Examining the Inclusive Skill-Building Learning Approach (ISLA) and Its Effectiveness in Reducing Exclusionary Discipline Disparities

by

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A dissertation accepted and approved in partial fulfillment of the

requirements for the degree of

Doctor of Philosophy

in Prevention Science

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Winter 2024

DISSERTATION ABSTRACT

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Title: Examining the Inclusive Skill-Building Learning Approach (ISLA) and its Effectiveness in Reducing Exclusionary Discipline Disparities

Background: Exclusionary disciplinary practices such as office disciplinary referrals (ODR), in-school suspensions (ISS), and out-of-school suspensions (OSS) are used across grades K–12 despite their negative impact on students, schools, and society. These forms of punishments are used for behavior management even though research has indicated their ineffectiveness. Studies have also found that exclusionary discipline is administered at disproportionate rates to students of color, males, and students with disabilities. The Inclusive Skill Building Learning Approach (ISLA) is an alternative that aims to reduce exclusionary discipline practices while providing instructional support when students are removed from the learning environment for practical behavior change. The purpose of this study is to examine ISLA's effectiveness in reducing discipline disparities for students of color, males, and students with disabilities.

Methods: This cohort study focuses on Oregon middle school students and examines ISS and OSS frequencies for 2021–2022 academic year. Sample participants (N = 891) include students from six schools, three ISLA schools and three non-ISLA. Negative binomial regression modeling was used to examine frequencies of ISS and OSS while controlling for school level

variables. ISLA's effects on ISS and OSS outcomes were also examined as moderated by student race/ethnicity, gender, and disability status.

Results: Gender was a significant predictor for the ISS regression model and student disability status was a significant predictor for OSS whereby being male predicted 7% higher incidences of ISS and being a student with a disability predicted 92% higher incidences of OSS. Four of the six interactions modeled were also statistically significant, and results indicated that White students, males, and students with disabilities who attended ISLA schools had lower frequencies of ISS compared to students in the non-ISLA schools. Only White students who attended ISLA schools had lower frequencies of OSS compared to students in the non-ISLA schools.

Conclusions: Findings indicate that ISLA is a promising intervention for reducing exclusionary discipline especially in terms of decreasing the frequency of in school suspension for specific populations such as males and students with disabilities. However, it is important to note that ISLA was not associated with fewer suspensions for Nonwhite students, who are often at the highest risk for exclusion. Implications, limitations, and future research are discussed.

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ACKNOWLEDGMENTS

I'd like to acknowledge and extend my sincerest gratitude to my Ph.D. Advisor and Committee Chair, Dr. Jean Kjellstrand. Thank you for being my mentor and my constant source of support throughout the doctoral program and the entire dissertation process. You always led with kindness, provided encouragement, and created the space for me to learn and grow as a researcher. Thank you to my dissertation committee members Dr. Rhonda Nese, Dr. Elizabeth Budd, and Dr. John Seeley for all your support and guidance as I navigated the dissertation research process. Thank you Elizabeth for being on my committee, as it was a project in your class that inspired the topic of my dissertation. Thank you John for your guidance and support on all methodological aspects of this study. A special thanks to Rhonda for allowing me to study your intervention, letting me be a member of the Nese Lab, and always presenting me with opportunities to grow as a researcher and scholar. I'd also like to acknowledge Dr. Joseph Nese for his statistical support on this project. I appreciate your guidance in helping me troubleshoot various methodological issues as well as your support with R.

I'd like to express my thanks to the team at UO Data Services and Consultations. Specially Cameron Mulder for all his time and effort over the last couple of years in helping me clean and format my data, and also for being my teacher with R Studios. I truly appreciate your time and patience, and for teaching me all things R.

I'm grateful for my friends, near and far, because I could not do what I do without their support. A very special thank you to Lauren for being my tutor on negative binomial regression modeling and R coding. Your support and help in problem solving various statistical queries have been invaluable on this project and I will never forget it. Thank you Sean and Alex for

being by my side over the years both as colleagues and friends. I appreciate Sean for the numerous helpful conversations we've had about ECS data, your input has been invaluable. Thank you Alex for being my friend from the moment we met, and for your constant positive feedback and encouragement of my work. And finally, I'm eternally grateful for my friend Dr. Eleanor Su-Keene who has been there for me during one of the most difficult times in my life. You have been a constant source of strength and inspiration.

Finally, I want to express my deepest gratitude and appreciation for my family. First, I want to acknowledge my parents who sacrificed their country, home, and family so that I could have a better education and more opportunities. Second, thank you to my sister Urmee for being a continuous source of encouragement, laughter, and always celebrating my accomplishments, big or small. Most importantly, thank you to my husband, Luis. You have been there for me through two grueling graduate programs and motherhood. You gave me strength, confidence, and reassurance at every step. I couldn't have done this without you. Lastly, I hope my daughter Maya reads this someday. She showed me that if I can balance motherhood and writing a dissertation at the same time, I can truly do anything.

For my father who instilled in me that I could do and be anything, and for my daughter Maya, who inspires me every day to be the best version of myself.

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CHAPTER I

INTRODUCTION

Exclusionary discipline is widely used in schools across grades K–12 to manage student behavior. However, there is significant research indicating its detrimental impacts on students, schools, communities, and society in general (American Psychological Association Zero Tolerance Task Force, 2008; Losen & Skiba, 2010; Muñiz 2021; Nese et al., 2020). There is also a large body of research that has documented the vast disparities in administration of exclusionary discipline, especially for minoritized youth (Kaufman et al., 2010; Ritter & Anderson, 2018; Sander & Bibbs, 2020). Punitive forms of discipline have been administered more frequently to students of color such as African American, Native American, and Latinx students who then experience the negative outcomes disproportionately (McIntosh et al., 2014; Skiba et al., 2014). Additionally, punitive approaches such as detention and suspensions are not only ineffective in changing student behavior but lead to lower academic achievement (Anderson et al., 2019; Lacoe & Steinberg, 2019) and future criminal justice involvement (Novak, 2021; Rosenbaum, 2020). Alternatives that emphasize social emotional learning or restorative justice practices that also promote connectedness and relationship building are far more effective in changing student behavior and improving positive outcomes in schools (Gregory et al., 2021).

Background and Significance

Exclusionary Discipline and Its Effects

Exclusionary discipline is the disciplinary practice of removing students from the classroom for different types of behavioral issues. These include anything from disruptive or disrespectful behavior to more high-risk behavior concerning student safety. There are different levels of exclusionary practices such as timeout in the classroom, being removed from class or a

social setting, office disciplinary referrals (ODR), or more severe discipline such as in-school suspension (ISS), out-of-school suspensions (OSS), and expulsions (Nese et al., 2020; Noltemeyer et al., 2015). ISS involves removing students from the classroom but keeping them on school grounds, typically in a room with a supervising adult, for one or multiple school days. OSS involves removing students from school grounds for one or multiple school days. Expulsion involves permanently removing students from their school, with no option of returning. Office disciplinary referrals or ODRs are any time a student is sent out of class or another social setting to the office or another setting for unwanted behavior to maintain a positive learning environment for other students. ODRs do not always result in an ISS or OSS, though they can. All exclusionary practices are detrimental to students because when a child is removed from the school environment, they are missing valuable instructional time and learning opportunities (Losen & Martinez, 2020; Nese et al., 2020; Noltemeyer et al., 2015).

Outcomes of Exclusion

Research indicated that these forms of exclusionary discipline led to more negative student outcomes (Losen & Skiba, 2010; McIntosh et al., 2014; Skiba, 2014), and were also ineffective in changing student behavior or improving school safety (Mitchell & Bradshaw, 2013; Perry & Morris, 2014). Studies showed that students who experienced exclusionary discipline were more likely to have lower academic achievement, drop out (Losen & Martinez, 2020; Noltemeyer et al., 2015), be suspended again in the future and experience more exclusion for behavioral problems, and have future juvenile justice involvement (Barnes & Motz, 2018; Mallett, 2016; McIntosh et al., 2014; Sander & Bibbs, 2020). Exclusionary and zero tolerance practices are utilized to improve school safety and ensure a positive learning environment for all students by removing some students from the academic environment. Yet the data suggested that

removal of some students did not improve learning outcomes for other students or enhance a positive school climate (American Psychological Association Zero Tolerance Task Force, 2008; Skiba, 2014). On the contrary, studies showed that schools with high rates of suspensions and expulsions also rated lower for school safety and positive school climate compared to schools with lower or zero rates of exclusion (Losen & Skiba, 2010; Skiba et al., 2014). Even more concerning is that these schools tended to also have lower rates of academic achievement (Noltemeyer et al., 2015). Data showed that schools with high rates of exclusion also had lower test scores, lower academic quality, and decreased graduation rates, even when controlling for factors such as poverty and other student demographics (Losen & Skiba, 2010).

Discipline Disparities

The disproportionate administration of school discipline continues to be a systematic problem within our education systems. While all students generally experience negative outcomes from exclusionary discipline, students from diverse or marginalized backgrounds experience exclusionary discipline disproportionately. Research demonstrated inequities in the administration of exclusionary discipline based on race, ethnicity, disability status, gender, socioeconomic status (SES), academic achievement, and sexual orientation (Girvan et al., 2017; Ritter & Anderson, 2018; Skiba, 2014; Skiba et al., 2014; Sullivan et al., 2014). Specifically, African American students, males, and students with disabilities are at a higher risk for experiencing exclusion (Noltemeyer et al., 2015; Ritter & Anderson, 2018; Ryberg et al., 2021) and are therefore more significantly impacted by the short- and long-term effects of these practices (Gregory et al., 2021).

In a meta-analysis study, Noltemeyer et al. (2015) examined school suspension and student academic outcomes including achievement and school dropout rates. The results

indicated a strong relationship between suspensions and academic achievement, along with a statistically significant positive relationship between out-of-school (OSS) suspensions and dropout rates. Specific participant characteristics (i.e., gender, race/ethnicity, disability status) and type of suspension (i.e., ISS, OSS, office referrals, expulsions) were related to such outcomes as lower academic achievement and school dropout (Noltemeyer et al., 2015).

