appreciation, and solidarity (IDEAS). I test the validity of the IDEAS measures by examining their association with outcomes (discrimination and social connections) related to people with diverse identities. I expect that the IDEAS measures will load onto a single latent factor that can be referred to as social justice. Further, I expect that the latent factor, social justice, will be negatively associated with discrimination and positively associated with social connections among diverse people.

Method

Scale Development

I followed the suggested best practices for all phases of development for the social justice beliefs and actions scale (Boateng et al., 2018). In my research, I noticed that very few social justice measures exist for youth populations. Further, the existing ones are neither developmentally appropriate nor culturally relevant for middle school-aged youth of diverse

backgrounds (Fietzer & Ponterotto, 2015). Therefore, the items I generated for the scale were informed by existing measures (as seen in Table 4.1) but were adapted for my intended audience's developmental appropriateness and cultural relevance. Specifically, I wrote the items for a 6th-grade reading level using the Flesch-Kincaid test.

Further, I consulted with topic and measurement experts to ensure the face content validity of the items. Next, I pilot-tested the survey items among a representative sample of youth. I deleted and refined items based on informal feedback from the youth and the quality of data collected. For example, the pilot participants experienced survey fatigue, so I reduced the number of items on the survey. Further, I provided additional written instructions for the survey and included clear and concise definitions of some vocabulary words that were advanced for some youth. Participants were asked to answer these 15 items on a 5-point Likert scale from *strongly disagree (1)* to *strongly agree (5).* Table 4.1 lists each IDEAS measure, its items, source, and reliability statistic.

Data Sources

I have two data sources for the present study. For one, I use baseline survey data from a longitudinal study of the *Youth Empowerment Solutions for Inclusion, Diversity, Equity, Appreciation, and Solidarity* (YES-IDEAS) after-school program. This larger study is a school-matched case-control design in which the schools were assigned to receive the YES-IDEAS after-school program (intervention condition) or the schools regularly offered after-school program (control condition). For the present study, I use the pre-test (baseline) survey data collected before any exposure to the YES program or the usual after-school program in 7 middle schools in Genesee County, MI.

My second data source is primary survey data collected for the present study. I collected survey data from students at one middle school in Washtenaw County, MI, during the school day. Both data sources use the same survey, are collected with middle school-aged youth at schools in Michigan, and have similar demographics of participants. Both data sources are from studies that received approval from the University Institutional Review Board (IRB) for parental passive consent and youth assent procedures. Data from these two sources were combined to produce an adequate sample size for the present study.

Participants

The present study includes a sample of 128 middle school youth from two data sources: the program baseline data (n = 58) and primary data collection (n = 70). Most students in the sample were in the 7th grade (n = 55; 43%) and were evenly distributed by sex (46.9% male). The majority of students in the sample self-identified as Black (n = 39; 30.5%) or White (n = 39; 30.5%) and were evenly distributed based on their reported mother's highest education level; less than (n = 61; 47.7%) or greater than (n = 67; 53.3%) a high school degree or equivalent.

Measures

Social Justice Components

Inclusion. Three items assessed participants' beliefs about inclusion (e.g., I like getting to know people who are different from me). Participants rated their level of agreement on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). A mean score of the three items was computed for each score.

Diversity. Four items assessed participants' beliefs about diversity (e.g., I want to know about other people's cultures and experiences). Participants rated their level of agreement on a 5-

point Likert scale (1 = strongly disagree, 5 = strongly agree). A mean score of the four items was computed for each score.

Equity. Two items assessed participants' beliefs about equity (e.g., We would have fewer problems if we treated people more equally). Participants rated their level of agreement on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). A mean score of the two items was computed for each score.

Appreciation. Four items assessed participants' appreciation of differences (e.g., I am accepting of all different types of people). Participants rated their level of agreement on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). A mean score of the four items was computed for each score.

Solidarity. Two items assessed participants' solidarity with others (e.g., I ask questions if people are not treated fairly). Participants rated their level of agreement on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). A mean score of the two items was computed for each score.

Validating Measures: Youth Outcomes

To validate my survey, I examined two youth outcomes: *discrimination against diverse people* and *social connections across diverse people.* Table 4.2 lists the two validation measures and their items, sources, and Cronbach alphas. Participants were asked how often they did each item on a 4-point Likert scale from *never (1)* to *three or more times (4).*

Discrimination Against Diverse People. Eight items assessed participants' discrimination against diverse people (e.g., How often have you been nice to someone's face, but said bad things behind their back because of their race/ethnicity?) Participants reported their

responses on a 4-point Likert scale (1 = never, 4 = three or more times). A mean of the eight items was computed for each score.

Social Connections Across Diverse People. Eight items assessed participants' social connections with diverse people (e.g., Even if someone is a different race than me, I can find something in common with them). Participants reported their responses on a 4-point Likert scale (1 = never, 4 = three or more times). A mean of the eight items was computed for each score.

