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SCHOOL-BASED PROFESSIONALS' PERCEPTIONS OF MODIFICATIONS TO SOCIAL-EMOTIONAL LEARNING FOR STUDENTS WITH ADHD AND ASD

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ABSTRACT

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Social-emotional learning (SEL) curriculums help children learn and develop foundational skills related to self-awareness, self-management, social awareness, relationship skills, and responsible decision making (CASEL, 2022). There are long-term positive outcomes of SEL in terms of academic achievement, motivation, mental health, self-discipline, emotion regulation abilities, and communication skills (Jones et al., 2015; Steed et al., 2022). Unfortunately, most SEL programs are designed with the neurotypical child in mind (New York State Department of Education, 2022).

Students with neurological differences such as Attention Deficit/Hyperactivity Disorder (ADHD) or Autism Spectrum Disorder (ASD) have inherent deficits in various social and emotional skill areas, including difficulty with emotion recognition and expression, maintenance of social skills needed for reciprocal friendships, pragmatic language, executive functions, and empathy, all of which contribute to social and emotional well-being (Arnaud, 2020; Braaten et al., 2000; Mendelson et al., 2016; Staikova et al., 2013; Waddington et al., 2018). Therefore, these children require deliberate effort to understand what others are feeling, and therefore more practice with these skills (Löytömäki et al., 2020).

This study examined 147 school-based professionals' perceptions of SEL programming in their school, specifically for students with ADHD or ASD. Exploratory analyses demonstrate that school-based professionals perceive SEL as valuable and effective for all students. They believe that modifications to SEL for ADHD and ASD students are needed and they encounter significant barriers to implementing high-quality SEL in their schools. Limitations of the research are discussed and clinical implications for school psychologists, graduate and SEL training programs, and schools are presented.

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CHAPTER 1: INTRODUCTION

Statement of the Problem

Social and emotional learning (SEL) is the acquisition and application of a broad range of social, emotional, and behavioral skills (Wigelsworth et al., 2021). The Collaborative for Academic, Social, and Emotional Learning, or CASEL (2022), expand on the definition of SEL:

> The process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions. (Fundamentals of SEL).

Students who have SEL as part of their educational curricula in school at a tier 1 (i.e., universal/school-wide/classroom-wide) level demonstrate significantly more advanced social and emotional skills, attitudes, positive behaviors, executive functioning, and academic performance compared to controls with no consistent SEL teachings (Durlak et al., 2011; Richard Albrecht & Brunner, 2019). These positive outcomes are associated with the idea that learning is not solely an academic or cognitive activity; rather, a child's ability to learn is inextricably intertwined with their emotional availability, safety, prosocial behaviors, and overall well-being (often referred to as a "whole-child" approach) (Slade & Griffith, 2013). Further, achievement is not only based on an individual's intelligence, but also their ability to self-regulate their emotions and behaviors, their level of intrinsic motivation, and overall attitude (Jones et al., 2015). The

importance of SEL programming is greater for students who are prone to social-emotional difficulties (including self-regulation, emotion recognition and understanding, building and maintaining relationships), such as children with Attention-Deficit/Hyperactivity Disorder (ADHD) and Autism Spectrum Disorder (ASD) (Martin et al., 2017). Currently, research is lacking as to whether school-based professionals perceive tier 1 SEL programs as appropriate for ADHD and ASD populations. If educators are not in agreement on whether to modify SEL and how to adapt SEL strategies for these populations, ADHD and ASD students will not benefit from the universal SEL programming that research shows can be helpful to overall human development. Input is needed from teachers, counselors, school psychologists, social workers, etc., to better modify school wide SEL programming for all students.

CHAPTER II: LITERATURE REVIEW

The Importance of Social-Emotional Learning (SEL)

Over the last few decades, an influx of evidence-based support for social-emotional interventions and curriculums in schools has developed (Durlak et al., 2011). According to Ragozzino et al. (2003), social and emotional aspects of teaching in schools are integral to learning, rather than incidental. According to CASEL (2022), an organization committed to incorporating evidence based SELs into schools for children of all ages and backgrounds, SEL is a process through which people "acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions" (Fundamentals of SEL). As this is a complex definition and idea, the process by which SEL is taught is also complex, and various SEL methodologies and curriculums have been designed by researchers over the years. Despite curricular differences, some shared goals of SEL programs include teaching the recognition, identification, and understanding of emotions, the development of empathy and acknowledging the needs and interests of others, social problem-solving, and helping children to utilize a blend of social-emotional, cognitive, and interpersonal skills to build and preserve healthy and positive relationships with others (Schonfeld et al., 2015). CASEL attests that SELs are not only essential to education, but also to human development.

CASEL's website (www.casel.org) consolidates the top CASEL-designated SEL programs available for schools and classrooms worldwide. It allows professionals to select a program based on the specific needs of their school and student body: including

cultural or racial differences (e.g., racial/ethnic specifications, etc.), outcome goals (e.g., decreasing emotional distress, increasing prosocial behaviors, increased school connectedness, etc.), school characteristics (urban, rural, suburban, non-US, etc.), and the type of program approach (lessons, teaching practices, full curriculum, etc.) (CASEL, 2022). SEL has proven to support children's ability to think flexibly, make sound decisions, adapt positively to changes in their environment, and foster connectivity between social, emotional, and behavioral competencies when instituted school wide at a tier 1 level; available to all students (Durlak et al., 2011; McCormac & Snyder, 2019). Such developments are even more important to nurture for students with social and emotional shortfalls, such as children with ADHD and ASD. The core components of SEL programs target growth in specific social and emotional competencies that children with ADHD and ASD may inherently lack.

Core Components of SEL

Many researchers and school professionals utilize the core components of SEL established by CASEL (Ragozzino et al., 2003; Wallender et al., 2020; Wigelsworth et al., 2019). CASEL (2022) contends that there are specific components and skill areas that SEL programs should contain: self-awareness, self-management, social awareness, relationship skills, and responsible decision making are the five components that make up the CASEL framework for SEL curriculums (CASEL, 2022). Wigelsworth et al. (2019) investigated 13 widely used SEL programs alongside CASEL's components and found that each core component was broadly balanced across the SEL programs. Many researchers approve of and consequently adhere by CASEL's core components when developing SEL programs and studying their effectiveness (Ragozzino et al., 2003;

Wallender et al., 2020). While some do not use CASEL's components exactly, many SEL programs consist of lessons that center around social skills, identifying one's own feelings, identifying the feelings of others, and behavioral coping skills and relaxation strategies, which can be linked to one or more of CASEL's core components (CASEL, 2022; Lawson et al., 2019). Furthermore, it would be important to know how these core components are implemented at a tier 1 level with students with ADHD and ASD, since such diagnoses include social and emotional shortcomings in many of the above skillsets.

The Benefits of SEL and Social-Emotional Skills

There are long-term, positive effects associated with the implementation of tier 1 SEL programs in childhood and adolescent education. SEL programming during early childhood is a promising way to instill foundational social-emotional skills and support students' long-term mental health and academic progress (Steed et al., 2022). Schonfeld et al. (2015) conducted a study across 24 elementary schools in an urban neighborhood in the Northeastern United States in which students were randomly assigned (cluster-randomized to control for race/ethnicity and family income) to either the control group with no SEL curriculum or the intervention group which received an SEL curriculum. The study followed the students from 3rd to 6th grade, tracking their standardized state test scores each year. The researchers found that of 400 students, those in SEL programs from 3rd grade to 6th grade demonstrated higher levels of proficiency in reading, math, and writing compared to controls with no consistent SEL teachings (Schonfeld et al., 2015). In their meta-analysis, Durlak and colleagues asserted similar findings, in which students receiving SEL demonstrated "significantly improved social and emotional skills,

attitudes, behavior, and academic performance that reflected an 11-percentile-point gain in achievement" (Durlak et al., 2011, p. 417).