Even though the use of exclusionary practices to manage student behavior decreased over time, the disparities in discipline remain high for minoritized youth. A 2021 analysis of the Civil Rights Data Collection study found that approximately 2.5 million K–12 students received out-of-school suspensions during the 2017–2018 school year. Further, the study demonstrated that even though the overall rate of suspension has decreased since 2011–12 school year, schools around the country continued to disproportionately suspend African American and students with disabilities (Ryberg et al., 2021). African American students were suspended at more than twice the rate (7.8%) of their White (3.8%) and Hispanic/Latinx (3.6%) counterparts. Students with disabilities (8.5%) were also suspended more than twice the rate of students without disabilities (4%). Another important finding from the study was that there were more than 11 million days of lost instruction due to out-of-school suspensions in the 2017–18 school year which means that African American students and students with disabilities disproportionately missed out on learning opportunities. Even more problematic is that though the suspension rate for African American students decreased from the 2011–12 to 2017–18 school years, it decreased much slower compared to suspension rates for Hispanic/Latinx and White students. This is similar for students with disabilities where rates of suspensions decreased over time but at a much slower pace compared to students without disabilities. These findings highlight the lack of equity in the

overall reduction of schools' reliance on suspensions for behavior management (Ryberg et al., 2021).

Studies also show students of color are removed from the classroom more often for minor subjective problems such as being disrespectful or disruptive, and further, experience harsher punishment compared to their White counterparts (Girvan et al., 2017; Losen & Skiba, 2010; Skiba et al., 2014). Smolkowski and colleagues (2016) found that overall African American students were more likely to receive subjective office disciplinary referrals than White students. In addition, African American students were at greater risk for subjective ODRs than White students in the classroom compared to other settings (e.g., playground, lunch rooms, hallways) Smolkowski et al., 2016). Ritter and Anderson (2018) examined disproportionality in referral (i.e., removal from class or another place) and exclusionary discipline rates across schools and districts in Arkansas. They found that African American students were more than twice as likely to be referred for minor nonviolent offenses (including subjective infractions such as disorderly conduct, insubordination, and other not specified infractions) than their white peers, even within the same school districts. Once referred, they were 2.6 times more likely than their White counterparts to receive exclusionary discipline for the very same minor infractions (Ritter & Anderson, 2018). African American students continue to be alarmingly overrepresented in school discipline (Girvan et al., 2017; Gregory et al., 2021) and in the juvenile system (Sander & Bibbs, 2020) which have been linked to institutional racism, implicit biases, and more punitive approaches for students of color. This emphasizes the need for an equity-focused, culturally responsive approach to school discipline versus present punitive practices.

Studies have also highlighted gender disparities where male students experience exclusionary discipline at much higher rates than female students (Bradshaw et al., 2010; Cruz et

al., 2021). A study examining office referral data by student demographics including grade and gender, found that male students were significantly more likely to receive office referrals compared to female students especially in elementary and middle schools. The study also found that males are referred more frequently for aggressive (or perceived as aggressive) and violent behavior than females (Kaufman et al., 2010). Further, when students have particular intersectional identities, they may be at an even higher risk for experiencing exclusionary practices. For example, studies have found that African American males with disabilities are suspended at rates double those of White males with disabilities, and triple those of white females without disabilities (Cruz et al., 2021; Cruz & Rodl, 2018; Morris & Perry, 2017; Wallace et al., 2008). Additionally, research indicates the highest discipline disparity between African American female students and their White female peers, especially for subjective behaviors such as being disrespectful or disruptive (Morris, 2007; Morris & Perry, 2017; Murphy et al., 2013). Morris and Perry (2017) utilized multilevel models and longitudinal data on school discipline to schools' discipline outcomes for African American girls. They found that African American girls are three times more likely than White girls to receive an office referral, which is substantially wider than the discipline gap between African American and White males (Morris & Perry, 2017).

Exclusionary discipline policies are not only ineffective in changing student behavior but are also harmful to students. As such, it is critical that schools move away from punitive approaches like exclusion to alternatives that promote prosocial behaviors, encourage conflict resolution, emphasize reconnection between the student and others, and are more effective in behavior management. Approaches such as social emotional–learning (SEL), restorative practices (RP), School-Side Positive Behavioral Intervention Supports (SWPBIS), and The

Inclusive Skill-Building Learning Approach (ISLA) are examples of potential alternatives to exclusionary discipline practices for behavior management. A great deal of research exists that supports the effectiveness of many of these programs in reducing rates of exclusion in schools and improving overall student wellbeing.

While research is increasingly demonstrating the effectiveness of these alternatives in reducing overall rates of exclusion in schools, there is limited research on their effectiveness in reducing disproportionality of exclusionary discipline based on race/ethnicity, gender and disability (Cruz et al., 2021; Gregory et al., 2021). The limited research thus far has found programs such as SWPBIS and restorative justice models that are effective in reducing overall exclusionary rates, are still not effective in addressing the disparities in rates, especially for students with intersecting identities such as for African American male students or males with disabilities of any race or ethnicity (Cruz et al., 2021; Cruz & Rodl, 2018). In the next section, I describe SEL, RP, SWPBIS, and ISLA models as alternatives to exclusionary discipline and also provide a review of current literature on their effectiveness in reducing disproportionality.

Alternatives to Exclusionary Discipline Practices

Social Emotional Learning

Social emotional learning (SEL) is rooted in Albert Bandura's social learning theory (SLT) (Bandura, 1977) which suggests that children learn behavior by observing, modeling, and imitating the behaviors, attitudes, and emotional reactions of others. Social learning theory reflects how both environmental and cognitive factors interact to influence human learning and behavior. Further, it emphasizes the mediating processes that occur between stimuli and response (i.e., positive and negative reinforcement of behavior). SLT posits that children learn behavior through observation of the people (e.g., parents, caregivers, teachers) and the environments that

surround them. A significant amount of research points to the positive effects that social emotional learning (SEL) practices in schools have on children's developmental and academic outcomes (Durlak et al., 2011; Osher et al., 2016; Osher & Berg, 2018).

SEL focuses on the social, emotional, and cognitive development of children and the promotion of mental wellness and other positive life outcomes. A combination of individual factors (e.g., emotional, cognitive, behavioral) as well as environmental factors (e.g., peer groups, home, classroom, school, community, cultures), all work together in a dynamic manner that influence student behavior. Osher and colleagues (2016) summarize results of school-based social and emotional learning research from the last 100 years. Osher (2016) explains that SEL can help children learn to manage emotions, set and achieve positive goals, see others' perspectives, establish and maintain supportive relationships, make responsible decisions, and constructively manage personal and interpersonal situations. A SEL approach identifies classrooms, schools, families, and communities as contexts where all aspects of academic, social, and emotional learning occur (CASEL, 2019; Durlak et al., 2011). Research over the last three decades indicates that under the right conditions, schools can effectively promote social emotional and cognitive skills among students and, further, that these competencies are associated with lower risk-taking behaviors and increased academic and overall well-being (Osher et al., 2016). Developing both social and emotional competencies of educators and students, and ensuring positive teacher-student relationships are viewed as critical to a school's safety in the SEL framework (Gregory et al., 2021).

Several meta-analyses have demonstrated the effectiveness of SEL intervention programs in enhancing important and positive outcomes in education. A meta-analysis by Durlak and colleagues (2011) examined 213 programs and found significant improvements in student

academic achievement, attitudes about the self, the school environment, and school safety. The study also found improvements in social and emotional skills, and a decrease in externalizing and internalizing behaviors such as antisocial behavior, conduct problems, and emotional distress. Two practices that moderated program effectiveness included the development of social and emotional skills with sufficient time to teach and practice those skills; and second, targeting explicit and specific social and emotional skills such as emotion recognition, stress-management, empathy, problem solving, or decision-making skills. Another meta-analysis of 89 SEL programs found similar effects on social–emotional competence, prosocial behavior, conduct problems, emotional distress, and academic achievement.

Taylor et al. (2017) examined the effects of 82 SEL intervention studies that were conducted internationally and represented a total of 97,000 students across grade levels. In their review of the studies, they found that SEL led to positive child outcomes (with the greatest effects among children ages 5–11 years) including an increase in areas such as SEL skills, positive attitudes, social/emotional behavior, academic performance, peer and family relationships, school attendance, graduation rates, college attendance, and decrease in areas such as drug use and arrests. Although only about half of the 82 studies reported specific data on race and SES, positive effects emerged regardless of students' reported race, ethnicity, and SES (Taylor et al., 2017).

Restorative Practices

Restorative practices (RP) are rooted in principles of various indigenous cultures from around the world (Gregory et al., 2021). RP programs reflect a more humanistic and equity centered approach and have components of building community, strengthening and building positive relationships, and repairing harm (Hopkins, 2002). Restorative philosophies generally

emphasize repairing relationships over punishing the offender to address wrongdoing. RP in schools involves shifting school cultures from authoritative and punitive to one where students share power with adults and engage in collective solution-seeking about challenges. There is a greater emphasis on the "why" of the issue at hand such as in "why" the student is misbehaving or "why" was a school or classroom rule broken. Instead of the traditional retribution focused method of addressing the misbehavior, the time is spent solving the problem by understanding why the misbehavior happened in the first place and working together to find solutions to move forward in a way where the harm is repaired and the relationship between student and adult (or another student) can heal (Hopkins, 2002). In more intensive interventions such as the Inclusive Skill Building Learning Approach (ISLA), which is the focus of the present study, this includes formal restorative conferences or reentry conferences, which are preplanned with a facilitator to bring together all parties involved in the harmful incident when possible. Student voice is central in the process and those impacted by conflict and discipline incidents can express how they have harmed and what they need to repair the damage caused by their actions (Gregory et el., 2021).