Sociodemographic Variables

Sociodemographic variables included sex, grade, maternal education, and race. Sex was coded male = 1, female = 2, and grade (proxy for age) was coded as 6th grade = 1, 7th grade = 2, 8th grade = 3. Participants rated their mother's highest level of education (proxy for socioeconomic status) as greater than a high school degree or equivalent = 1 or less than a high school degree or equivalent = 2. Racial-ethnic identity was a self-reported measure in which participants could choose one or more of the following racial-ethnic categories: Black/African American, Latino/a/x or Hispanic, Asian/Asian American or Pacific Islander, American Indian/Native American, White, Arab/Middle Eastern/North African, and other (not listed). For the purpose of this study, I coded race as Black = 1, non-Black = 2 to establish categories with comparable sample sizes and because researchers have argued that the use of white as the referent group (i.e., comparing participants who identify as white vs. those who identify as non-white) can perpetuate white supremacy (McLoyd, 2004; Randall et al., 2022).

Analytic Strategy

All analyses were conducted using MPlus 8.0 (Muthén & Muthén, 2010). I used structural equation modeling (SEM) to test the measurement and structural models of social justice for middle school-aged youth. I first used confirmatory factor analysis (CFA) to examine

the measurement model for social justice. I first generated a correlation table of the elements to assess the discriminant validity of the SJ components (not shown). I concluded, based on the magnitude of the Pearson correlation coefficients, that each component measured a distinct but related construct. I then use substantive theory, fit indices, and standardized factor loadings to refine the factor structure of the measurement model.

Following the specification of the measurement model, I examined the association between the SJ components and outcomes, such as social connections and discrimination against people with diverse gender, racial, and physical identities using structural regression. Due to theoretical considerations about differences across demographics in these models (Diemer & Li, 2011; Kubi et al., 2022; Taft, 2006), I included sociodemographic variables as control variables to account for these differences. I evaluated model fit using the comparative fit index (CFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR).

Sample Size

Although my sample of 128 participants falls below the general guidelines for factor analysis, such as ten cases per predictor (Clark & Watson, 2016; MacCallum et al., 1999), this rule of thumb does not have robust empirical support. Instead, researchers have demonstrated that the ratio of predictors *(p)* per factor *(f)* and the magnitude of standardized factor loadings yield more precise estimates of the sample size necessary for factor analysis (Gagne & Hancock, 2006; Marsh et al., 1998). For instance, Marsh and colleagues (1998) suggest that when $p/f = 6$ and standardized factor loadings equal .60 or greater, the necessary sample size for the analysis is only $N = 50$. They further suggest that if the standardized loadings equal .40 or greater, the sample size necessary increases to $N = 100$ (Marsh et al., 1998), which is still well below general

guidelines requiring universally large sample sizes for factor analysis (Clark & Watson, 2016; MacCallum et al., 1999). This finding supports the notion that as the ratio of predictors per factor and the quality of a measurement model increase, the necessary sample size for factor analysis decreases (Gagne & Hancock, 2006).

Results

Descriptive Statistics

Table 4.3 presents descriptive statistics, including covariances, means, and standard deviations for continuous variables and proportions for categorical study variables. All scales that served as indicators for social justice components demonstrated acceptable skewness.

Measurement Model

Fit indices for the measurement model are presented in Table 4.4. The measurement model, a single factor SJ model consisting of the five IDEAS components as indicators, was a good fit with the data (CFI = .98; TLI = .96; RMSEA = .10, CI = [.05, .15]; SRMR = .03). The RMSEA, however, is above the recommended cut-off for good fit, but this index is sensitive to sample size (Geiser, 2012). Modification indices suggested correlating the error terms of two indicators (equity and diversity) to improve model fit. I did not add this correlation to the model to avoid over-specification and just identification. I concluded that the original hypothesized model was an acceptable fit for the base model without any modifications. Table 4.5 provides standardized factor loadings, standard errors, and R^2 values for the measurement model. All standardized factor loadings were above 0.6 and were statistically significant ($p < .000$). The *p/f* ratio for the measurement model was five, suggesting that the sample size of *N = 128* was sufficient for the CFA.

Structural Model

Following an acceptable measurement model, I examined relationships between SJ and youth outcomes, specifically discrimination against and social connections with diverse people. Figure 4.1 depicts the final measurement and structural models with standardized parameter estimates. In a structural regression, I included sociodemographic variables as covariates for these SJ indicators and youth outcomes. The structural model, with youth outcomes and sociodemographic covariates, was a good fit with the data (CFI = .97; TLI = .96; RMSEA = .06, CI = [.00, .01]; SRMR = .03). After controlling for sociodemographic factors, I found that SJ was associated with more social connections across diverse people ($p < .000$) and less discrimination against diverse people ($p < .05$). The *p/f* ratio for the structural model was six; one of two validation measures yielded a factor loading above 0.4, suggesting that the sample size of *N = 128* may have affected the model convergence. Model fit indices and standardized factor loadings can be found in Tables 4.4 and 4.5.