Not only does SEL correlate with academic achievement but enhanced social-emotional skills in early childhood may be predictive of adaptive skills and behaviors later in life. Employers seek candidates who have advanced interpersonal and communication skills, including social awareness and collaborative problem solving or decision making (Newman & Dusenbury, 2015). In addition, higher teacher ratings of prosocial behaviors in kindergarten have been positively associated with achievement (e.g., graduating from high school on time, receiving a college degree, obtaining stable employment in young adulthood) (Jones et al., 2015). Such prosocial behaviors include noncognitive skills such as academic motivation, self-discipline, organization, communication skills, and emotion regulation (Jones et al., 2015). Furthermore, significant negative correlations have been found between high ratings of prosocial behaviors in kindergarten and being arrested, binge drinking behaviors, drug use and abuse, and appearances in a court setting (Jones et al., 2015). Such long-term, positive outcomes of enhanced social-emotional skills point to the importance of children learning about and improving upon such skills in school.

These findings are not only valuable to psychological research, but also in the field of public health since violence, crime, and substance abuse can be associated with maladaptive social and emotional skills such as a lack of empathy and externalizing behaviors, further emphasizing the importance of SEL worldwide (Jones et al., 2015). In addition, students with ADHD or ASD can be at an increased risk for negative social, emotional, and academic outcomes (Lee et al., 2011). Children with ADHD in particular

have high rates of comorbid behavior or mood disorders, poor academic performance, and social difficulties (American Psychiatric Association, 2013; Lee et al., 2011). About 70% of individuals with ASD may have one comorbid mental disorder, and 40% may have two or more comorbid mental disorders (American Psychiatric Association, 2013; Lee et al., 2011). Therefore, if there are effective tier 1 SEL interventions that are modified for students with ADHD and ASD, this can significantly increase the likelihood of positive social, emotional, behavioral, and academic outcomes considering their vulnerability to social, emotional, and behavioral deficits. However, at present tier 1 SEL programs and goals are designed for neurotypical students (New York State Department of Education, 2022). School-wide SEL programs with considerations for children with ADHD and ASD are needed to increase their long-term positive social, emotional, and behavioral outcomes (Durlak et al., 2011; Lubchansky, 2017; Martinez & Bogovich, 2019).

SEL Implementation

Despite the positive outcomes that SEL programs have for students across many age groups, nearly 50% of schools in the US report having no SEL curriculum or program (McGraw Hill, 2021). In addition, research on implementation of SEL, specifically the fidelity with which the programs are implemented, is deficient. Implementation of SEL in schools is multi-dimensional and involves not only the curricula and materials, but also personnel training, professional development, coaching, and monitoring (Hunter et al., 2022). Despite overwhelming evidence that devoting time and resources to promoting SEL within a formal educational environment will likely be invaluable for society, the implementation and maintenance of SEL in schools is complex for school personnel

(Wallendar et al., 2020). School personnel report that a general lack of administrative support, time constraints, inadequate mental health staff, lack of a school-wide SEL curriculum, no training, and general lack of resources obstructs teachers' ability to deliver effective SEL programming in the classrooms (Domitrovich et al., 2008; Steed et al., 2022).

In an effort to try to understand factors that interfere with teachers' ability to deliver the SEL lessons with fidelity, Hunter et al. (2022) published a year-long exploratory study of 41 first and second grade teachers in 13 schools across three states implementing a CASEL-approved program. The researchers found that the teachers consistently reported time pressure, schedule disruptions, and the desire to differentiate learning to meet individual student needs as the primary factors that interfered with fidelity (Hunter et al., 2022). Fidelity research relating to SEL is important to the present study because if general education settings are not consistently implementing SEL, it is unlikely that students with clinical classifications such as ADHD or ASD are consistently learning SEL at their cognitive, social, and emotional levels. Students with ADHD or ASD benefit from modified or specialized SEL, which may require even more training and time from the school-based professionals involved in implementation. While the desire to modify tier 1 SEL for specific student needs such as ADHD or ASD exists, as shown in Hunter et al.'s (2022) study, there are systemic barriers to such modifications, and as such, students with learning difficulties may not be receiving the adequate implementation of SEL that they require, including individualized attention, small group instruction, positive reinforcement and feedback, movement breaks, check-ins (e.g.,

monitoring for frustration, offering help), visual aids, broken-down tasks, or modified instruction (Center for Disease Control and Prevention, 2022; Houchin, 2016).

Professionals' Perceptions of SEL Programs

School-based professionals largely believe that SEL is important for students' school and life goals, and many support the research findings linking social-emotional skills with academic achievement (Buchanan et al., 2009). In a study surveying 263 elementary and middle school teachers from Oregon and Illinois, the researchers found that despite 98.9% of teachers agreeing that SEL programming in schools is important, only 67.4% were currently implementing a specific curriculum in their classroom (Buchanan et al., 2009). 68.9% of participants believe that SEL should be taught in the classroom, though teachers shared that the support of other school personnel would be helpful in implementation (Buchanan et al., 2009). In terms of training and consultation, 61.7% of the teachers surveyed reported that they would be willing to be observed during SEL to receive constructive feedback and improve their teaching methods (Buchanan et al., 2009). The authors conclude that not only are many teachers willing to spearhead SEL in their classrooms, but they are also open to improving their implementation skills to further efficacy and student outcomes (Buchanan et al., 2009).

A recent survey has illustrated the continued significance of SEL according to educators. Teachers endorsed various SEL curriculums in their classrooms, and shared qualitative information regarding effective and ineffective features of the programs (Steed et al., 2022). Many effective features included schools that provided SEL kits, professional development, trainings, an integrated/multi-disciplinary approach, allotted SEL periods throughout the week, and SEL specialists in the schools (Steed et al., 2022).

Some teachers shared that their school SEL program even includes a Family Partnership component, which helps students generalize SEL skills and practices across settings (Steed et al., 2022). While openness to implement and improve SEL in schools is a good start, the fact remains that students with ADHD and ASD require modifications to standard SEL programming designed for neurotypical students. However, research on school professionals' perceptions of tier 1 SEL does not currently address ADHD and ASD populations, which arguably have the most need for routine social and emotional skills practice and instruction on how to generalize such skills across settings.

There is research on teachers' perceptions of SEL programming in schools throughout the country. However, many findings suggest that teachers alone may not be the best equipped to implement SEL into classrooms, and many teachers believe that other school personnel may be better equipped (e.g., school psychologists, school counselors, social workers, etc.) (Buchanan, 2009; Steed et al., 2022; Yang, 2021). Most SEL lessons are incorporated into classrooms by teachers and occur weekly for about thirty minutes (Jones et al., 2018). However, this format does not promote maintenance of SEL skills and practices beyond the classroom (Jones et al., 2018). In some schools, SEL is a multi-disciplinary approach and involves teachers and mental health staff; yet, there is minimal research on the perceptions of tier 1 SEL programs from those school-based professionals that are not teachers. If teachers are not the sole SEL instructors, to fully understand efficacy and efficiency of SEL in schools, more input is needed from school psychologists, social workers, counselors, or other health and mental health personnel with knowledge on SEL, to help inform tier 1 SEL modifications. Then, the modified tier 1 SEL can better reach all students in the classroom, not just neurotypical students.

Furthermore, since many students with ADHD and ASD additionally receive tier 2 or 3 interventions (e.g., individual/ group counseling, social skills groups), with counselors, school psychologists, social workers, etc., input on modifications of SEL for ADHD and ASD populations from such professionals is essential to consider when modifying tier 1 SEL programming school wide.

SEL Adaptations and Modifications

SEL programs have been adapted to better reach populations of various ethnic and cultural backgrounds (CASEL, 2022). CASEL's search tool for SEL programs includes a filter for specific racial and cultural groups, with hopes of finding a curriculum that best targets the cultural makeup of a given population (CASEL, 2022). Cross-cultural and multi-ethnic adaptations of SEL can better reach diverse populations, and furthermore, empower students and foster academic success (Castro-Olivo, 2014; Hamedani & Darling-Hammond, 2015).