Studies have shown when schools implement a restorative initiative, their out-of-school suspension rates generally decrease (Darling-Hammond et al., 2020; Fronius et al., 2019). However, there is limited research on whether RP can significantly decrease discipline disproportionality in schools. Augustine et al. (2018) conducted an experimental trial examining disaggregated data from 22 intervention schools and 22 control schools. They found that in the intervention schools, the days lost to suspension declined by 36% versus an 18% decline in the control schools. They also found that elementary schools experienced steeper declines in the suspension rates of African American students as well as low-income students when compared to

middle schools. This research suggests that RPs are promising approaches for reducing racial disparities in discipline (Augustine et al., 2018).

Positive Behavioral Interventions Supports (PBIS)

The Positive Behavioral Interventions and Supports (PBIS), another alternative to exclusionary discipline, is an evidence-based framework for supporting students' behavior, academics, and social, emotional, and mental health needs (Bradshaw et al., 2012; Cho Blair et al., 2021; Kim et al., 2018; McIntosh et al., 2011; A. Noltemeyer et al., 2019). PBIS is a multi-tiered framework for supporting the implementation of evidence-based practices (e.g., supporting students, teaching students skills, building positive relationships, creating positive school climates) in schools and has been implemented in over 25,000 schools across the country (Center on PBIS, 2023). PBIS models focus on redesigning school environments to discourage problem behaviors, and emphasize preventative strategies for classroom management, such as teaching, modeling, and reinforcing appropriate behaviors versus waiting to react or respond until after the misbehavior has occurred (Bradshaw et al., 2012; Nese et al., 2020; Nese, Kittelman, et al., 2021; Nese, Santiago-Rosario, et al., 2021; Sugai & Horner, 2009). Substantial research has found PBIS strategies effective in decreasing disciplinary referrals for all groups, including racially minoritized students and students with disabilities. However, African American (AA) and White discipline gaps still remain in schools implementing SWPBIS with AA students receiving disproportionately more referrals than White students (McIntosh et al., 2018). Furthermore, PBIS model does not support students when they are removed from class or another setting (Nese et al., 2020; Nese, Kittelman, et al., 2021) nor provides classroom-level supports to teachers (Hunter et al., 2017; Pas et al., 2015; Reinke et al., 2014). For instance, in a typical middle or high school setting, when a student misbehaves and is sent out of class, they

generally walk alone to the office or someplace similar and wait to see an administrator. During this time, the student is missing crucial in-class learning opportunities, and receives no support for that lost instruction, lessons on appropriate classroom behaviors, ways to reconnect and make amends with the teacher, or an appropriate process for re-entering the classroom (Nese et al., 2020). This results in students falling behind on academics, exhibiting more problem behaviors in the future, and having an increased likelihood of future disciplinary referrals (Losen & Martinez, 2020; Skiba & Losen, 2016).

Inclusive Skill-Building Learning Alternative (ISLA)

The Inclusive Skill-Building Learning Approach (ISLA) is a universal intervention for middle schools (grades 6 to 8) that can be implemented within the PBIS framework and utilizes both SEL and RP approaches. In addition, ISLA provides the individual student-level and classroom-level teacher supports that, as previously mentioned, are often missing from traditional PBIS and other models for behavior management. ISLA was developed to change educator behavior, improve student behavior, improve student-teacher relationships, reduce exclusionary discipline practices, and address the loss of instructional time. The intervention does this by: (a) providing skill-building supports to improve student social and behavioral problem-solving, (b) improving teacher and administrator practices and school systems such as implementing school-wide breaks, greeting students when they enter the classroom, and not excluding students from classrooms for low-level student issues (c) restoring student-teacher relationships (Nese et al., 2020). Low-level student problem behavior (e.g., being disrespectful to a teacher or peers, not listening to instructions, being disruptive in class) is prevented or managed in the classroom through student teacher relationship-building, teaching class-wide expectations, and graduated discipline (e.g., reteaching, redirecting, parent contact, behavioral

contracts; Furjanic et al., 2021). When a student is removed from class, they go to a designated space to meet with an ISLA trained support staff who provides coaching through a ISLA triage process (to determine whether behavior is a safety concern), a student debrief (i.e., the student's understanding of the incident), behavior skills coaching (i.e., teaching, modeling, and reinforcing alternative skills), a reconnection conversation and card (i.e., providing coaching for how to converse and reconnect with teacher upon going back to class), and classroom reentry where an ISLA support staff guides the student in the reconnection conversation (Nese et al., 2020). ISLA is considered a tier 1+ intervention. It is a tier 1 intervention in that it strives to improve academics, enhance positive student behavior, and prevent other challenges for all students. It does this by providing school-wide universal supports and setting up classroom practices and systems to establish a foundation of regular, proactive support while preventing unwanted behaviors before they occur. It is a tier 1+ intervention because it provides school-wide supportive strategies in addition to providing individual support for students who need it.

Initial research on ISLA indicates that it is effective in reducing exclusionary discipline, has high acceptability ratings by school staff and administrators, and improves overall school climate (Furjanic et al., 2021; Nese et al., 2020). The ISLA pilot study was first implemented during the 2015–2016 academic year in two public middle schools serving 6 through 8 graders. The findings of the pilot study indicated that with fidelity of implementation, ISLA was effective in reducing ODRs, ISS, and OSS at both schools after just one year of implementation (Nese et al., 2020). However, research is limited on ISLA's potential for reducing disproportionality in the use of ODR, ISS, and OSS based on race/ethnicity, gender, and disability.

Gaps in Literature

The evidence is clear that school-wide alternative frameworks such as SEL, RP, PBIS, and ISLA are effective models for student behavior management, improving school climates, and reducing overall referrals. However, there is still limited research about the effectiveness of these methods in reducing exclusionary discipline disproportionality across race/ethnicity, gender, and disability (Gregory 2021, Cruz 2021). In a review of 20 studies examining the effectiveness of empirically studied school-based interventions in reducing disproportionality in discipline practices, Cruz et al. (2021) found only four of the 20 studies examined the effectiveness of the interventions for a specific group or groups. Of the four studies that examined interaction between program effectiveness and student characteristics, two studies were on SWPBIS (Bradshaw, Waasdorp et al., 2012; Cruz & Rodl, 2018), one on restorative practice (Anyon et al., 2016), and one examined the effectiveness of teacher professional development related to culturally responsive and empathetic practices (Gregory, Hafen et al., 2016). The two studies on SWPBIS found continued or worsening exclusionary discipline inequities for males and students with disabilities (Bradshaw, Waasdorp et al., 2012), and African American, Latinx, and American Indian/Alaska Native students (Cruz & Rodl, 2018), respectively. Overall, the review indicated that SWPBIS programs alone were either inconsistent or ineffective in reducing discipline disparities, and, additionally, some programs served as a protective factor for only White and female students, further widening the exclusionary discipline gap for marginalized students (Cruz et al., 2021). Anyon et al. (2016) examined restorative justice and found increased ODRs but reduced suspensions for African American students in treatment conditions. The review found only one program that explicitly reduced disparity. Gregory, Hafen et al.'s (2016) study of a one-to-one coaching intervention, found reduction in exclusionary discipline by

treatment for African American students compared with the overall student population. There is clearly a need for continued research to identify not only effective alternatives for reducing exclusionary discipline but also interventions that are effective in reducing disparities in the use of discipline based on student identities.

The Current Study

Based on a review of current literature on exclusionary discipline, it is clear that race/ethnicity, gender, and disability status are risk factors for experiencing exclusionary discipline and its negative outcomes. Punitive approaches to manage student behavior further widens the opportunity and discipline gap for already marginalized students in a system which is inherently inequitable to students with minoritized identities (Cruz et al., 2021; Cruz & Rodl, 2018; Morris & Perry, 2017; Sander & Bibbs, 2020). While interventions such as SEL, RP, PBIS, and ISLA have demonstrated effectiveness in reducing exclusionary discipline and improving student outcomes, there are still challenges in addressing the disproportional administration of exclusionary discipline. Therefore, continued research that examines the effectiveness of interventions for specific populations (especially those who are marginalized) is warrented.

The current study aimed to address this gap and examined in-school suspension (ISS) and out-of-school suspension (OSS) rates as moderated by race/ethnicity, gender, and disability status for schools where ISLA was implemented. Due to limited data on expulsions at ISLA and non-ISLA schools, expulsion outcomes were excluded from the current study. As a first step, this study examined the extent and manner that race/ethnicity, gender, disability status, and ISLA explained variation in the frequency of ISS and OSS within the ISLA and non-ISLA schools. Second, the study examined if the effect of ISLA on the frequency of ISS and OSS varied

depending on the race/ethnicity, gender, or disability status of a student (see Figures 1 and 2). Such information is critical to understand as we strive to reduce disproportionality in exclusionary discipline.

Research Questions and Hypotheses

My specific research questions and hypotheses are as follows:

RQ 1: To what extent and in what manner do race/ethnicity, gender, disability status, and ISLA explain variation in the frequency of ISS for students within four centrally located school districts in Oregon while controlling for total school enrollment and concentration of low-income students in school (FRL)?

RQ 1a: Is the effect of ISLA on frequency of ISS moderated by race/ethnicity?

RQ 1b: Is the effect of ISLA on frequency of ISS moderated by gender?

RQ 1c: Is the effect of ISLA on frequency of ISS moderated by disability status?

RQ 2: To what extent and in what manner do race/ethnicity, gender, disability status, and ISLA explain variation in the frequency of OSS for students within four centrally located school districts in Oregon while controlling for total school enrollment and concentration of low-income students (total free and reduced lunch) in school?

RQ 2a: Is the effect of ISLA on frequency of OSS moderated by race/ethnicity?

RQ 2b: Is the effect of ISLA on frequency of OSS moderated by gender?

RQ 3c: Is the effect of ISLA on frequency of OSS moderated by disability status?