Discussion

The present study is one of the first to provide empirical support for a culturally relevant and developmentally appropriate measure of social justice beliefs among early adolescents. I found that the social justice components, IDEAS, reflected a single factor called social justice. The five hypothesized components are interrelated and collectively represent a larger construct that can be interpreted as social justice beliefs among early adolescents. Thus, my results provide support for social justice as a comprehensive, multidimensional construct. My findings provide support for the development of justice-focused indicators as a way to measure broader social justice beliefs among early adolescents. This finding is aligned with the literature that comprehensive, holistic social justice beliefs extend beyond DEI and include aspects such as an

appreciation for and solidarity with diverse people (Bolger, 2020; Borge, 2023; Gomez et al., 2021).

The association of social justice in hypothesized directions for other adolescent outcomes supports the construct validity of my SJ measure. It suggests that efforts to enhance social justice beliefs through IDEAS may be an effective strategy for promoting positive youth development. As measured by the IDEAS variables, I found that social justice beliefs were associated with more social connections and less discrimination across diverse youth. This finding is consistent with the literature that social justice beliefs and actions can lead to positive youth outcomes, including social belonging (Bublitz et al., 2024). Researchers have less developed the relationship between positive developmental factors, such as social justice, and concomitant decreases in negative behaviors, such as discrimination (Phelps et al., 2007). My finding that social justice was associated with less discrimination is novel and supports the hypothesis that social justice beliefs may help contribute to positive change.

My study's measure of social justice examines broad and non-specific values (e.g., I want to know about other people even if they are different from me). Conversely, both positive and negative outcomes measured in this study examines values about people with specific racial, gender, and physical identities that are minoritized in society (e.g., I can be friends with someone who identifies as LGBTQ+; I've been rude to someone because of their LGBTQ+ identity). Thus, the finding that a broad conceptualization of social justice is associated with positive and negative outcomes toward people of specific identities is noteworthy. This further supports the argument that a comprehensive but general measurement of social justice can be a valuable tool for future research. It is especially noteworthy that my general measure of SJ is associated with a more specific assessment of the value of people, regardless of their ascribed identity.

Limitations

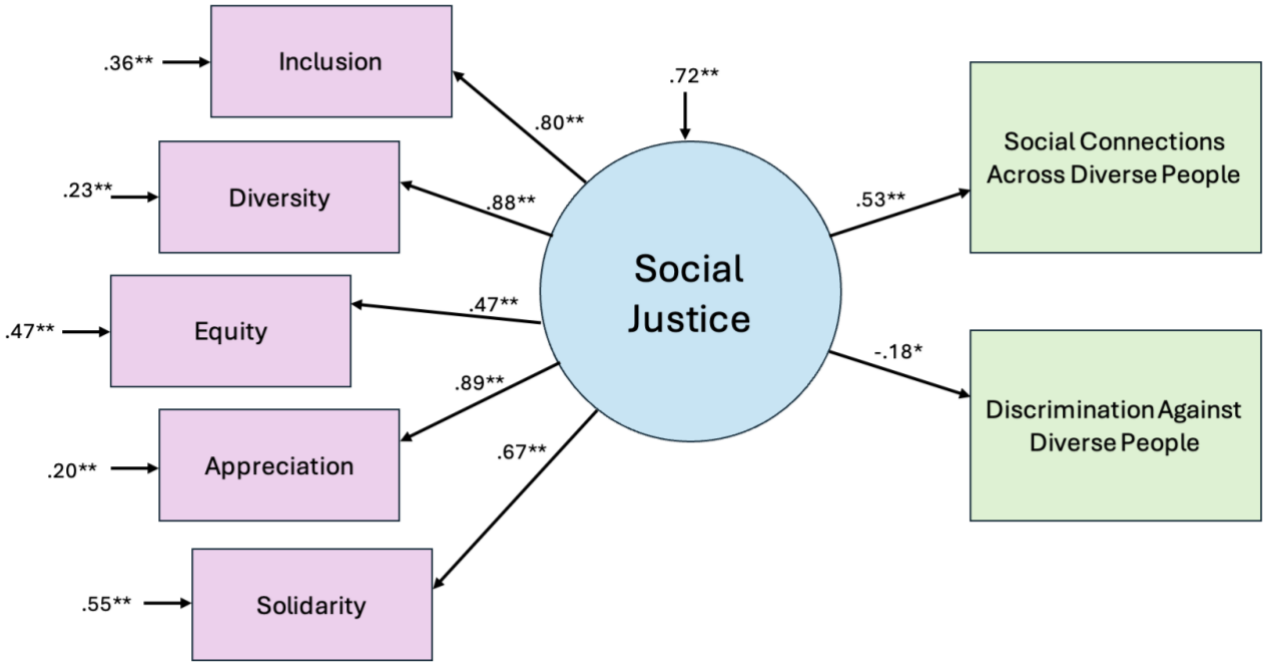
This study is not without limitations. For one, my study participants were from two geographically close urban/suburban areas, so the results may not be generalizable to other settings. Yet, my study included a sample of racially diverse youth in a critical developmental period (middle school) who were from two cities (Flint & Ypsilanti, MI) in two counties (Genesee & Washtenaw) with different demographic and socioeconomic characteristics. Second, my participants are middle school-aged, limiting the generalizability to early adolescents. However, the constructs in this study are relevant for high school youth, and future researchers may consider replicating this study with older adolescents. Third, data for the analyses in this study were collected through youth self-reports and could not be cross-validated with other data sources (e.g., survey data from teachers or parents). Nevertheless, researchers have found that self-report measures among youth are generally valid and reliable and are widely used to assess adolescent outcomes (Sieving et al., 2001; Thompson et al., 2007). Fourth, I could not establish predictive validity for my construct because the outcome measures were collected at the same time as predictors, limiting the conclusions about construct validity to concurrent. Nevertheless, researchers note that concurrent validity is valuable for scale measurement and is consistent with best practices for scale development and dissemination (Boateng et al., 2018). Finally, the model fit statistics suggested that the data did not fit my structural model as well as my measurement model. Yet, researchers recommend a comprehensive approach to evaluating fit statistics with a strong theoretical rationale for model specification instead of adhering to strict cut-off values in SEM, particularly for RMSEA, as it is sensitive to sample size (Gagne & Hancock, 2006; Geiser, 2012; Kline, 2011). Although the strength of factor loadings diminished when including outcome