Relatedly, SEL programs have also been adapted for low-income areas (CASEL, 2022). The most effective SEL programs require a constant flow of resources: curriculum and materials, professional development and training, progress monitoring, implementation fidelity/tracking, and so on (Domitrovich et al., 2008; Steed et al., 2022). For this reason, low socio-economic areas require modifications and adaptations to see the efficacy and positive outcomes that wealthier areas see. SEL programs may also be selected based on specific outcomes that schools or classrooms are looking for, including reduced emotional distress, decreased externalizing/ problem behaviors, improved school climate/ connectedness, etc. (CASEL, 2022).

Some tier 1 SEL manuals offer suggestions for modifications for specialized populations such as ADHD and ASD. Michelle Garcia Winner, founder and CEO of the established Social Thinking SEL curriculums, includes "considerations" for students with ADHD, ASD, Social Communication Disorder, Nonverbal Learning Disabilities, and Twice Exceptionality (Winner, 2008). In her Social Thinking curriculum, she encourages professionals to modify their teachings depending on the child and suggests adaptations throughout. One of Winner's Social Thinking curriculums, SuperFlex, specifically was designed with social cognition deficits in mind, and is consequently effective for ADHD and ASD children, as well as neurotypical children (Bolton, 2010; Nowell et al., 2019; Rachmah et al., 2016; Winner, 2021; Yadlosky, 2012). If such modifications for ADHD and ASD students are in fact conducive for all students, SEL can be modified at the school wide level and yield more positive results for all students, as SEL is intended to do.

The Present Research: SEL Curricular Adaptation for Children with ASD & ADHD

Organizations like CASEL simplify the search and selection process for professionals seeking an SEL program for their school or classroom. However, these programs tend to be designed with the average child in mind across cultures and tend to be standardized within groups of neurotypical children (e.g., children in general education settings with no substantial learning difficulties or developmental/intellectual disabilities). This is problematic because children with learning and attentional difficulties such as ADHD or developmental disorders like ASD are increasingly prone to social and emotional difficulties (Mendelson et al., 2016; Staikova et al., 2013;

Waddington et al., 2018). Nonetheless, current tier 1 SEL curriculums have no evidence-based support for reaching ADHD and ASD individuals at their social and emotional levels, which is almost always a lower level than neurotypical children. Since 4-10% of children are diagnosed with ADHD, and ASD prevalence has reached a staggering 1 in 36 children in the United States, it is crucial to keep ADHD and ASD students in mind when implementing tier 1 SEL in schools (American Psychiatric Association, 2013; Centers for Disease Control and Prevention, 2024; Johns Hopkins Medicine, 2022). It is also important to note that many children with ASD also have an ADHD diagnosis, and vice versa. Currently, 50 to 70% of those with ADHD have a comorbid ASD presentation, which can exacerbate symptom presentation and difficulty in certain social or emotional areas (Hours et al., 2022).

Emotional Deficits in ASD

Children with ASD have increased difficulty with various aspects of emotions such as general understanding, recognition, expression, and empathy (Arnaud, 2020). Notable criteria of ASD are reduced sharing of affect and emotions, reduced or a complete lack of facial expressions, inflexible thinking, and difficulty understanding the ideas and feelings of others (American Psychiatric Association, 2013). Such challenges have been vastly observed and discussed in research over many decades and continue to be an important topic today. Both visual and auditory emotion recognition was found to be stunted in individuals with ASD compared to healthy controls (Waddington et al., 2018). Waddington et al. (2018) found that the speed of emotion recognition was slowest for individuals with both ASD and ADHD for both auditory and visual stimuli, and the speed was significantly different from controls with no diagnoses. In addition, ASD

individuals had far less accuracy in recognizing emotions than siblings and controls (Waddington et al., 2018). Additionally, a meta-analysis of 148 studies found that ASD children have significant difficulty recognizing basic facial emotions compared to both "other" clinical populations and non-clinical populations (Trevisan & Birmingham, 2016).

Individuals with ASD require deliberate and supplementary effort to attempt to understand what other people may be feeling (Löytömäki et al., 2020). While many neurotypical children develop empathy naturally or with scaffolding as they grow, there appears to be a disconnect in developing empathy for those with ASD. This distinction has been understood as the "implicit emotion processing" for neurotypical children versus the "explicit emotion processing" for ASD (Arnaud, 2020). Research has further demonstrated that different areas of the brain are activated in ASD and neurotypical brains when presented with emotion recognition stimuli, suggesting a neurological basis for this deficit, and further supporting the implicit versus explicit processing notion (Wicker et al., 2008). While many neurotypical children inherently process their emotions and consider the emotions of others, individuals with ASD must be prompted to think of others' emotions or to consider a feeling other than their own.

Unlike typically developing children, individuals with ASD need to attempt intentionally and explicitly to read and process other people's emotions (Arnaud, 2020). Since ASD individuals have trouble with eye contact and sustaining one's gaze toward social cues, it is logical that emotional and social cues are not as salient as they are for neurotypical individuals, since processing emotions requires focus on another person's face, body language, and voice (Arnaud, 2020). This otherwise naturally developing

social and emotional salience, or "early and intuitive preference for social and emotional information" (p.11) is lacking in ASD, thus, learning to process differently is a complex and strenuous procedure both for the child with ASD and for the professionals working with them (Arnaud, 2020; Löytömäki et al., 2020). Furthermore, we cannot teach SEL the same way to ASD and neurotypical children when their embedded emotional processing procedures vary so greatly.

Social Deficits in ASD

Students with ASD are more likely to experience functionally impairing social deficits than their same-aged, neurotypical peers (Mendelson et al., 2016). Many times, the social and emotional difficulties go hand in hand; a recent meta-analysis found that compared to typically developing peers, children with ASD diagnoses have more difficulty with recognizing others' emotions, resulting in less experiences of developing and maintaining reciprocal friendships (Mendelson et al., 2016). Despite newer research suggesting that children with ASD do indeed desire friendships, characteristics of ASD include difficulty with subtle social communication, tone, eye contact, body language, gestures, etc., all of which make the development of friendships more challenging (Mendelson et al., 2016). According to the Fifth Edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), individuals with ASD experience "persistent deficits in social communication and social interaction across multiple contexts" (American Psychiatric Association, 2013, p. 31). These deficits include difficulty with social-emotional reciprocity, nonverbal communicative behaviors such as tone and body language, and the development and maintenance of relationships with others (American Psychiatric Association, 2013).

Many individuals with ASD also experience repetitive behaviors and restricted interests, which tend to socially isolate them further because of confusion and scrutiny from peers. Social cognition, or the ability to recognize, manipulate, and behave with respect to socially relevant information, is a significantly difficult skill for children with ASD (Waddington et al., 2018). Often, children with ASD experience peer rejection, social isolation, and victimization because of their perceived difficulty relating to their peers and acting in a socially appropriate manner (Mendelson et al., 2016; Waddington et al., 2018). When a student perseverates on a seemingly random detail, or engages only in conversation about their specific interests, or makes "random" and repetitive sounds or motions, other children are likely to avoid the individual, or potentially mock them (Mendelson et al., 2016). In addition, compared to typically developing peers, children with ASD diagnoses have increased difficulty with perspective taking and social reasoning (Mendelson et al., 2016). This finding suggests that while neurotypical children can attend to social and contextual cues to make informed social decisions, children with ASD are less able to reason with such clues, and often appear to make uninformed or random social choices. SEL designed for typically developing children who are more natural socializers would not be as effective for a student who innately struggles with such social skills.