Hypothesis 1: Based on prior research, I hypothesized that being a person of color, male identifying, or having a disability will predict more ISS for students in non-ISLA schools, while being enrolled in ISLA schools will result in fewer ISS for students of color, males, and students with disabilities.

Hypothesis 1a: In ISLA schools, students of color will have fewer ISS compared to students of color within non-ISLA schools.

Hypothesis 1b: In ISLA schools, male students will have fewer ISS compared to males in non-ISLA schools.

Hypothesis 1c: In ISLA schools, students with disabilities will have fewer ISS compared to students with disabilities in non-ISLA schools.

Hypothesis 2: Based on prior research, I hypothesized that being a person of color, male identifying, or having a disability will predict more OSS for students in non-ISLA schools, while being enrolled in ISLA schools will result in fewer OSS for students of color, males, and students with disabilities.

Hypothesis 2a: In ISLA schools, students of color will have fewer OSS compared to students of color within non-ISLA schools.

Hypothesis 2b: In ISLA schools, male students will have fewer OSS compared to males in non-ISLA schools.

Hypothesis 2c: In ISLA schools, students with disabilities will have fewer OSS compared to students with disabilities in non-ISLA schools.

Figure 1

ISLA and Frequency of ISS Moderated by Race/Ethnicity, Gender, and Disability

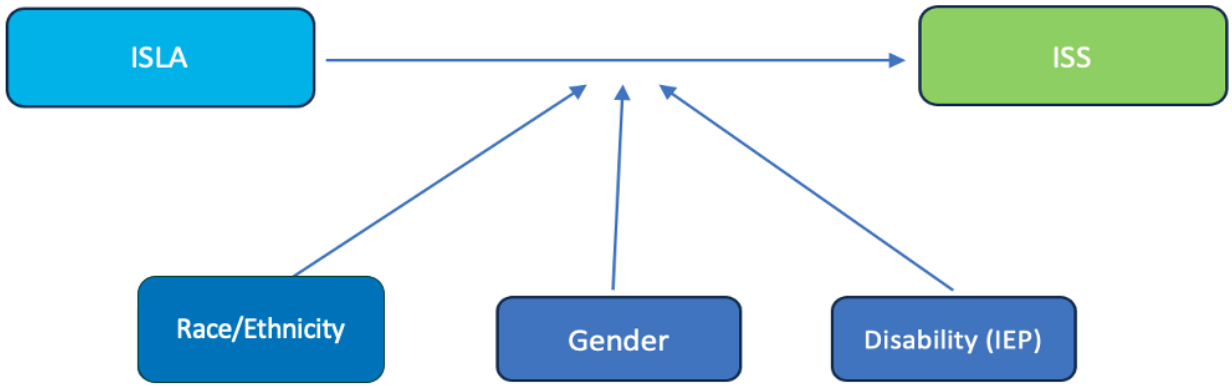
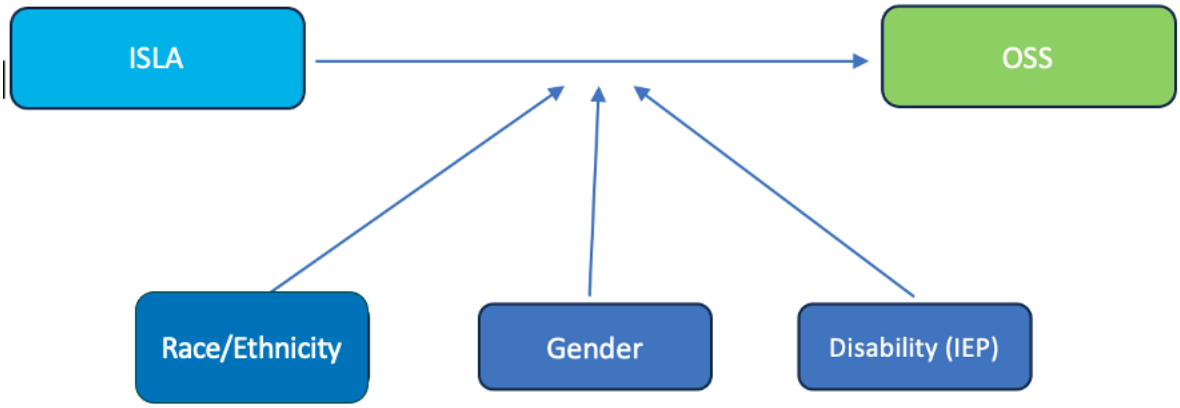


Figure 2

ISLA and Frequency of OSS Moderated by Race/Ethnicity, Gender, and Disability



CHAPTER II

METHOD

Participants and Settings

This study focused on a subset of schools from a quasi-experimental parent study on ISLA (Nese et. al, n.d.). Participants included 6th through 8th grade students from six public middle schools from four different school districts in central Oregon. The analytic sample included 891 students who experienced some form of office disciplinary referral (ODR) from six schools, three ISLA schools (n = 497) and three matched non-ISLA schools (n = 394).

The intervention group included students who received an ODR during the 2021-22 academic year and were enrolled in one of the three schools where the ISLA intervention was implemented. Students with ODRs represented 36% of the total number of students enrolled in the ISLA schools. The comparison group included students who received an ODR during the same academic year and were enrolled in schools in neighboring school districts where ISLA had not yet been implemented. Students with ODRs represented 30% of total number of students enrolled in non-ISLA schools.

Table 1 provides National Center of Education Statistics (NCES) school demographic information for 2021–22 academic year for both ISLA (Schools A, B, and C) and non-ISLA schools (Schools D, E, and F). NCES did not have data on Free and Reduced Lunch (FRL, a proxy for concentration of low-income students) for 2021–22 academic year for schools in this sample. The most recent data available on FRL was from academic year 2018–19. The percent of students on FRL for ISLA schools and non-ISLA schools was calculated using total student enrollment for 2018–19 school year.

Table 1

2021–2022 School Demographic Information (NCES, 2022)

ISLA schools School characteristics	School A *n*	 %	School B *n*	 %	School C *n*	 %
Ethnicity						
White	285	75	213	52	357	59
Non-White	93	25	199	48	248	41
Hispanic	31	8	125	30	192	32
Gender						
Male	197	52	196	48	336	56
Female	180	48	214	52	268	44
Total Enrollment	378		412		605	
TFRL	127	30	215	53	587	86
Student/Teacher Ratio	21.56		18.37		18.99	
Non-ISLA schools School characteristics	School D *n*	 %	School E *n*	 %	School F *n*	 %
Ethnicity						
White	216	55	243	64	262	48
Non-White	176	45	137	36	285	52
Hispanic	118	30	79	21	197	36
Gender						
Male	203	52	188	49	283	52
Female	182	48	187	51	263	48
Total Enrollment	392		380		547	
TFRL	258	74	247	58	366	71
Student/Teacher Ratio	17.68		17.94		20.37	

Note. Data not available for 2021–22 Total free and reduced lunch (TFRL). TFRL presented here are from the most recent year that data was available (2018–19). Percentages for TFRL are based on total student enrollment for 2018–19.

Table 2 provides information on enrollment, racial and ethnic distribution of students, gender, and school level information for the analytic sample. The average demographics for ISLA schools within the analytic sample were 39.8% female, 60.2% male; 59.8% White, 40.2 % Nonwhite (2.4% Black, 26% Hispanic/Latinx, 1.4% Indigenous, less than 1% Native Hawaiian

or Pacific Islander, less than 1% Asian, and 9.5% multiracial); and 18.7% students with disabilities. The average demographics for comparison group within the analytic sample were 32.5% female, 67.5% male; 59.4% White, 40.6% Nonwhite (4.6% Black, 23.5% Hispanic/Latinx, 1.5% Indigenous, less than 1% Native Hawaiian or Pacific Islander, 1% Asian, and 9.6% multiracial); and 22.6% students with disabilities. During 2018–19 academic year, 67% of total students in the ISLA schools and 66% of total students in the non-ISLA schools qualified for Free and Reduced Lunch.

Table 2

Demographic Characteristics for Students and Schools (ECS 2021–22)

Variables *Student-Level*	Non-ISLA Group *n* = 394 %	ISLA Group *n* = 497 %	Total sample *N* = 891 %
Race/ethnicity			
White	59.4	59.8	59.6
Non-White	40.6	40.2	40.4
Latinx	23.5	26.0	24.8
Multiracial	9.6	9.5	9.5
Black	4.6	2.4	3.4
Asian	1.0	0.4	0.7
Indigenous	1.5	1.4	1.5
NH/PI	0.5	0.6	0.6
Gender			
Male	67.5	60.2	63.4
Female	32.5	39.8	36.6
Disability Status (IEP)	22.6	18.7	20.4
Grade			
6th	31.2	38.0	35.0
7th	36.5	30.0	32.9
8th	32.2	32.0	32.1
Students with ISS	36.3	31.4	33.6
Students with OSS	31.2	21.1	25.6

Variables *School-Level*	Comparison *n* = 3 *M*	 *SD*	ISLA n = 3 *M*	 *SD*	Total sample n = 6 *M*	 *SD*
Total Enrollment	444.99	78.93	509.30	102.99	477.15	
Total FRL	293.86	55.88	398.83	203.36	346.35	

Note. NHPI = Native Hawaiian or Pacific Islander, IEP = Individualized Education Plan, FRL = Free and Reduced Lunch (proxy for socioeconomic status).

Procedures

The University of Oregon Institutional Review Board approved the original parent study, "The Development of an Instructional Alternative to Out-of-School Suspension: The Instructional Suspension Learning Alternative (ISLA)." An addendum to the original IRB approved study was submitted before conducting the present study, which was classified as exempt and not human subject research.