variables in the model, I believe this was important for investigating the construct validity of my measure of youth social justice.

Conclusion

Given the involvement of young people in social justice movements, it is crucial to understand how they make sense of social justice and the outcomes that those beliefs can have on their development. Thus, the results of this study provide compelling psychometric evidence for a social justice measure for early adolescents. This measure of social justice is associated with interpersonal outcomes among middle school-aged youth, including social connections and acts of discrimination. My measure of social justice may be beneficial when applied to populations of middle school-aged youth from diverse racial backgrounds. Further, the social justice measure developed in this study can be applied to studying the effects of interventions designed to improve adolescents' values for diversity and other related constructs (e.g., social-emotional learning, critical race theory). The measure may also help understand the mechanism by which such interventions operate because it provides a measure that may be expected to mediate the relationship between program content and outcomes. Applying the SJ measure may also help inform the content of DEI-related interventions for adolescents.

Figure 4.1 Measurement Model for SJ and Structural Model for Testing Concurrent Validity for SJ and Youth Outcomes with Standardized Estimates



Note. *p < .01; **p < .001; Covariate paths not shown.

Table 4.1 Listing of Items for SJ Components

Scale name and items	**Source**	**# of items**	**Reliability**
Inclusion	Adapted from Phinney (1992)	3	α = .63
9. I like getting to know people who are different than me 14. I can talk respectfully with other people even when we disagree 18. I am confident I can help everyone feel included			
Diversity	Adapted from Bagci et al. (2020)	4	α = .84
11. I want to know about other people even if they are different from me 12. I am interested in learning more about people who are different from me 17. I want to know about other people's cultures and experiences 19. I feel OK hanging out with lots of different types of people			
Equity	Adapted from Diemer et al. (2017)	2	r = .43**
21. I treat everyone fairly even if they are not like me 34. We would have fewer problems if we treated people more equally			
Appreciation	Adapted from Wolsko et al. (2006)	4	α = .88
10. I treat people who are different than me with respect 13. I can work and hang out with others even when we are different 15. I am accepting of all different types of people 23. I can accept all different types of people			
Solidarity	Adapted from Aldana et al. (2019)	2	r = .27*
24. I feel confident to join with other people for something I believe in 35. I ask questions if people are not treated fairly			

Note. *p < .01; **p < .001; α = Cronbach alpha; r = Pearson correlation coefficient.

Table 4.2 Listing of Items for Validating Measures

Scale name and items	**Source**	**# of items**	**Cronbach alpha**
Discrimination against Diverse People	Adapted from English et al. (2020)	8	α = .94
46. Been nice to someone's face, but said bad things behind their back because of their race/ethnicity 47. Made someone feel like an outsider because of their physical appearance 48. Excluded someone because of their LGBTQ+ identity 49. Made someone speaking a different language feel like an outsider 51. Hinted that someone was stupid because of their race 52. Called someone bad names because of their physical appearance 53. Made jokes about someone because of their LGBTQ+ identity 54. Been rude to someone because of their LGBTQ+ identity			
Social Connections across Diverse People	Adapted from Bagci et al. (2020)	8	α = .96
70. I make friends with people who are different from me. 71. I want to be friends with people from different groups 72. Even if someone is of a different race than me, I can find something in common with them 73. I want to get along with all different types of people 74. I can be friends with someone from a different racial group 75. I can be friends with someone who identifies as LGBTQ+ 76. I can be friends with someone who has a physical difference than me 77. I want to be friends with someone who is different from me so I can learn about them			