Emotional Deficits in ADHD

Individuals with ADHD have less accuracy in emotion recognition compared to ASD individuals and controls with no diagnoses (Bora & Pantelis, 2016; Sjöwall et al., 2013; Waddington et al., 2018). ADHD is linked to deficiencies in emotion regulation and emotion recognition (Sjöwall et al., 2013; Waddington et al., 2018). Further, emotion

recognition problems may be as fundamental to children with ADHD as they are to children with ASD (Waddington et al., 2018). In some ways this is not surprising, considering the impulsivity that is characteristic of many individuals with ADHD (specifically ADHD-combined type, and ADHD primarily hyperactive/impulsive type). Impulsive children tend to act without considering the consequences of their actions, which can directly affect another person's emotions. For this reason, targeted SEL for these children is needed to foster emotional recognition skills that may be lacking because of their ADHD.

There is empirical evidence that suggests that children with ADHD are less empathetic than neurotypical children (Braaten & Rosen, 2000; Maoz et al., 2019). Young boys with ADHD were found to have less empathic responses to empathy-invoking images, as well as lower self, parent, and teacher reports of empathic concerns, compared to non-diagnosed controls (Braaten et al., 2000; Maoz et al., 2019). Additionally, the children with ADHD were less likely to relate their own experience of an emotion with a character's emotion in a story (Braaten et al., 2000). A meta-analysis of children with ADHD found that both facial and vocal emotion recognition abilities were significantly impaired in an ADHD sample (Bora et al., 2016). These findings are incredibly significant because it stresses that students with ADHD may have more difficulty generalizing SELs into their everyday life. While the ADHD child may understand the fictitious character's emotion and how he or she should work through said emotion, their ability to apply this knowledge and understanding to their own experience of the emotion beyond the four walls of the classroom is more difficult than for children without ADHD.

Braaten et al. (2000) also found that compared to non-ADHD controls, boys with ADHD endorsed feeling sadness, anger, and guilt more frequently and stronger. Some research supports a correlation between increased impulsivity and negative affect and more variable affect (Braaten et al., 2000). Considering the "on the go" acting as if "driven by a motor" component of hyperactive and impulsive children with ADHD according to the DSM-V, this finding would indicate that such children would experience more variability and negativity in their emotional repertoire (American Psychiatric Association, 2013). However, negative emotionality is more than the tendency to experience negative emotions; it also includes one's ability to handle stress (Gomez & Corr, 2014). Gomez's and Corr's (2014) meta-analysis depicted a large and significant effect size between ADHD and negative emotionality, suggesting that children with ADHD not only experience more frequent and stronger negative emotions, but they also have emotional responses that are likely to present as externalizing behaviors and low stress and frustration tolerance. Being prone to negative emotionality and impulsivity puts ADHD individuals at risk for increased conflicts in school and gives further argument for the importance of enhanced and intentional tier 1 SEL interventions for these students.

Social Deficits in ADHD

An essential criterion of an ADHD diagnosis is a "persistent pattern of inattention that interferes with functioning or development" (American Psychiatric Association, 2013, p. 61). Such inattentiveness will influence a child's ability to attend to their friends and relationships in an efficient manner. Often with ADHD comes disorganization and other executive function challenges, which are likely to interfere with a child's ability to maintain friendships for extended periods. In addition, language plays a central role in the

development and maintenance of social skills. According to Staikova et al. (2013), children with ADHD had inferior pragmatic language skills compared to non-ADHD peers, which contributed to their overall poorer general language abilities. These findings indicate that children with ADHD are more likely to find communicating appropriately in social situations more difficult, in addition to the characteristic difficulties they tend to experience with taking turns, interrupting, and calling out, and thus require regular, rigorous SEL to scaffold social skills and techniques, and minimize the gap in social functioning between ADHD and neurotypical students.

The Current Research: The Importance of SEL for Children with ADHD & ASD

According to the New York State Department of Education's Social Emotional Learning Benchmarks (2022), SEL goal recommendations were created broadly for "all students," and "should be adjusted for individual students (e.g., those with neurodiversities)" (NYS SEL Benchmarks, p. 1). However, no recommendations for such "adjustments" are provided by school personnel to classroom teachers for students of such profiles. Given what is known about ADHD and ASD social and emotional understanding and skill deficits, it is evident that such learners require additional support in SEL. ADHD and ASD students can be significantly delayed in developing these skills compared to neurotypical controls (Löytömäki et al., 2020). In addition, we know that these children are naturally lagging in these areas, so they cannot be taught such skills in the same manner that typically developing students are taught. According to Dale et al. (2022), ADHD and ASD students are "unlikely to fully benefit from tier 1 SEL," (p. 278) and need to have SEL delivered to them at their cognitive, social, emotional, and attentional levels. While many students with ADHD and ASD additionally receive tier 2

or 3 interventions (e.g., individual/group counseling, social skills groups), modified tier 1 SEL in conjunction with their individualized tier 2 or 3 interventions can help them generalize such skills and improve their overall social and emotional functioning.

Research exists that offers guidance for teachers to better conceptualize the social and emotional difficulties a student with ADHD of ASD may experience and provide recommendations for SEL best practices. These articles outline the need for more consistent SEL in classrooms, recommended mindfulness activities to incorporate into daily classroom activities, and tips for explicit SEL instruction paired with evidence for the importance of these modifications to standard SEL practices (Bierman & Sanders, 2021; Lee et al., 2023; Perry, 2022). However, the ways in which teachers are provided this information through their places of work is unclear, and without guidance from leadership and administrators, it is unknown whether teachers are seeking out resources and research on their own to lead to best practices for application of SEL programs for atypical youth.

While we have considerable support throughout the literature for the importance of SEL programs in schools with neurotypical students, the aforementioned research demonstrates why SEL, and modifications in SEL delivery, for ADHD and ASD individuals is essential. Some historically successful modifications for teaching students with ADHD and ASD in a tier 1 classroom setting include increased individualized attention, small group instruction, positive reinforcement and feedback, movement breaks, check-ins (e.g., monitoring for frustration, offering help), visual aids, broken-down tasks, or modified instructions (Center for Disease Control and Prevention, 2022; Houchin, 2016). However, based on the research on the barriers to implementation and,

consequently, the efficacy of most SEL programs, it is likely that these students are not receiving modified SEL instruction regularly (Hunter et al., 2022). It is vital to gain an understanding of school-based professionals' perceptions of the efficacy and possibility of modifications of tier 1 SEL programs for such ADHD and ASD students in order to incorporate appropriate and efficient SEL to better meet their unique educational needs.

CHAPTER III: RESEARCH QUESTIONS AND HYPOTHESES

The current study aims to investigate the following research questions:

1. Are there differences in school-based professionals' perceptions of tier 1 SEL importance (i.e., compared to academics, behavior management, physical health, specials [e.g., art, music, etc.]) for students with ADHD/ASD compared to neurotypical students?
2. Are there differences in school-based professionals' perceptions of tier 1 SEL effectiveness (defined as producing the desired results [i.e., improved social reasoning, decision making, etc.]) for students with ADHD/ASD compared to neurotypical students?
3. To what degree do school-based professionals believe that the instruction of tier 1 SEL curricula need to be modified for ADHD and ASD students, and are there specific areas of the Core Components of SEL that they think should further be modified?
4. Are there perceived to be more barriers among school-based professionals to the implementation of modified SEL for students with ADHD or ASD compared to that of neurotypical students?
5. What support (from schools, districts, administrators, etc.) do teachers need in order to modify the way they implement SEL classroom-wide for all students?

Students with ADHD and ASD have an increased need for social and emotional interventions due to the inherent social and emotional deficits in their symptomology (Braaten & Rosen, 2000; Maoz et al., 2019; Wicker et al., 2008). While past work has

shown that tier 1 SEL programs have been modified for population characteristics such as age group, socio-economic status, ethnicity, and outcome goals, they do not seem to be modified at a tier 1 level for atypical student populations (CASEL, 2022). Given that across these student characteristics tier 1 SEL programs are designed for neurotypical students without social and emotional deficits, it is hypothesized that:

1. The school-based professionals recruited for this study who work closely with special education populations would rate SEL as more important (i.e., compared to academics, behavior management, physical health, specials [e.g., art, music, etc.]) than school-based professionals who work primarily with neurotypical students.
2. School-based professionals who work closely with special education populations would rate tier 1 SEL as more effective (defined as producing the desired results [i.e., improved social reasoning, decision making, etc.]) for neurotypical students versus students with ADHD/ASD, as measured by the SBPP survey.