Training on ISLA for school teams and staff began at the beginning of 2021–2022 academic year (August 2021) and school teams were provided two days (14 hours total) of training on ISLA implementation. School teams consisted of at least one instructional assistant, one behavior support specialist, one administrator, and one grade level representative for each grade (i.e., 6th, 7th, 8th). These training sessions covered ISLA intervention elements over six learning modules (i.e., an ISLA overview, building and sustaining relationships, responding to behavior, school-wide break systems, the ISLA process, and databased decision-making). Each training session engaged school teams through whole-group discussion, small-group reflection, skill practice and feedback, implementation checklist completion, and action planning (Nese et al., n.d.). The initial training sessions were followed by monthly professional development provided by the research team in collaboration with the school teams to all school staff as part of their school-wide ISLA implementation. Implementation started with foundational preventative school-wide supports including building relationships and effective responses to low-level student behaviors in the classroom, followed by education and training on targeted supports for students sent out of class (ISLA Process) and last, assessments of fidelity (Furjanic et al., 2021; Nese et al., 2021).

Fidelity of Implementation

All six schools implemented School-Wide Positive Behavior Intervention Supports (PBIS). The Tiered Fidelity Inventory (TFI) is utilized to reliably and efficiently measure the extent that schools are applying the core features of PBIS (PBIS, 2019). A TFI score of 70% is considered as an adequate level of PBIS implementation that will result in improved student outcomes (Algozzine et al., 2014). Due to the COVID-19 pandemic school closures, TFI tier 1 scores were not available for academic year 2021–22 (years examined in this study). Tier 1

scores for ISLA and non-ISLA schools were not available for any one single year and therefore, I reported the tier 1 scores for the earliest year available which varied for each school. For the ISLA schools, school A measured PBIS tier 1 implementation to be 73% for 2017–18 academic year, which was above the recommended 70% threshold score. School B scores were not available; and school C measured PBIS tier 1 implementation to be 60% for 2018–19 academic year which was below the recommended score. Among the non-ISLA schools, schools D and E had TFI tier 1 scores for 2018–19 academic year and the most recent tier 1 scores available for school F was for 2016–17 academic year. School D measured PBIS tier 1 implementation to be 90%, school E 87%, and school F 90%, all of which were above the recommended score.

Fidelity of ISLA implementation was measured using the ISLA Implementation Checklist, which measures implementation of school-wide components. Schools used the checklist to track school-wide systems and ISLA systems during 2021–22 academic year. Table 3 shows the school-wide ISLA implementation scores for Schools A, B, and C. Implementation was evaluated using the ISLA Implementation checklist at three different time points: the beginning of the school year (baseline), in the middle (mid), and at the end of the school year (final). Schools did not consistently complete implementation checklists which resulted in some missing implementation scores as depicted in Table 3.

Table 3

ISLA Implementation Checklist: School-Wide Implementation Scores

ISLA schools	School A			School B			School C		
	Baseline	*Mid*	*Final*	*Baseline*	*Mid*	*Final*	*Baseline*	*Mid*	*Final*
Systems									
School-Wide Systems	4			8	9		9.5	10	9.5
ISLA Systems				7	10		5.5	8.5	7

Note. Implementation scores were not available for all schools or all time points. Only available scores are presented in the table.

Measures

Independent Variables

Both student- and school-level data were analyzed in this study. The data were obtained from Education Community Supports (ECS), at the University of Oregon. ECS tracks publicly available data (through request) for PBIS schools across the country. To obtain access to the data, a request was submitted to ECS specifying the years of data needed (2021–2022 for this study), school districts, schools, and student and school-level variables that were needed for the study. The most recent school-level demographic information was obtained from the National Center of Education Statistics (NCES), which is publicly available data on schools. The combined data from ECS and NCES include information both on **student demographics** (i.e., race/ethnicity, gender, student disability status, grade) as well as **school characteristics** (i.e., total school enrollment, total number of students on the Free and Reduced Lunch (FRL) program). All data (with the exception of FRL) was from the 2021–2022 academic year. Due to the unavailability of FRL data from these specific years, data on FRL from the 2018– 2019 academic year were used for this study.

Race/ethnicity was coded "white" (= 1) and "nonwhite" (= 0). Nonwhite included students who identified as Asian, American Indian/Alaskan Native, Black, Latinx, or multiracial (two races/ethnicities or more). For gender, most students were identified as male or female in the enrollment forms by their parents when registering their children for school. Only a small number of students (n = 5) were identified as "other" without additional information on defining "other" (e.g., non-binary). As such, the five students who identified as "other" were dropped from the sample, making a final analytic sample 891 students. Gender was coded "male" (= 1)

and “female” (= 0). Student disability status was proxied by student Individualized Education Plan (IEP) status. If the student ever had an IEP, they were coded as “IEP true” (= 1). If students did not have an IEP, they were coded as “IEP false” (= 0). ISLA was coded as “INTVstatus” and schools that received ISLA were coded as “1” and schools that did not receive ISLA were coded as “0.” Student grade, total school enrollment (TENRLMNT), and total free and reduced lunch (TOTFRL) were continuous variables.

Dependent Variables

Data on student problem behavior was collected from the School-Wide Information System (SWIS), a web-based data collection system that PBIS schools across the U.S. use to track incidences of problem behavior and exclusionary discipline actions (May et al., 2013). In addition to tracking office disciplinary referrals (ODRs), schools also generally track three types of exclusionary discipline practices in SWIS: in-school suspensions (ISS) and out-of-school suspensions (OSS), and expulsions. SWIS discipline data for all six schools (ISLA and non-ISLA schools) for the academic year 2021–2022 were included in the Education Community Supports (ECS) dataset that was utilized for this study. Due to the lack of information on expulsions for the sample schools, it was excluded from analysis and only ISS and OSS as outcome variables were examined for this study.

Analysis

All data analyses and visualizations were conducted and created in the R programming environment (R Core Team, 2022) with the following packages: readxl (Wickham, 2022), finalfit (Harrison et al., 2023), performance (Lüdecke et al., 2021), AER (Kleiber and Zeileis, 2008), pscl (Jackman, 2020), sandwich (Zeileis et al., 2020), lmtest (Zeileis and Hothorn, 2022), rio (Chan et al., 2023), janitor (Firke, 2023), MASS (Venables and Ripley, 2022), interactions

(Long, 2019), lme4 (Bates et al., 2015), sjPlot (Lüdecke, 2023), Hmisc (Harrell, 2023), tidyverse (Wickham et al., 2019), knitr (Xie, 2022), dplyr (Wickham et al., 2023), and ggeffects (Lüdecke, 2023).

As part of the preliminary analyses, descriptive statistics for student and school level variables were examined for all participants in the sample (N = 891) and also by condition (ISLA and non-ISLA schools). Table 2 presents descriptive statistics for the analytic sample by condition. No missing data were present in the variables used for this analysis. In addition, due to the nested nature of the data involving students within schools, the intraclass correlation coefficient (ICC) for both outcome variables (ISS and OSS) for all six schools were examined in order to determine the variability between schools. The ICC was small (ICC = .080 for ISS; ICC = .050 for OSS) which indicated that there was minimal variability between schools.

Preliminary analysis of both ISS and OSS variables indicated a large number of zeros and heavily left skewed distribution of outcomes, typical for count variables such as school suspensions. As such, standard logistic regression models are not a good fit for analyzing overdispersed count data (Beaujean & Grant, 2016). Therefore, Poison, negative binomial, and zero-inflated negative binomial regression models were compared as possible model fits for analysis. When using the Poisson model, zero inflation was present. However, when using the negative binomial with the tau dispersion parameter, the model was no longer underfitting zeros (i.e., zero inflation was not present). Model fit comparisons confirmed that negative binomial fit was significantly better than the Poisson model. Further, a zero-inflated negative binomial model was also compared to the negative binomial model, and the fit was not significantly improved. Therefore, the negative binomial model was deemed as the most appropriate model for this study

because it had the best fit when compared to Poisson and zero-inflated negative binomial models, and zero inflation was not present under it.

Unconditional main effects models were estimated separately for each outcome (i.e., ISS, OSS). Models including multiplicative interaction terms were subsequently estimated to test whether race/ethnicity, gender, and Disability status moderated the effect of ISLA on ISS and OSS outcomes. All models additionally controlled for school level variables such as total school enrollment and concentration of low-income students in school (using total free and reduced lunch as a proxy) and were estimated using cluster robust standard errors to correct for the correlated errors associated with student nesting within schools. I assessed statistical significance at the $\alpha = 0.05$ level, presented incidence rate ratios (*IRR*) for all models, and reported estimated means based on the interaction models to convey effect size.

CHAPTER III

RESULTS

The analytic sample included a total of 891 students from ISLA (n = 497) and non-ISLA schools (n = 394) who received at least one office disciplinary referral (ODR) during the 2021–22 academic year. Table 2 displays student demographic information, frequencies of in-school suspensions (ISS) and out-of-school suspensions (OSS) for students across all six schools, as well as the means and standard deviations for school-level variables.

Research Question 1: ISS Main Effects

Research question one examined the extent and manner that race/ethnicity, gender, disability status, and ISLA explained variation in the frequency of ISS outcomes for students while controlling for total school enrollment and concentration of low-income students in school (FRL). I hypothesized that being Nonwhite, male, or having a disability would predict more ISS for students, while students enrolled in an ISLA school would have fewer ISS. Table 4 presents coefficients and incident rates ratios (IRR) from the negative binomial regression models estimated to assess the effects of ISLA on student ISS outcomes. The results from the main effects model indicated that gender was the only statistically significant predictor of the number of ISS *(b* = 0.06, *IRR* = 1.07, 95% CI [1.00, 1.13], p = .036), whereby males had a 7% higher incidence of ISS than females, when controlling for other variables.