Table 4.3 Covariances, Means, and Standard Deviations for Study Variables

	1	2	3	4	5	6	7	8	9	10	11
Inclusion	.75										
Diversity	.56	.79									
Equity	.44	.45	.80								
Appreciation	.50	.59	.51	.76							
Solidarity	.42	.48	.44	041	.80						
Social connections	.32	.42	.36	.38	.27	1.14					
Discrimination	-.01	.02	-.04	-.05	.04	.18	.53				
Grade	-.05	-.06	-.04	-.05	-.05	-.20	-.10	.58			
Sex	-.02	-.00	.01	.01	-.03	.11	-.03	-.01	.25		
Race	-.04	-.07	-.05	-.04	-.08	-.05	.09	.03	.02	.24	
Mother's education	-.04	-.05	-.07	-.04	-.06	-.09	-.04	.02	.00	-.04	
Mean/ proportion	3.51	3.77	3.94	3.95	3.64	2.77	1.72	43%	46.9%	30.5%	47.7%
Standard deviation	.75	.79	.81	.76	.81	1.14	.53	.58	.25	.24	.24
Skewness	-.35	-.73	-.86	-.86	-.67	-.50	1.40	-.04	-.01	.51	-.37

Note. Proportions for categorical variables are: Grade = 7th grade; Sex = male; Race = Black; Mother's Education = Less than a high school degree or equivalent.

Table 4.4 Fit Indices for Measurement and Structural Models of SJ

	CFI	TLI	RMSEA (90% CI)	SRMR
Measurement model	0.98	0.96	0.10 (0.05, 0.16)	0.03
Structural model	0.97	0.96	0.06 (0.00, 0.10)	0.04

Note. N = 128.

Table 4.5 Standardized Factor Loadings for Measurement Model of SJ and Structural Model with Youth Outcomes

	Standardized estimate	S.E.	R^2
Measurement model			
Inclusion	0.80**	0.03	0.64
Diversity	0.88**	0.03	0.77
Equity	0.73**	0.04	0.53
Appreciation	0.89**	0.03	0.80
Solidarity	0.67**	0.05	0.45
Structural model			
SJ – Social Connections	0.53**	0.08	-
SJ – Discrimination	-0.18*	0.09	-

Note. *p < .05; **p < .001.

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Chapter 5 Summary and Implications for the Future of School Safety

In this dissertation, I provided novel information for the field of school safety and youth violence prevention guided by three empirical studies. In the first study (Chapter 2), I used multivariate analysis to evaluate the efficacy of a school-based violence prevention program to understand the role of school climate in preventing school violence and promoting school safety. In the second study (Chapter 3), I systematically reviewed the literature to identify interventions to reduce racism in school discipline practices and determine the evidence base to contribute to creating more equitable school environments for students of all backgrounds. In the third study (Chapter 4), I employed confirmatory factor analysis to develop a measure of social justice beliefs (SJ) among youth. I also conducted a concurrent validity analysis to study the association of the SJ measure with behavioral outcomes for promoting equity and preventing youth violence in schools.

These studies contribute unique and crucial information to build knowledge in the school safety literature in three ways. First, school violence is a ubiquitous problem (CDC, 2016, 2017, 2021; Turanovic et al., 2022) and has negative short-term (Duru & Balkis, 2018; Flannery et al., 2004) and long-term (Borofsky et al., 2013; Boynton-Jarrett et al., 2013; Hsieh et al., 2017) consequences for healthy youth development, disproportionately affecting students of color (Peguero, 2011, 2012; Peguero et al., 2015). My analysis of a school climate intervention in my first study provides some evidence for a climate program explicitly focused on creating a climate for school safety. Climate programs can help address the warning signs of school violence

perpetration, including social isolation, withdrawal, bullying perpetration and/or victimization, and directly communicating threats of violence, especially on social media (Sandy Hook Promise Foundation, 2020). Specifically, comprehensive programs that include both social inclusion and educational awareness activities, such as *Know the Signs,* may be most effective at preventing violence because they include multiple strategies (e.g., SWH, SS) to address numerous school environments (e.g., social, attentive), improving the climate. This is one of the first such studies to evaluate a school-based program designed to help improve a school's social and attentive environments.

Second, while extant evidence demonstrates racial disproportionality in school discipline practices in myriad contexts (Anderson & Ritter, 2016; Eyllon et al., 2022; Gregory et al., 2021; McIntosh et al., 2020; Skiba et al., 2014), the existing efforts to address this problem have fallen short of making discipline practices more equitable. They often reduce discipline generally while racial inequities persist, leading to the school-to-prison pipeline (Muñiz, 2021; Pigott et al., 2018; Skiba et al., 2014). In my second study, I review the research literature on programs designed to reduce racial disparities in school disciplinary practices. Inequitable school discipline practices have the potential to pose a threat to students' psychological safety and their positive youth development, as well as school safety more generally. When students have poor mental health, they may be more likely to isolate themselves, withdraw from school, and perpetrate violence. With this second study, I add to the literature by using an ecological lens to understand the evidence and identify the gaps in our knowledge about what works to reduce racially biased school disciplinary practices.