Children with diagnoses of ADHD and ASD children are most likely not as receptive to SEL programs "as is" considering that they are designed for and tested on neurotypical children (Dale et al., 2022). As such, it is assumed that they will have difficulty in responding to the basic SEL programming developed for typically developing students without such attentional, social, emotional, and behavioral deficits. Students with ADHD and ASD benefit from modifications to tier 1 SEL programming designed for neurotypical children to meet their social-emotional levels and deficits (Gomez & Corr, 2014; Löytömäki et al., 2020; Mendelson et al., 2016; Staikova et al., 2013; Waddington et al., 2018). Given this, it is hypothesized that:

3. Participants who read the ASD vignette will indicate that they believe that these students will require the most modifications (e.g., small group instruction, positive reinforcement and feedback, movement breaks, modified instructions etc.), followed by ADHD, and then neurotypical students.

The most effective SEL programs require a constant flow of resources: curriculum and materials, professional development and training, progress monitoring, implementation fidelity/tracking, and so on (Domitrovich et al., 2008; Steed et al., 2022). School-based professionals report that time pressure, schedule disruptions, and the desire to differentiate learning to meet individual student needs are the primary factors that interfered with successful implementation of SEL (Hunter et al., 2022). Given these barriers to implementing SEL in general education, it is likely that further modifying tier 1 SEL to address the needs of ADHD and ASD students would be even more logistically challenging. Given this, it is hypothesized that:

4. Participants who read the ADHD or ASD vignette will indicate more significant barriers (e.g., rate each proposed barrier highly) to the implementation of modified tier 1 SEL for these students compared to barriers for neurotypical students/SEL programs “as is.”.
5. *Participants will report that in order to successfully modify their implementation of tier 1 SEL in the classroom, they will require additional support (from schools, districts, administrators, etc.).*

CHAPTER IV: METHODS

Participants

An a priori power analysis was computed to determine a sample size for this study based on desired effect size (f = .25 [medium effect]), number of groups, power, and type of statistical test. A medium effect size has been found in previous meta-analyses and studies with similar procedures investigating perceptions with three comparison groups (Durlak et al., 2011; Herbert et al., 2004; Pescosolido et al., 2008). The proposed participant sample for this study will consist of 250-300 elementary school-based professionals (83-100 per group), including teachers (general or special education), school psychologists, social workers, school counselors, and other mental health providers from New York State. Given the differences in educational policies and practices regarding SEL between states, the present study will focus only on New York State school-based professionals, with hopes of the findings generalizing across states (Wallace, 2021).

To be eligible for this study, school-based professionals must meet the following criteria: (1) currently work in an elementary school that implements SEL curricula in the classrooms at the tier 1 level, (2) currently be involved in the implementation (teach SEL in the classrooms or in small groups/counseling settings, create SEL material for other teachers, attend SEL trainings, etc.) of SEL programming in their classroom or school, (3) currently are employed in a school in New York State, and (4) have access to the internet to participate in online vignettes and surveys. At the conclusion of the study, participants have the option of entering a raffle for a $50 Amazon gift card.

The objective of the study was to collect information on the school-based professionals' perceptions of the standard components of SEL programs, the importance of SEL, and its potential efficacy with ADHD and ASD students, as well as proposed modifications for such populations, and barriers to implementation, if any. The participants were recruited randomly via emails circulated through their school districts from their superintendent/principal. Principals and superintendents were contacted using email addresses listed on the publicly available New York State Education Department database (available at https://www.oms.nysed.gov//sedref/home.html). They were additionally recruited via a flyer circulating social media. All school-based professionals received consent forms (see Appendix B) and a brief demographic and background information questionnaire (see Appendix C) to gain more information on their professional backgrounds and experiences with SEL.

Procedure

School-based professionals were recruited to participate in the proposed study through an email (1) sent to their school district superintendent or principal (see Appendix A) that they will ask to have distributed to their elementary school staff or (2) through New York State provider organizations such as the New York Association of School Psychologists (NYASP), New York State School Social Workers Association (NYSSSWA), New York State School Counselor Association (NYSSCA), and New York Statue United Teachers (NYSUT). Professionals were additionally recruited through a flyer posted on social media (Instagram and Facebook) (see Appendix H). If school staff wished to gain more information about the study, they went to the study website and read the study consent (see Appendix B). If they consented to participate, they received the

Core Components of SEL document (see Appendix C) and filled out a Demographic Questionnaire to gain professional background and demographic information that is pertinent to the study (see Appendix D). They then answered four items in a General SEL survey (see Appendix E). Next, they were randomly assigned to one of three groups that presents a case vignette of a student (Typically developing, ADHD, or ASD) with 40-43 participants per group (Appendix F).

Following exposure to the case vignette, participants completed the 17-item School-based Professionals Perceptions of SEL, or SBPP, (Appendix G) which is in the format of a seven-point Likert scale (Joshi et al., 2015) with the objective to evaluate their perceptions of the effectiveness of such SEL components for the student described in their vignette, the need for modifications for the student described in their vignette, and potential barriers to implementation of SEL for the student described in their vignette. Participants referenced the Core Components of SEL document determined by CASEL (2022), which includes the definitions of each component of SEL programming (Appendix C): Self-awareness, self-management, social awareness, relationship skills, and responsible decision making. Participants have access to this document while completing all surveys.

Measures and Materials

Demographic Questionnaire

Participants completed an eight-item questionnaire (Appendix D) to gather background information relevant to this study including their age, degree(s), year degree was earned, title/profession in the school, years of experience with special education populations, years of experience with SEL, type of SEL programs utilized, and scope of

said programs with reference to the CASEL's (2022) Core Components of SEL (Appendix C).

General SEL Survey

Participants responded to a four-item survey collecting information on their general impressions of the importance and effectiveness of tier 1 SEL, their perceptions of the importance of SEL compared to other aspects of school, how much school time should be spent teaching SEL, and perceived barriers to successful implementation of tier 1 SEL in general education settings in schools. Three items have response choices in a seven-point Likert Scale format: response choices for items one through three are rated on a scale of (1) Strongly Disagree, (2) Disagree, (3) Somewhat Disagree, (4) Unsure/ Undecided, (5) Somewhat Agree, (6) Agree, (7) Strongly Agree. Response choices for the perceived barriers item is rated on a scale of (1) Not a Barrier to (7) Significant Barrier. One item required participants to rank aspects of school in order of importance. The General SEL survey can be found in Appendix E.

Student Vignettes

Participants were randomly assigned to read one of three case vignettes: Neurotypical student, ADHD student, or ASD student. The vignettes provided background information about a fictional student, including age, gender, diagnosis and symptoms (if applicable), interests, etc. Each vignette was created based on common symptomology from the DSM-5 for ADHD and ASD, and incorporated data from research on common social and emotional deficits of individuals with such diagnoses. The vignettes were sent to four clinicians, two with expertise in ADHD and two with expertise in ASD, to receive expert feedback and suggestions to ensure validity. The

three vignettes can be found in Appendix F. Participants utilized the information from the vignette to answer the SBPP survey items (Appendix G). The vignette was accessible while the survey is being completed. To alleviate bias between vignettes, all student information is the same besides the diagnosis and associated symptoms. The student's social and emotional functioning will be stated for each associated diagnosis, or lack thereof.