Table 4

Negative Binomial Regression: RQ 1 In-School-Suspensions (ISS) Main Effects Model

Term	Estimate	SE	IRR	95% CI		*p*
				IRR low	IRR high	
(Intercept)	-1.81	0.45	0.16	0.07	0.39	.000
Race/ethnicity	-0.11	0.09	0.90	0.75	1.07	.233
Gender	0.06	0.03	1.07	1.00	1.13	.036*
IEP	0.13	0.28	1.14	0.66	1.98	.633
INTVstatus	-0.16	0.20	0.85	0.57	1.26	.425
TENRLMNT	0.00	0.00	1.00	1.00	1.01	.097
TOTFRL	0.00	0.00	1.00	1.00	1.00	.882

Notes: SE = cluster robust standard error; IRR = incidence rate ratio; CI = confidence interval; *$p <$ .05.

Race/ethnicity: 1 = White, 0 = Nonwhite. Gender: 1 = male, 0 = female. IEP = individualized education plan (proxy for student disability status); 1 = has an IEP, 0 = does not have an IEP. White = 1. INTVstatus= intervention status; 1 = ISLA, 0 = no ISLA. TENRLMNT = total school enrollment; TOTFRL = total Free and Reduced Lunch.

Questions 1a, 1b, and 1c: ISS Interaction Effects

When examining the moderation of race/ethnicity, gender, and disability on the effects of ISLA, I hypothesized that Nonwhite students, males, and students with disabilities in the ISLA schools would have fewer incidences of ISS compared to students in the non-ISLA schools. Tables 5, 6, and 7 shows the interaction models for ISLA and the moderating effects of students' race/ethnicity, gender, and disability status (IEP) on ISS outcomes and the results of all three moderating variables were statistically significant.

As shown in Table 5, results indicated that race/ethnicity significantly moderated the effectiveness of ISLA on ISS outcomes (b = -0.43, *IRR* = 0.65, 95% CI [0.52, 0.81], p <.001). Figure 1a shows that the beneficial effect of ISLA on ISS rates was significantly greater for White students compared to Nonwhite students. The estimated mean of ISS days for White students is .40 in ISLA schools compared to non-ISLA schools where the estimated mean of ISS

days was slightly higher at .56 for White students in non-ISLA schools. For Nonwhite students, the results are reversed where mean of ISS days is higher (.54) in ISLA schools compared to non-ISLA schools (.49) though only slightly. In addition, the estimated mean difference of ISS days between White and Nonwhite students in ISLA schools is greater (.14) compared to non-ISLA schools (.07).

Table 5

Negative Binomial Regression: RQ 1a Race/ Ethnicity and ISLA Interaction Effects on In-School Suspensions (ISS)

Term	Estimate	SE	IRR	95% CI		*p*
				IRR low	IRR high	
(Intercept)	-2.12	0.45	0.12	0.05	0.29	.000
Race/ethnicity	0.14	0.04	1.15	1.07	1.23	.000
INTVstatus	0.09	0.22	1.10	0.72	1.67	.672
Race/ethnicity: INTVstatus	-0.43	0.11	0.65	0.52	0.81	.000*

Notes: SE = cluster robust standard error; IRR = incidence rate ratio; CI = confidence interval; *$p <$ .05. Race/ethnicity: 1 = White, 0 = Nonwhite. INTVstatus= intervention status; 1 = ISLA, 0 = no ISLA.

Figure 1a

ISLA Effects on ISS Days Moderated by Race/Ethnicity

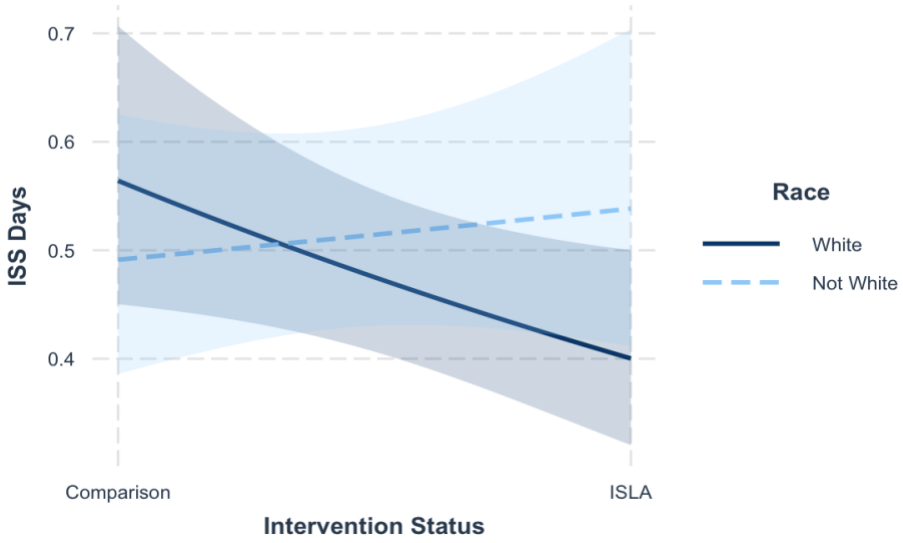


Table 6 shows the interaction model for gender and ISLA. Results indicated that sex significantly moderated the effectiveness of ISLA on ISS outcomes (b = -0.19, IRR = 0.83, 95% CI [0.75, 0.90], $p < .001$). Figure 1b shows that the beneficial effects of ISLA on ISS rates was significantly greater for male students than females. The estimated mean of ISS days for males was .45 in ISLA schools compared to non-ISLA schools where the estimated mean of ISS days was higher at .57 for males. For females, the means of ISS days are almost the same at .46 in ISLA schools compared to .47 at non-ISLA schools, which indicated little to no change in ISS suspension rates for females between the two groups. In addition, the estimated mean difference of ISS days between males and females in the control school was .10 days but the difference was substantially smaller in ISLA schools at .01 days. This reduction almost completely closed the discipline gap for males and females where there were no disparities between ISS outcomes for either sex in the ISLA group compared to the non-ISLA group.

Table 6

Negative Binomial Regression: RQ 1b Gender and ISLA Interaction Effects on In-School-Suspensions

Term	Estimate	SE	IRR	95% CI		*p*
				IRR low	IRR high	
(Intercept)	-1.88	0.44	0.15	0.06	0.36	.000
Gender	0.18	0.03	1.19	1.14	1.25	.000
INTVstatus	-0.03	0.18	0.97	0.68	1.38	.852
Gender: INTVstatus	-0.19	0.05	0.83	0.75	0.90	.000*

Notes: SE = cluster robust standard error; IRR = incidence rate ratio; CI = confidence interval; *p < .05. Gender: 1 = males, 0 = females. INTVstatus= intervention status; 1 = ISLA, 0 = no ISLA.

Figure 1b

ISLA Effects on ISS Days Moderated by Gender

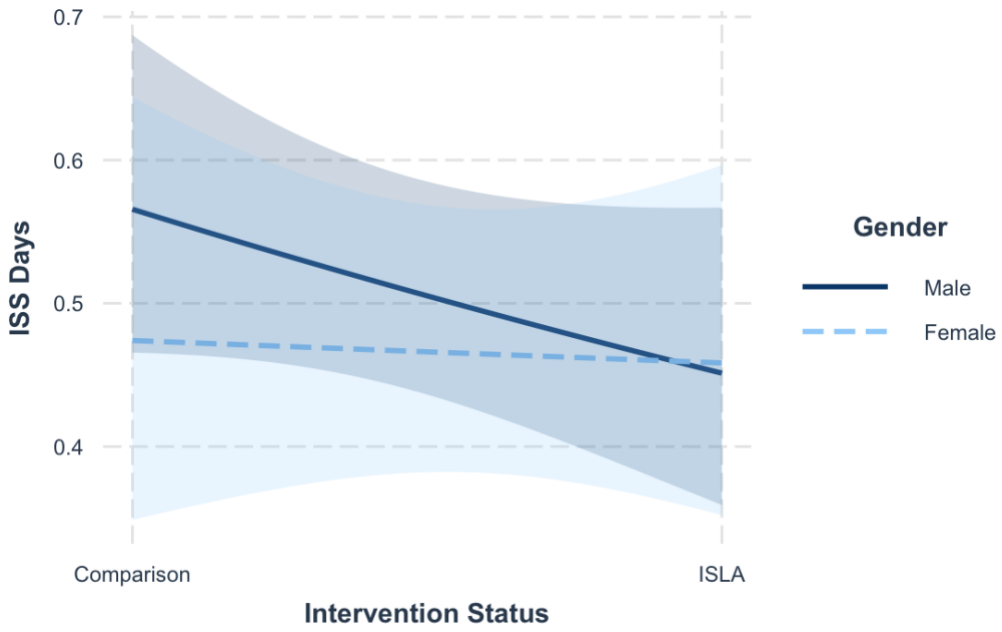


Table 7 shows the interaction model for students with disabilities, represented by students who have an IEP, and ISLA. Results indicated that disability status significantly moderated the effectiveness of ISLA on ISS outcomes for students with disabilities (*b* = -0.88, *IRR* = 0.41, 95%

CI [0.25, 0.70], $p = .001$). Figure 1c shows that the beneficial effects of ISLA were very pronounced for students who had an IEP compared to students without an IEP. The estimated mean of ISS days for students who had an IEP was .34 days in ISLA schools versus non-ISLA where the estimated mean of ISS days was higher at .81 days for students with an IEP. In addition, the estimated mean difference of ISS days between students with IEPs and students without IEPs was substantially smaller in ISLA schools at .14 days whereas the mean difference was greater in non-ISLA at .34 days.