Third, although youth have been at the forefront of social justice movements and advocacy efforts for social equality for decades (Clark, 2020; Dixon, 2021; Franklin, 2021;

Gilmore, 2021; Manis, 1999), we have no psychometrically sound measures for assessing social justice beliefs among early adolescents. My third study provides preliminary evidence for a multi-factorial measure for early adolescents that demonstrated concurrent validity with constructs expected to be associated with social justice. This psychometrically sound, developmentally appropriate measure of social justice for early adolescents can be used among researchers to conduct empirical evaluations of violence prevention programs through an equity lens. Further, school leaders can use this measure to assess social justice values as a violence prevention strategy among their students. Additionally, the research I presented in this dissertation is notable in that all three empirical papers examine the issue of school safety and youth violence at different ecological levels (e.g., individuals, school-wide) and for various populations (e.g., students, teachers). This adds to existing theoretical and practical literature about the importance of multi-faceted school safety efforts (Stilwell et al., 2024).

Study 1: School Climate Matters for School Violence Prevention

In the first study of this dissertation, I demonstrated the importance of school programs that improve school climate for preventing school violence. This expands existing research on the role of school climate in school safety and identifies the potential of school climate interventions to improve school safety (Gottfredson et al., 2005; Kutsyuruba et al., 2015; Peterson & Skiba, 2000; Thapa et al., 2013). Examining the relationship between school climate and safety is particularly important given its effect on various aspects of the school experience, including academic achievement (Kutsyuruba et al., 2015), peer bullying (Cohen, 2014; Cohen & Freiberg, 2013), and mental health (LaRusso et al., 2008). Further, students' perceptions of school climate influence their willingness to report warning signs that a peer may be planning a

violent attack (Syvertsen et al., 2009), pointing to the importance of school climate for violence prevention.

I report two main findings in this first empirical study. First, I found that students who attended the *Know the Signs* (KtS) program reported greater school climate indicators post-programming when compared to their baseline scores. This information can be used to inform future school safety strategies. These findings provide additional nuance to existing evidence that a positive school climate is paramount for preventing school violence and improving school safety (Peterson & Skiba, 2000; Syvertsen et al., 2009; Thapa et al., 2013). These results provide evidence for a program that enhances students 'perceptions of school climate, thereby reducing school violence and its concomitant precursors. Identifying the characteristics of effective school climate programming for students could help inform future programs on how to improve students' perceptions of school climate most successfully.

I found that participation in the KtS program increased perceptions of safety and connectedness to school for high school students at four schools in an urban school district. The KtS program, which reflects a comprehensive school safety model, is multi-dimensional; it supports social and attentive school environments with the *Start with Hello* and *Say Something* programs, respectively. Implementing school programming that addresses multiple environments rather than one singular issue will likely create positive, lasting change across the school ecology. This finding builds on the research on school climate, which suggests that climate consists of many factors within a school community (Thapa et al., 2013). Therefore, multifaceted programming across ecological levels, such as KtS, will likely be most effective in improving school climate. However, this analysis did not include a comparison group, so I conducted additional analysis to help reduce alternative explanations of the results and provide convergent

support for the conclusion that the program was a significant factor in improving an environment for school safety.

For my second finding, I found that students who attended KtS reported more positive school climate indicators, including school connectedness and community perceptions, than non-attendees. This finding builds on the first, providing additional evidence for climate-focused programming to improve school safety. Researchers of *A Comprehensive Report on School Safety Technology* (2016) suggest that programs that are both a) educational about the warning signs and the actions to take if you see someone demonstrating signs of potential violence and b) participatory and engage members of the school community to improve school climate, are most likely to be successful at preventing school violence. Community engagement to promote a positive school climate shifts the emphasis solely from violence prevention (which can have a deficit orientation; what a school is doing wrong) to a focus on building positive, nurturing, and engaging relationships and norms (a strengths-based approach; focusing on what is already going right).

Attendees also reported greater beliefs about reporting, including their comfort level, self-efficacy, and willingness to report warning signs compared to non-attendees. This finding is significant given that those who are considering perpetrating violence against themselves or others often communicate their plans to someone in written, verbal, or social media modalities (Meloy & O'Toole, 2011; Messman et al., 2022; Vossekuil et al., 2004). The importance of identifying, assessing, and taking action to reduce and prevent violence in schools should not be understated.

This first study of this dissertation makes a significant contribution by building evidence for effective school safety strategies and student programming. A limitation of this study is that

the implementation of the KtS program was truncated; Sandy Hook Promise has additional program components, including the Say Something Anonymous Reporting System and student-led organizations (SAVE Promise Clubs) that were not included in this program implementation. Further, the implementation of KtS in the present study was only implemented for half of the school year or less, and the strength of program effects may have increased if the program had been implemented at the start of the school year, allowing for a more significant dose effect. Even with the implementation of SWH and SS in the absence of the other program components for only part of the school year, the current study provides preliminary evidence for the efficacy of the KtS program in improving school climate and reducing school violence, demonstrating the importance of the KtS program and its goals.