School-Based Professionals' Perceptions of SEL (SBPP)

The survey was developed for this research and will consist of 17 items, with response choices for items one through 15 in the format of a seven-point Likert Scale format: (1) Strongly Disagree, (2) Disagree, (3) Somewhat Disagree, (4) Unsure/Undecided, (5) Somewhat Agree, (6) Agree, (7) Strongly Agree. Response choices for item 16 is rated on a scale of (1) Not a Barrier to (7) Significant Barrier. The SBPP and its items can be found in Appendix G. Participants utilized the supplemental materials on the Core Components of SEL (Appendix C) to best answer the survey items. Item 17 is open-ended and for teacher participants only. This survey was piloted in the present form with about 25 educators, and recommended changes or edits were made accordingly.

The SBPP survey has the following goals: (1) obtain information regarding perceived effectiveness of the SEL components for the student described in the vignette they received (either neurotypical, ADHD, or ASD student), (2) obtain feedback on the degree of modifications/how to modify such SEL teachings for the student described in their vignette (3) screen for potential barriers/obstacles to successful implementation in a classroom with the student described in their vignette, and (4) gauge their willingness to

implement such modifications at a tier 1 level. Items in the SBPP were designed with influence from Kazdin's Treatment Evaluation Inventory Short-Form (TEI-SF) (1981) (modified by Kelley et al., 1990). As the TEI-SF is an internally consistent and valid instrument for assessing the acceptability of behavioral treatments for children, wording from TEI-SF items was considered in creating items on the SBPP survey (Kelley et al., 1990). Data from the participants' responses was consolidated and analyzed for trends and impressions.

Data Analysis

All data was analyzed using IBM SPSS Statistical Tool Software Version 28. In order to first describe the sample, descriptive statistics of school-based professionals' demographic variables was provided, including their age, degree(s), year degree was earned, title/profession in the school, years of experience with clinical populations, and years of experience with SEL. Before collapsing the data to compare experimental groups (ADHD, ASD, and NT group vignettes), data analyses first utilized an Analysis of Variance, or ANOVA, to assess between-group differences within the participant pool based on the participant's level of experience with clinical populations. If there were significant differences between groups, they were controlled for prior to additional analyses. A one-way ANOVA was then performed to determine differences between experimental conditions (ADHD and ASD) and the control (Neurotypical) on (1) the effectiveness and importance of SEL for each group and (2) the degree of modifications and accommodations for each group.

CHAPTER V: RESULTS

All data were analyzed using IBM SPSS Statistical Tool Software version 28. Results of the current study are described in the following order. First, preliminary analyses and descriptive statistics were computed to better understand the scope of the sample. Then, the results of each hypothesis will be presented, accompanied by pertinent data tables.

Preliminary Analyses

Of the 298 participants who opened the Qualtrics survey, 147 completed the parts of the survey necessary for the statistical analyses. Of the 147 total participants, the mean age of the participants was 40 years (M = 40.03, SD = 10.15 [range: 22-59]). The participants' professions were identified as counselors (N = 27), social workers (N = 13), general education teachers (N = 35), special education teachers (N = 27), school psychologists (N = 9), or "Other" (N = 36). Of the 36 "other," 18 opted to further identify as school principals/vice principals or Heads of School, 4 disclosed administrator titles, and the remaining 14 participants either did not report or are miscellaneous school staff members (e.g., SEL coordinator, ESL teacher, speech pathologist, paraprofessional, superintendent, teacher aide, wellness teacher, SEL coach). Most of the participants' highest degree earned is a master's degree (N = 123), followed by bachelor's (N = 9) and doctorate (N = 9), then "other" *(*N = 6 [Associate's, CAS {Certificate of Advanced Study}, Graduate Certificate, Professional Degree]). See Table 1 for demographic characteristics of the sample by experimental group.

Table 1:

Demographic Characteristics of Sample by Experimental Group (NT) v. ADHD v. ASD v. N/A

	control (NT)	ADHD	ASD	N/A
	n	*n*	*n*	*n*
Profession				
Counselor	5	9	8	5
Social Worker	6	3	4	0
General Education Teacher	15	7	9	4
Special Education Teacher	3	5	11	8
School Psychologist	2	4	2	1
Other	10	12	9	5
Degree Type				
Bachelor's	1	5	3	0
Master's	35	27	38	23
Doctorate	2	5	2	0
Other (Certificate, Assoc.)	3	3	0	0
Experience with Clinical Populations				
No experience (0 years)	1	1	1	0
Minimal experience (1-2 years)	1	4	4	1
Some experience (3-4 years)	2	5	7	5
5-6 years experience	3	4	3	2

Moderate experience (7-8 years)	12	4	9	4
Significant experience (~9 years)	13	17	10	3
Considerable experience (10+ years)	9	5	9	8

Note. The "N/A" group of participants did not answer the survey items associated with the assignment of an experimental or control group. Total sample size for this table is N = 147.

Most pertinent to the present study is the years of clinical experience that participants reported. The most commonly reported range of years of experience with clinical populations across the 147 participants was significant experience, ~9 years (N = 43). Participants responded on a Likert scale to indicate the years of experience working with clinical populations (Table 1). Since years of clinical experience is pertinent to two of the study's hypotheses, an ANOVA was performed to analyze whether years of clinical experience is homogenous across the study's conditions (Neurotypical, ADHD, and ASD vignettes). The overall ANOVA was not significant, suggesting that there are no significant differences in years of clinical experience between conditions ($F\ (2,121)$ = 1.37, p = .26).

Hypotheses

Experience and Value of SEL

Participants rated the importance of SEL by responding on a seven-point Likert scale to the statement, "SEL is an important part of the curriculum in a general education classroom setting" with ratings going from 1 = strongly disagree to 7 = strongly agree. A correlation between the aforementioned variable "importance of SEL" and years of clinical experience demonstrated that there was no significant relationship between perceived importance of SEL and clinical experience ($r(141) = .04$, $p = .63$).

Participants were also asked to rank the importance of SEL compared to academics, classroom management, physical health/physical education, and specials (e.g., art, music, etc.) (with a rating of "1" reflecting the highest level of importance and "5" being the lowest level), to further gauge how SEL is prioritized compared to other aspects of general education. An ANOVA was performed with years of clinical experience as the factor and ranking of SEL importance as the independent variable. The ANOVA was not statistically significant, suggesting that there was no significant difference in ranking of SEL importance against other aspects of general education based on years of clinical experience ($F(6, 136) = .66$, $p = .68$) and thus the first hypothesis was not supported.

Perceived Effectiveness of SEL

An ANOVA was conducted to examine whether participants would rate tier 1 SEL as more effective for neurotypical students than students with ADHD or ASD. First, participants were assigned a group based on the vignette they received (neurotypical [$N = 41$], ADHD [$N = 40$], or ASD [$N = 43$]). Notably, Dunnett T3 scores were used to account for the violation of homogeneity. The overall ANOVA comparing SEL

effectiveness ratings between groups was significant, suggesting differences in perceived SEL effectiveness for different student groups ($F(2, 121) = 3.15$, $p = .046$). However, post hoc analyses suggest that the mean score for the neurotypical condition ($M = 6.05$, $SD = .92$) was not significantly different from the ADHD condition ($M = 6.13$, $SD = .88$) or the ASD condition ($M = 5.56$, $SD = 1.65$) (Table 2). Furthermore, there were no significant differences between neurotypical and ADHD students, between neurotypical and ASD students, or between ADHD and ASD students. A lack of statistically significant differences between groups once multiple comparisons were considered does not support the hypothesis that tier 1 SEL would be rated most effective for neurotypical students, followed by ADHD, and ASD students.

Table 2:

Perceptions of SEL Effectiveness for Neurotypical (NT) v. ADHD v. ASD

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Between-Component Variance
					Lower Bound	Upper Bound	
control (NT)	41	6.05	.92	.14	5.76	6.34	
ADHD	40	6.13	.88	.14	5.84	6.41	
ASD	43	5.56	1.45	.22	5.11	6.01	
Total	124	5.90	1.14	.10	5.70	6.11	

Model	Fixed Effects			1.12	.10	5.70	6.10	
	Random Effects				.18	5.13	6.67	.066

Note. The sample size for this analysis is 124 instead of the previously stated 147 because 23 participants did not answer the survey items needed for this analysis. Ratings were reported on a Likert scale (e.g., "this is effective for the student in my vignette") with 1 = strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = neither agree nor disagree, 5 = somewhat agree, 6 = agree, 7 = strongly agree.