Table 7

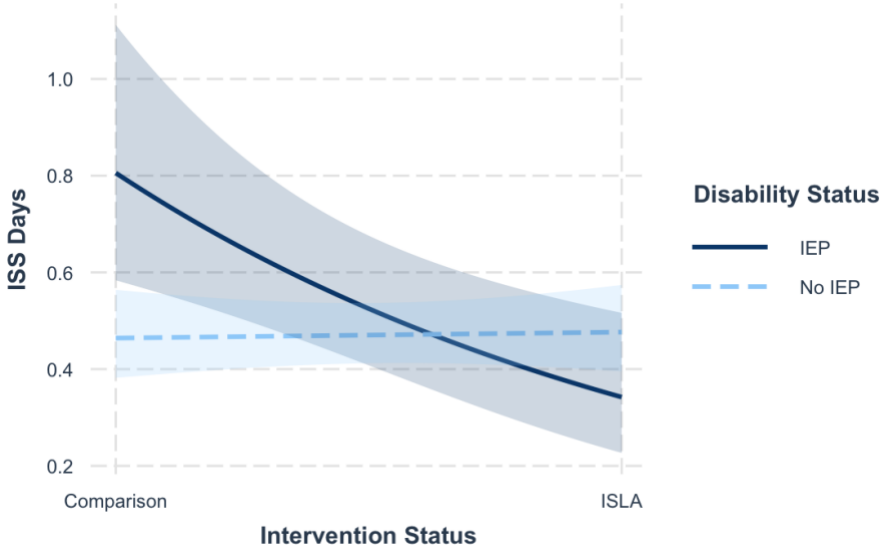
Negative Binomial Regression: RQ 1c Disability Status (IEP) and ISLA Interaction Effects on In-School Suspensions (ISS)

Term	Estimate	SE	IRR	95% CI		*p*
				IRR low	IRR high	
(Intercept)	-2.08	0.39	0.12	0.06	0.27	.000
IEP	0.55	0.22	1.74	1.14	2.65	.010
INTVstatus	0.03	0.20	1.03	0.70	1.51	.894
IEP: INTVstatus	-0.88	0.26	0.41	0.25	0.70	.001*

Notes. SE = cluster robust standard error; IRR = incidence rate ratio; CI = confidence interval; *$p <$ .05. IEP = individualized education plan (proxy for student disability status); 1 = has an IEP, 0 = does not have an IEP. INTVstatus = intervention status; 1 = ISLA, 0 = no ISLA.

Figure 1c

ISLA Effects on ISS Days Moderated by Disability Status (IEP)



Research Question 2: OSS Main Effects

Research question two examined the extent and manner that race/ethnicity, gender, disability status, and ISLA explained variation in the frequency of OSS outcomes for students while controlling for total school enrollment and concentration of low-income students in school (FRL). I hypothesized that being Nonwhite, male, or having a disability would predict more OSS for students, while students enrolled in the ISLA schools would have fewer OSS. Table 8 presents coefficients and incident rates ratios (IRR) from the negative binomial regression models estimated to assess the effects of ISLA on student OSS outcomes. The results from the main effects model indicated that student disability status was a significant predictor for the number of OSS (b = 0.65, IRR = 1.92, 95% CI [1.33, 2.77], p = 0.001), such that students with an individualized education plan (IEP) had a 92% higher incidence of OSS compared to students without an IEP, while holding the other variables constant in the model.

Table 8

Negative Binomial Regression: RQ 2 Out-of-School Suspensions (OSS) Main Effects Model

Term	Estimate	SE	IRR	95% CI		*p*
				IRR low	IRR high	
(Intercept)	-2.96	0.35	0.05	0.03	0.10	.000
Race/ethnicity	0.02	0.17	1.02	0.74	1.41	.893
Gender	0.11	0.15	1.12	0.84	1.50	.435
IEP	0.65	0.19	1.92	1.33	2.77	.001*
INTVstatus	-0.31	0.20	0.73	0.50	1.08	.119
TENRLMNT	0.01	0.00	1.01	1.00	1.01	.000
TOTFRL	0.00	0.00	1.00	0.99	1.00	.000

Notes: SE = cluster robust standard error; IRR = incidence rate ratio; CI = confidence interval; *$p <$ .05.

Race/ethnicity: 1 = White, 0 = Nonwhite. Gender: 1 = male, 0 = female. IEP = individualized education plan (proxy for student disability status); 1 = has an IEP, 0 = does not have an IEP. White = 1. INTVstatus= intervention status; 1 = ISLA, 0 = no ISLA. TENRLMNT = total school enrollment; TOTFRL = total Free and Reduced Lunch.

Questions 2a, 2b, and 2c: OSS Interaction Effects

When examining the moderation of race/ethnicity, gender, and disability on the effects of ISLA for OSS, I hypothesized that Nonwhite students, males, and students with disabilities in the ISLA schools would have fewer incidences of OSS compared to students in the non-ISLA. Tables 9, 10, and 11 shows the interaction models for ISLA and the moderating effects of students' race/ethnicity, gender, and Disability status on OSS outcomes. Results indicate that the only statistically significant moderator of ISLA effects on incidences of OSS was race/ethnicity.

Table 9

Negative Binomial Regression: RQ 2a Race/Ethnicity and ISLA Interaction Effects on Out-of-School Suspensions (OSS)

Term	Estimate	SE	IRR	95% CI		*p*
				IRR low	IRR high	
(Intercept)	-3.36	0.24	0.03	0.02	0.06	.000
Race/ethnicity	0.32	0.17	1.38	0.98	1.95	.063
INTVstatus	0.03	0.25	1.03	0.63	1.67	.916
Race/ethnicity: INTVstatus	-0.56	0.25	0.57	0.35	0.94	.027*

Notes. SE = cluster robust standard error; IRR = incidence rate ratio; CI = confidence interval; *p < .05. Race/ethnicity: 1 = White, 0 = Nonwhite. INTVstatus= intervention status; 1 = ISLA, 0 = no ISLA.

Table 10

Negative Binomial Regression: RQ 2b Gender and ISLA Interaction Effects on Out-of-School Suspensions (OSS)

Term	Estimate	SE	IRR	95% CI		*p*
				IRR low	IRR high	
(Intercept)	-2.94	0.34	0.05	0.03	0.10	.000
Gender	0.08	0.21	1.08	0.72	1.64	.700
INTVstatus	-0.35	0.19	0.70	0.49	1.02	.062
Gender: INTVstatus	0.06	0.27	1.07	0.63	1.80	.811

Notes. SE = cluster robust standard error; IRR = incidence rate ratio; CI = confidence interval; *p < .05. Gender: 1 = males, 0 = females. INTVstatus= intervention status; 1 = ISLA, 0 = no ISLA.

Table 11

Negative Binomial Regression: RQ 2c Disability Status (IEP) and ISLA Interaction Effects on Out-of-School Suspensions (OSS)

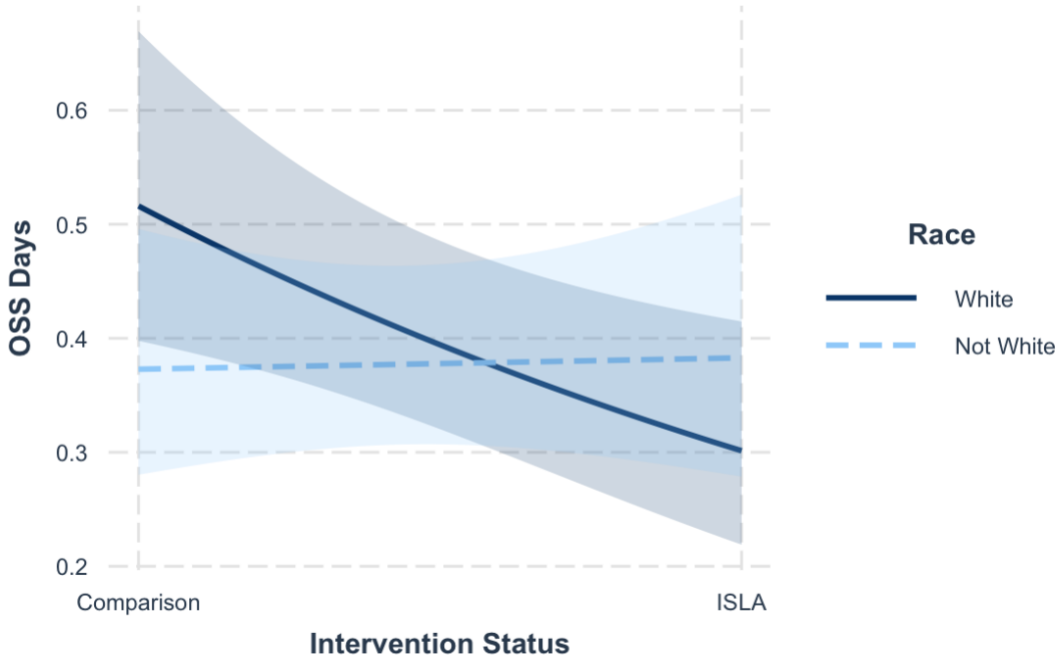
Term	Estimate	SE	IRR	95% CI		*p*
				IRR low	IRR high	
(Intercept)	-3.08	0.39	0.05	0.02	0.10	.000
IEP	0.82	0.21	2.28	1.50	3.48	.000
INTVstatus	-0.21	0.20	0.81	0.55	1.19	.284
IEP: INTVstatus	-0.37	0.28	0.69	0.40	1.20	.190

Notes. SE = cluster robust standard error; IRR = incidence rate ratio; CI = confidence interval; *p < .05. IEP = individualized education plan (proxy for student disability status); 1 = has an IEP, 0 = does not have an IEP. INTVstatus = intervention status; 1 = ISLA, 0 = no ISLA.

As shown in Table 9, results indicated that race/ethnicity significantly moderated the effectiveness of ISLA on OSS outcomes (b = -0.56, *IRR* = 0.57, 95% CI [0.35, 0.94], p = .027). Figure 2a shows that the beneficial effect of ISLA of OSS was significantly greater for White students compared to Nonwhite students, such that White students had 57% fewer incidences of OSS compared to Nonwhite students. The estimated mean of OSS days for White students was .30 days in ISLA schools versus non-ISLA schools where the estimated mean of OSS days was higher at .52 days for White students. For Nonwhite students, the means of OSS days was almost the same in both groups at .38 days in ISLA schools and .37 days at non-ISLA schools, which indicated little to no change in OSS suspension rates for Nonwhite students in the intervention schools. In addition, the estimated mean difference of OSS days between White and Nonwhite students in the non-ISLA schools was .15 days but the difference was smaller in ISLA schools at .08 days.