Given the abovementioned findings and limitations, I suggest that future researchers focus on conducting empirical, robust program evaluations of KtS and other climate programs across different demographic contexts. Although school violence is ubiquitous, programs may not have a one-size-fits-all approach given the unique needs of each school community (Cipriano et al., 2023; Peguero & Jiang, 2016; Schmidt et al., 2020). Additionally, longitudinal research on the sustainability of school climate programming and the lasting effects over time could expand the findings of my study (Masi & Heinze, 2021; Sandy Hook Promise Foundation, 2020). Relatedly, assessments of reach and fidelity for evaluation of program implementations are critical for drawing conclusions and next steps about a program's effectiveness and are a future direction for this work. Finally, collecting quantitative and qualitative data from multiple school populations, such as teachers, administrators, and students, would allow researchers to gather more nuanced data to inform the development of the most comprehensive and successful school safety programs.

Study 2: Cultural Relevance Matters for Equitable School Environments

In the second empirical study of this dissertation, I examined the characteristics of interventions that address racial disproportionality in school discipline to understand how we may best address this problem. Given the pervasiveness of the race discipline gap and its implications for youths' futures (Bleakley & Bleakley, 2018; Gregory et al., 2011; Muñiz, 2021; Owens et al., 2016; Perez Jr. & Erwin, 2020; Skiba et al., 2014, 2022), this is a critical school safety concern to address. I systematically reviewed the literature to identify (1) what interventions exist to address racism in disciplinary practices in K-12 schools and (2) to what extent those interventions have been evaluated. In addition, I wanted to know what *works* for reducing racial disparities, so I further identified the types of interventions that reported a reduction in racial disparities in school discipline.

The findings of my second empirical study provide details about effective strategies to close the race discipline gap in K-12 schools that have yet to be addressed in previous research. In my systematic review of the literature, I found limited evaluations of interventions that address this problem. This builds on past work, most notably that of Cruz and colleagues (2021), by focusing on the *racial* disparity in school discipline rather than examining multiple intersecting identities. Importantly, my review includes an additional three years of research since Cruz and colleagues (2021) published their study, which is notable given the increasing attention to race disparities in school discipline in recent years (Cruz & Firestone, 2023; Sanders, 2024; Sobti & Welsh, 2023; Zinsser et al., 2022). The limited evaluation research on interventions to address the race discipline gap leaves school leaders with minimal guidance on the best practices for addressing this problem in their respective school contexts. For this reason, many school leaders are implementing programs and interventions that may not have solid

evidence bases (Gregory et al., 2014, 2021; Skiba et al., 2022). Nevertheless, my review revealed several important conclusions related to racism and school discipline based on my findings.

First, and perhaps most important, school programs such as Positive Behavioral Interventions and Supports (PBIS), Social-Emotional Learning (SEL), and Restorative Practices (RP) are most likely to mitigate race-based disparities in school discipline when they are implemented with an intentional focus on race and cultural relevance. Interventions that are not equity-focused and culturally relevant are unlikely to mitigate race disparities because they fail to honor and uplift cultural differences among youth (Anyon et al., 2016; Curran, 2016; Hashim et al., 2018; Knochel et al., 2022; Zakszeski et al., 2021). This means that interventions implemented without focusing on culture will likely allow disparities to persist and sometimes even widen (Davison et al., 2022). Culturally relevant programming is critical to mitigating race disparities in school discipline; school leaders looking to address this problem in their school contexts may want to consider whether existing programs are explicitly and intentionally culturally relevant and make necessary changes based on their assessment.

Based on my findings, interventions that address the root causes of disparities, such as structural and personal biases, may be most effective at mitigating the discipline gap. The extent to which an intervention is successful may be contingent on a school community's embedded structural and personal biases (Cruz et al., 2021). I identify a need for interventions that challenge the biases of those with the power and authority to enforce discipline on students. This means interventions tailored to educators and school leaders, such as staff professional development opportunities, teaching training, school or district policies, or a combination of these approaches, may address the root causes of disparities. While interventions designed to change student behavior may broadly reduce school discipline, these programs are unlikely to

reduce the race discipline gap, given that student behaviors do not cause disparities (Mendez & Knoff, 2003; Rocque, 2010; Skiba et al., 2002, 2011; Smolkowski et al., 2016; U.S. Department of Education, Office for Civil Rights, 2014).

This second study provides a significant and novel contribution by highlighting the need for discipline reform to create safe and equitable K-12 schools for all students. A limitation of this study is that I did not include unpublished program evaluations, and schools or other entities may conduct internal evaluations of their efforts to mitigate the race discipline gap without publishing their findings. A future direction based on the findings of my second study is the need for more rigorous program evaluations to establish the generalizability of intervention effects and best practices for reducing discipline disparities. Further, researchers may consider conducting efficacy evaluations of interventions among Latinx students. In my review, I identified no randomized control trials that examined discipline disparities among Latinx students despite researchers demonstrating that students with Latinx backgrounds are affected by disproportionate discipline practices (Crosse et al., 2022). Additional research is needed to address these gaps in the literature. I recommend that future researchers and practitioners develop and implement interventions grounded in anti-racism, equity, and cultural relevance to help make school environments more equitable for students of all backgrounds.