A one-way ANOVA was performed to compare the effect of different levels of clinical experience on ratings of effectiveness of SEL for each experimental group. For this analysis, participants with five or more years of experience were considered "experienced" and those with less than five years were categorized as "less experienced," and the ANOVA was performed for the experienced group (Table 3). The ANOVA revealed that there was a significant difference in perceived effectiveness of SEL between at least two groups for clinically experienced participants ($F\ (2, 95) = 3.96$, $p = .02$). However, post-hoc tests accounting for multiple comparisons and a non-homogenous sample found that there was no statistically significant difference between the mean ratings of effectiveness of SEL between groups, specifically for participants with significant clinical experience ($N = 98$) (Table 4). It was hypothesized that participants with more clinical experience would perceive SEL as least effective for ASD students, followed by ADHD, followed by neurotypical, and thus this hypothesis was not supported.

Table 3:

Participants by Years of Clinical Experience

Experience with clinical populations	N	Mean	Std. Deviation	Std. Error Mean
Less experienced	30	6.57	.568	.104
Experienced	113	6.67	.604	.057

Note. Participants with five or more years of experience were considered "experienced" and those with less than five years were categorized as "less experienced." Mean in this case indicates the average Likert Scale ratings from 1-7 for SEL effectiveness (total maximum score is 7, minimum score is 1).

Table 4:

Perceived Effectiveness of SEL for Neurotypical (NT) v. ADHD v. ASD for Participants with Significant Clinical Experience

					95% Confidence Interval	
	(I) GROUP	(J) GROUP	Mean Difference (I-J)	Sig.	Lower Bound	Upper Bound
Bonferroni	control (NT)	ADHD	-.12	1.00	-.80	.56
		ASD	.63	.07	-.04	1.30
	ADHD	control (NT)	.12	1.00	-.56	.80
		ASD	.75*	.03*	.04	1.45
	ASD	control (NT)	-.63	.07	-1.30	.04
		ADHD	-.75*	.03*	-1.45	-.04

Dunnett T3	control (NT)	ADHD	-.12	.93	-.66	.43
		ASD	.63	.14	-.14	1.39
	ADHD	control (NT)	.12	.93	-.43	.66
		ASD	.75	.06	-.03	1.53
	ASD	control (NT)	-.63	.14	-1.39	.14
		ADHD	-.75	.06	-1.53	.03

*$p < .05$

Note. Dunnett T3 data was used for this analysis to account for a non-homogenous spread, demonstrated by a significant result in a test of homogeneity of variances. The sample size for this analysis shifted from 113 to 98 participants because 15 participants did not answer the survey items needed for this analysis.

Modifications to SEL

A one-way ANOVA was performed to compare the effect of the group of students (neurotypical, ADHD, ASD) on the degree of SEL modifications needed. The ANOVA revealed that there was a statistically significant difference in modifications between at least two groups ($F(2, 121) = 5.95$, $p = .00$). Further, post-hoc comparisons using a Dunnett T3 analysis because of a violation of the homogeneity of variance assumption yielded a statistically significant difference between the neurotypical and ASD students ($p = .01$, *95% CI* = [-7.57, -.84]), suggesting that neurotypical students require significantly less modifications to SEL compared to ASD students (Table 5). There was no statistically significant difference found between neurotypical and ADHD students ($p = .12$) or ADHD and ASD students ($p = .37$). Therefore, the third hypothesis was partially supported: the neurotypical group requires significantly less modifications to SEL

compared to ASD students, and no significant difference in modifications between neurotypical and ADHD or ADHD and ASD students was found.

Table 5:

Post-Hoc Comparison of Degree of Modifications to SEL for Neurotypical (NT) v. ADHD v. ASD

					95% Confidence Interval	
	(I) GROUP	(J) GROUP	Mean Difference (I-J)	Sig.	Lower Bound	Upper Bound
Dunnett T3	control (NT)	ADHD	-2.72	.12	-5.91	.48
		ASD	-4.20*	.01	-7.57	-.84
	ADHD	control (NT)	2.72	.12	-.48	5.91
		ASD	-1.49	.37	-3.95	.98
	ASD	control (NT)	4.20*	.01	.84	7.57
		ADHD	1.49	.37	-.98	3.95

Note. Dunnett T3 data was used for this analysis to account for a non-homogenous spread, demonstrated by a significant result in a test of homogeneity of variances. The sample size for this analysis shifted from 143 to 124 because 19 participants did not answer the survey items needed for this analysis.

Barriers to SEL

A final one-way ANOVA was computed to investigate the degree of perceived barriers to the implementation of effective tier 1 SEL for students across neurotypical,

ADHD, and ASD groups, and the overall ANOVA was not significant ($F\ (2, 121)$ = 1.48, p = .23). While the mean comparisons trended as hypothesized, with participants reporting that the ASD group had the most significant barriers to modification (M = 22.40, SD = 6.61), followed by the ADHD group (M = 21.30, SD = 6.41) followed by the neurotypical group (M = 19.88, SD = 7.10), there is no statistically significant difference between groups (Table 6). The fourth hypothesis was not supported, as participants who read the ADHD or ASD vignette did not indicate more significant barriers to the implementation of modified tier 1 SEL for these students compared to barriers for neurotypical students.

Table 6:

Barriers to SEL for Neurotypical (NT) v. ADHD v. ASD

		N	Mean	Std. Deviation	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Between-Component Variance
control (NT)		41	19.88	7.10	17.64	22.12	
ADHD		40	21.30	6.41	19.25	23.35	
ASD		43	22.40	6.61	20.36	24.43	
Total		124	21.21	6.74	20.01	22.41	
Model	Fixed Effects			6.71	20.02	22.40	
	Random Effects				18.05	24.37	.53

Note. Mean in this case indicates the average Likert Scale ratings from 1-7 for five barrier items (total maximum score is 35, minimum score is 5). The sample size for this analysis

shifted from 143 to 124 because 19 participants did not answer the survey items needed for this analysis.

In addition to the barriers presented in the survey (time constraints for lessons, time constraints for planning, limited access to resources/curricula, lack of PD/training, lack of progress monitoring tools), teachers were asked to indicate what additional supports (from schools, districts, administrators, school psychologists, etc.) they would need to successfully modify the way SEL is implemented classroom-wide for all students. Of the 147 participants, 33 teachers responded to this question, and many listed multiple barriers in their response. Of the 33 respondents, 13 responses indicated that strong, evidence-based, consistent school-wide SEL programming is needed for them to implement SEL to the best of their ability. 12 respondents reported a lack of professional development and training related to SEL in their school, and 8 reported that they require time embedded in the daily schedule to implement SEL lessons. Additional barriers named by the teachers who opted to respond to this question included time and permission from administrators to prioritize SEL, time for SEL lesson planning, SEL funding, school-wide assemblies for SEL, an SEL point-person or team, more SEL training and Professional Development sessions, and additional staff to support teachers during SEL lessons in the classroom.

CHAPTER VI: DISCUSSION

The purpose of this study was to gain a better understanding of school-based professionals' perceptions of the importance and effectiveness of tier 1 SEL in the classrooms. More specifically, efforts to understand whether perceived effectiveness of SEL among professionals differs for students with ADHD and ASD diagnoses compared to neurotypical students. This section will delve into each of the study's hypotheses and findings and integrate outcomes with previous research. Then, limitations of the present research and clinical implications of findings will be discussed. The discussion will conclude with future directions for related research in the field of psychology.