Figure 2a

ISLA Effects on OSS Days Moderated by Student Race/Ethnicity



CHAPTER IV

DISCUSSION

The present study extended prior research on the Inclusive Skill-Building Learning Approach (ISLA; Furjanic et al., 2021; Nese et al., 2020; Pimentel-Mannan et al., 2023) by examining how student race/ethnicity, gender, and disability status predicted the frequency of ISS and OSS outcomes among middle school students. Student race/ethnicity, gender, and disability status were examined as potential moderators to better understand how these characteristics impacted the effect of ISLA on ISS and OSS outcomes.

The results of the main effects model examining ISS indicated that being male was the only significant predictor for experiencing ISS when controlling for demographic characteristics of students, ISLA, total school enrollment, and the concentration of low-income students in each school. Although the associated effect size was small, the findings indicated that male students had 7% higher incidences of ISS compared to female students. The results of the main effects model examining OSS indicated that student disability status was the only significant predictor for experiencing OSS when controlling for demographic characteristics of students, ISLA, total school enrollment, and the concentration of low-income students in each school. The associated effect size was significantly large. The results showed that students with a disability status had a 92% higher incidence of OSS compared to students without a disability. Both of these findings were consistent with prior research which has indicated that males and students with disabilities are at a higher risk for experiencing exclusionary discipline (Noltemeyer et al., 2015; Ritter & Anderson, 2018). In fact, studies show that males are suspended significantly more frequently than females (Kaufman et al., 2010) and students with disabilities are often suspended at more than twice the rate of students without disabilities (Ryberg et al., 2021). Neither of the main

effects models suggested a significant effect of ISLA on ISS and OSS outcomes when controlling for demographic characteristics of students, total school enrollment, and the concentration of low-income students in each school.

While the effect of ISLA on ISS and OSS frequencies were not statistically significant while controlling for other factors, race/ethnicity, gender, and disability status played important roles in moderating the effect of ISLA on the frequency of ISS and OSS. These interaction effects were estimated by not only calculating incidence rate ratios (IRRs), but also estimating the mean differences for ISS and OSS days for each of the interaction models in order to better contextualize the effect.

When examining ISS, race/ethnicity, gender, and disability status each moderated ISLA's effect on the incidences of ISS. The findings indicated that students who attended ISLA schools and were either White, males, or had a disability, experienced considerably fewer ISS days compared to students in non-ISLA schools. In fact, the discipline gap between males and females experiencing ISS was almost completely eliminated in the ISLA schools compared to the non-ISLA schools (see Figure 1b). Also notable, students with disabilities who attended the ISLA schools had substantially fewer ISS days with an estimated mean of .34 days compared to students with disabilities who attended non-ISLA schools and had an estimated mean of .81 days (see Figure 1c). These are important findings as they highlight the benefit of ISLA for specific student populations, especially for two populations, males and those with disabilities, who often experience exclusionary discipline at disproportionate rates (Bradshaw et al., 2010; Cruz et al., 2021). However, when examining how race/ethnicity moderated ISLA's effects, it appears that ISLA was more effective for White students than Nonwhite students in reducing the frequency of ISS.

When examining how race/ethnicity, gender, and disability status each moderated ISLA effects on the frequency of OSS, only the interaction between ISLA and race/ethnicity was statistically significant. The findings indicated that students who were White and were in ISLA schools received significantly fewer OSS compared to White students in non-ISLA schools. Gender and disability status did not significantly predict OSS outcomes. While it is encouraging to observe the decrease of OSS for some students (i.e., Whites), the results from this study indicate the ISLA may have limited or no impact on other populations (i.e., Nonwhites, students with a disability, males) in terms of the frequency of OSS.

Prior research on ISLA has demonstrated that it is an effective alternative to exclusionary practices that combines approaches likes social emotional learning, restorative practices, relationship building, and school to classroom-wide PBIS strategies to effectively reduce overall exclusionary discipline (Nese et al., 2020, 2021; Pimentel-Mannan et al., 2023). However, even though these strategies have demonstrated effectiveness in reducing overall exclusionary discipline and improving some student outcomes, there are still challenges in addressing disproportionality in exclusionary discipline at a scale that focuses on equity, counters inequality and institutionalized privilege, and intentionally promotes thriving across multiple domains for individuals experiencing inequity and injustice (Osher et al., 2020). The findings of this study demonstrate that ISLA has the potential to address several areas of disproportionality in exclusionary discipline outcomes, especially for males and students with disabilities.

The limited effect of ISLA on Nonwhites for both ISS and OSS is discouraging and, unfortunately, is consistent with a different study on ISLA (Pimentel-Mannan et al., 2023). While overall rates of suspensions have decreased in the past decade, students of color—specifically African American students—are still suspended at more than twice the rate of their

White counterparts (Ryberg et al., 2021). It is clear, more research is needed to identify specific factors behind this problem and also to identify strategies that might be effective in resolving this issue. There could be several factors coming into play such as, ISLA may need to be adapted so that it more effectively addresses the needs of Nonwhite students. However, it might also be related to other issues. For instance, educational leaders (i.e., teachers, administrators) are predominantly White in the United States (NCES, 2020), which not only impacts disproportionate suspension rates for Nonwhite students (Christie et al., 2004; Lindsay & Hart, 2017), but it may also influence how programs are delivered and who benefits from these services. Having more racially and culturally diverse educators who reflect Nonwhite student identities as well as having additional trainings on topics such as teacher implicit biases is paramount to address this issue (Morgan et al., 2019; Smolkowski et al., 2016).

Future research on ISLA and similar interventions striving to reduce exclusionary discipline should continue to examine disaggregated data by specific student populations to better understand the benefit of the interventions for different populations. Part of this examination needs to look at how other contextual factors (e.g., school environments, teacher characteristics, societal norms) might be coming into play. By examining these other aspects, we can better pinpoint the core issues and systematic problems that are resulting in disproportionality in exclusionary discipline in order to work towards creating more equitable school environments.

Limitations

Findings from the current study should be considered within the context of some limitations. First, the sample of schools in this study was small *(N* = 6) and lacked racial and ethnic diversity. Study participants were from school districts located in small towns in the

Pacific Northwest where students were predominantly White. While Nonwhite students represented roughly 40% of the sample for both intervention and comparison groups, this group was mostly comprised of Latinx (approximately 25% for both groups) students, with Black, Asian, Native Hawaiian, and Indigenous students who represented less than 10% of the total sample for both groups. Therefore, results of this study may not be generalizable to all schools or student demographics, specifically urban and more racially diverse populations across the United States. Future research should examine ISLA outcomes for specific racial groups utilizing larger, more racially and ethnically diverse samples to better understand ISLA effects for groups mostly impacted by exclusion (e.g., Black, Latinx, Indigenous). Another area of study would be to examine other demographic characteristics such as student socioeconomic status (SES). As lower SES is a known risk factor for experiencing disproportionate exclusionary discipline (Cholewa et al., 2018), future research should examine confounding variables such as student SES, household income, and school Title 1 status and their association with ISLA effects on discipline outcomes.

A second limitation was that the sample was only limited to students who received an office disciplinary referral (ODR) and did not include the entire student population of each school. Therefore, the present study could examine the frequency of ODR but not if a student ever received an ODR during the study period. As a result, this study did not account for or examine all possible confounding factors that might be coming into play between those receiving an ODR or not. Future research should attempt to replicate the study's findings using a sample that includes all students enrolled in the schools, not just the students with ODRs.

A third limitation was that the current study design did not include a systematic examination of the specific ISLA components (i.e., schoolwide systems, classroom systems, ISLA triage) that may be associated with the desired outcomes. Future research examining the

different components of ISLA associated with various discipline outcomes will be critical for identifying some of the essential ISLA strategies that maximize effectiveness in reducing exclusionary discipline outcomes among all students, but specifically minoritized students. Future studies should also include fidelity measures for the various ISLA components to better understand the mechanisms by which ISLA is the most effective in schools.

A final limitation was related to the limited outcome measures examined (i.e., ISS, OSS). The current study measured exclusionary discipline using only frequencies of ISS and OSS incidences, which do not encompass all the various exclusionary disciplinary practices utilized in many schools and classrooms (Nese et al., 2020; Noltemeyer et al., 2015). Additional research on this topic may be warranted to explore a variety of exclusionary discipline outcomes in addition to ISS and OSS (e.g., office disciplinary referrals, expulsions, lost instruction time) and how these other disciplinary actions are administered to diverse groups of students.

Conclusions

Despite the limitations of the current study, the findings discussed represent several important conclusions for prevention of exclusionary disciplinary practices in schools through alternatives that promote positive behavior and restorative practices. Current effective alternatives for reducing exclusionary discipline such as social emotional learning, restorative justice approaches, and Positive Behavior Intervention Supports (PBIS) on their own are still not effective at addressing disparities for all students especially those with intersecting identities such as for African American male students or males with disabilities of any race/ethnicity or ethnicity (Cruz et al., 2021; Cruz & Rodl, 2018). In addition, these approaches do not include systems of support for students when they are actually removed from an instructional environment. ISLA is an effective alternative that combines the best aspects of these approaches

but also provides instructional support to students who are removed from the learning environment for real behavior change so that they can return to the classroom. The findings from this study demonstrate ISLA's potential for reducing disproportionate exclusionary discipline outcomes, particularly for male students and students with disabilities. Still, more research is needed on ISLA or other alternatives that examine effective strategies to eliminate disproportionalities in exclusionary discipline, especially for students of color. Students and schools can benefit from ISLA because it offers an alternative to exclusion, provides students with support that is effective for practical behavior change, while simultaneously addressing issues of discipline disproportionality.

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