Study 3: Social Justice Matters for Positive Youth Development in Schools

In this dissertation's third and final empirical study, I examined a measurement model of social justice components (inclusion, diversity, equity, appreciation, solidarity; IDEAS) among middle school-aged youth. I investigated if these components reflected a single factor I call *social justice*. Then, I tested if social justice was associated with less adverse outcomes (discrimination) and more positive outcomes (social connections) across diverse youth. This

analytic approach was beneficial for two reasons. First, the use of factor analysis to specify a measurement model of social justice for early adolescents is notable. Despite extant evidence that young people are civically engaged (Bublitz et al., 2021, 2024; Conner & Rosen, 2016; Earl et al., 2017; Kruse, 2018; Sloan Morgan et al., 2024), we have no developmentally appropriate measures to evaluate their social justice beliefs and actions. Second, structural equation modeling (SEM) is a robust technique for advancing research in the social and behavioral sciences (Weissman, 1979). Using SEM, I established concurrent validity of my measure of social justice for early adolescents, which is consistent with best practices for scale development and dissemination (Boateng et al., 2018).

My findings from this third empirical paper allow me to draw several conclusions that could provide information paramount for future research about youth violence prevention. First, operationalizing social justice as a multidimensional, comprehensive construct (e.g., IDEAS) is vital for accurately identifying and assessing beliefs among early adolescents. Early adolescence is a critical developmental period in which youth gain autonomy and form their social identity (Erikson, 1959; Phinney, 1989; Tajfel, 2010). Moreover, some scholars have criticized narrow conceptualizations of social justice, suggesting a comprehensive definition beyond diversity, equity, and inclusion (Bolger, 2020; Borge, 2023; Engram & Mayer, 2023; Killermann & Bolger, 2016; Milner et al., 2024). Theoretical and statistical results from my third study suggest that five social justice components, inclusion, diversity, equity, appreciation, and solidarity, or IDEAS, collectively represent a larger construct that can be interpreted as social justice beliefs among early adolescents.

Notably, my measure of social justice beliefs was associated with more social connections and less discrimination across diverse youth. This finding supports the construct

validity of my measure of social justice and suggests that efforts to enhance social justice beliefs among early adolescents can help facilitate positive youth development. While the items that make up the measure of social justice in my study examine broad values (e.g., I treat everyone fairly even if they are not like me), the items that make up the validating measures (social connections and discrimination) examine values about people with specific identities (e.g., I can be friends with someone from a different racial group). Notably, my general measure of social justice is associated with an identify-specific assessment of relational outcomes for youth. Thus, I argue that a general but comprehensive measurement of social justice can be a valuable tool for future research.

The third study of this dissertation provides a meaningful and novel contribution to the school safety field in that it provides compelling psychometric evidence for a developmentally appropriate measure of social justice among early adolescents. A limitation of this study is that I could not establish predictive validity for my SJ measure, given that the outcomes were measured at the same time as the predictors. However, best practices for scale development and dissemination include establishing concurrent validity (Boateng et al., 2018), as I did in this study. Given the involvement of young people in social justice movements, it is vital to understand how they make sense of social justice in a standardized and systematic way. Further, assessing the outcomes those beliefs can have on positive youth development is paramount, and some argue that it is the ultimate goal of school safety efforts (Stilwell et al., 2024). Given the characteristics of this study, my measure of social justice may be most applicable to middle school-aged youth from diverse racial backgrounds. Further, the social justice measure developed in this study may be used to study program effects of interventions designed to

improve adolescents' positive youth development in an equity-centered way (e.g., trauma-informed programs, social-emotional learning).

Conclusion

In the present dissertation, I expanded the field of school safety and youth violence prevention in three notable ways. First, I found empirical support for a no-cost (or low-cost) accessible school violence prevention program, the Sandy Hook Promise *Know the Signs* Program, in improving school climate, thereby reducing school violence. Using multivariate within- and between-subjects analyses, I found that the program helped improve students' perceptions of school safety, school connectedness, and perceptions of community, all indicators of school climate more broadly. The findings of my first empirical paper suggest that efforts to improve school climate for high school students in urban settings may be necessary for preventing school violence. In my second empirical paper, I found that we have limited experimental evaluations of interventions to reduce race-based disparities in school discipline. The implications of this second study stress the need for evidence-based, culturally relevant interventions tailored to school authority figures to address the root causes of disparities and mitigate the race discipline gap. Interventions that are not grounded in anti-racism and equity, as well as those that aim to control student behavior, are not likely to be successful as they do not address the root causes of discipline disparities. Finally, in the third empirical paper, I developed and validated a measure of social justice beliefs for early adolescents to establish a reliable instrument to be disseminated to other researchers. I found that a comprehensive, multifaceted conceptualization of social justice consisting of five constructs (IDEAS) was associated with increased social connections and decreased discrimination toward diverse peers. The findings from the third empirical paper have implications for social justice as a positive factor for positive

youth development. With the research presented in this dissertation, I employed a strengths-based, comprehensive, equity-centered approach to promoting positive youth development and creating safe and equitable schools for all students.

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