Experience and Value of SEL

The results of the study did not support the first hypothesis, as there was not a statistically significant relationship between the perceived importance of SEL and years of experience with clinical populations. Previous research suggests that clinical populations are more socially and emotionally vulnerable, specifically children with ADHD and ASD diagnoses, as there are inherent social and emotional deficits in their symptomology (Braaten & Rosen, 2000; Maoz et al., 2019; Wicker et al., 2008). Based on such evidence, it was hypothesized that professionals who have more experience working with ADHD and ASD students would highly value SEL programming in schools, and rate it as highly important compared to those who have less experience with such students. It was presumed that professionals who have spent more time with clinical populations would be more likely to understand how essential it is to explicitly teach and practice SEL skills, versus professionals who have worked primarily with neurotypical student populations.

However, most of the participants recruited for this study reported having substantial experience working with clinical populations: 113 of the 147 reported having five to 10+ years of experience. Had the sample been evenly distributed on the variable of years of clinical experience, there may have been a more distinct difference in perceived importance of SEL on the factor of years of clinical experience. Most participants, regardless of years of clinical experience, rated SEL as extremely important. Similarly, when asked to rank the importance of SEL compared to academics, classroom management, physical health/physical education, and specials (e.g., art, music, etc.), most participants rated SEL as a top priority, again, regardless of years of clinical experience.

On the contrary, it is possible that even without significant experience working with clinical populations, school professionals at varied experiential levels value SEL as part of their elementary school's curriculum. Research supports the idea that generally, SEL has recently been more widely promoted and valued compared to the historical view on teaching and discussing social and emotional ideals in schools (Steed et al., 2022). The large majority of the participants in this study rated SEL as the most and second most important part of the elementary school's curriculum, followed by classroom behavior management and academics. Therefore, it is reasonable to conclude that more school-based professionals are valuing SEL than expected, and that clinical knowledge and experience does not play a significant role in perceiving SEL as important.

Perceived Effectiveness of SEL

It was hypothesized that school-based professionals who work closely with special education populations would rate tier 1 SEL as more effective for neurotypical students versus students with ADHD or ASD. More specifically, it was predicted that

participants would rate SEL most effective for neurotypicals, followed by ADHD, then ASD. The present study defined "effective" as producing the desired results (i.e., improved social reasoning, decision making, etc.). Despite a statistically significant result for the overall ANOVA, the findings did not support this hypothesis, as there were no statistically significant differences between groups once multiple comparison considerations were accounted for. Additionally, it was predicted that a more clinically experienced sample may have more insight to the difficulties with SEL that ADHD and ASD students may have compared to neurotypicals. However, there were also no significant differences between groups for the more clinically experienced sample.

When looking strictly at mean differences, participants reported that SEL would be least effective for students with ASD, followed by neurotypicals, followed by ADHD. The order of this trend is especially surprising when considering empirical research on the effectiveness of SEL for special populations compared to neurotypical populations, which asserts that ADHD and ASD students are not likely to fully benefit from the standard delivery methods of tier 1 SEL (Dale et al., 2022). Currently, tier 1 SEL programs, goals, and lessons are designed for neurotypical students, and studies investigating effectiveness of SEL programs are vastly made up of neurotypical samples (New York State Department of Education, 2022). Since ADHD and ASD students can be significantly delayed in developing social and emotional skills compared to neurotypical controls, it is surprising that participants believe that ADHD students would learn from SEL in a similar manner to neurotypicals (Löytömäki et al., 2020). This pattern of results suggests that many individuals, even those working in schools and with children of various profiles, may not hold an accurate understanding of what an ADHD

or ASD diagnosis can denote, particularly the lagging social and emotional skills characteristic of the diagnosis. School psychologists and other school personnel with backgrounds in psychology must do more to spread an informed understanding of how an ADHD diagnosis may present, and the specific social-emotional challenges a student with said diagnosis may experience.

Modifications to SEL

The results of the present study support the hypothesis that school-based professionals would believe that neurotypical students would require significantly less modifications to SEL compared to ASD students. This finding is additionally supported empirically, as students with ASD are more likely to experience functionally impairing social deficits than their neurotypical peers, and thus would require modified lessons to compensate for their predisposed social and emotional gaps (Mendelson et al., 2016). However, there was no significant difference in modifications between neurotypical and ADHD or ADHD and ASD students.

As with the findings for the previous hypothesis, this outcome is unexpected considering the empirical research on social and emotional deficits in ADHD individuals. Past researchers have found that emotion recognition and emotion regulation difficulties can be as prevalent to children with ADHD as they are to children with ASD (Waddington et al., 2018). Additionally, inattentiveness and/or impulsivity, which are characteristic of ADHD, affect a child's ability to maintain friendships, communicate clearly, accurately perceive social cues, and take turns during conversations (American Psychiatric Association, 2013; Staikova et al., 2013). Furthermore, such students would require consistent SEL programming, delivered with modifications to meet their social-

emotional level, to scaffold social skills and techniques that may be innate for neurotypicals. The result of the present research is not consistent with these claims and concerns asserted by previous researchers and, again, may indicate a gap in school professionals' understanding of the nuances of an ADHD diagnosis, particularly related to social and emotional functioning.

Barriers to SEL

Findings from this study did not support the fourth hypothesis, which predicted that participants who were randomly assigned to the ADHD or ASD vignette would indicate more significant barriers to the implementation of modified tier 1 SEL for these students compared to barriers for neurotypical students. As with the findings from the prior hypothesis regarding modifications, the general mean differences between groups trended in the expected direction, with the neurotypical mean the lowest, followed by ADHD, followed by ASD, indicating the least anticipated barriers to the most, respectively. However, the ANOVA was not statistically significant, as the trends and mean differences may not be fully dependent on the groups.

Past researchers have found that the most effective SEL programs require an overabundance of resources including curriculum and materials, professional development and training, progress monitoring tools and supports, and so on (Domitrovich et al., 2008; Steed et al., 2022). Past researchers have also asserted that when surveyed, school professionals report a plethora of barriers to successful implementation of SEL (Hunter et al., 2022). Many professionals have reported time pressure, schedule disruptions, and the desire to differentiate learning to meet individual student needs as the primary factors that interfered with successful implementation of

SEL (Hunter et al., 2022). Therefore, it is reasonable to predict that there would be more barriers to successful SEL implementation for students who require additional scaffolding or modifications, as ASD and ADHD students would. However, despite the previous hypothesis being partially supported finding that neurotypical students would require the least SEL modifications, there were no statistically significant differences between groups on perceived barriers to implementation of SEL.

One interpretation of these findings is that there may be a general dissatisfaction with the feasibility of the implementation of SEL programs in schools, regardless of the students' profiles. If a school-based professional is overall unhappy with their school's SEL program or implementation, which many participants alluded to in a final open-ended survey item, it is likely that regardless of the vignette they were assigned to, they may already hold strong feelings about barriers to SEL implementation from their own experiences. Emotion, mood, and affect can influence a person's thoughts, behaviors, and decisions in an unconscious way, potentially resulting in bias (Peters et al., 2006; Schwarz & Clore, 2003). In hindsight, it might have been beneficial to gauge participants' overall satisfaction with their current SEL programming to add to the robustness of the interpretation of the survey responses and results. If participants were dissatisfied, frustrated, or even ambivalent toward SEL, these feelings could have influenced their pattern of responses not only for questions related to barriers, but also for the entirety of the survey.

Supports for SEL

Finally, the last hypothesis for this study suggested that participants would report that additional support from schools, districts, and administrators would be needed to help

give school-based professionals the ability to modify and implement effective SEL for all students as best they can. It was proposed based on previous researchers' findings that participants would report barriers to implementation related to time constraints for lesson planning, time constraints for lesson execution, limited access to resources or curricula, lack of Professional Development or training, and a lack of progress monitoring tools. Many participants reported such barriers as predicted, with the most common barrier as a lack of Professional Development and training, and time (both for lesson planning and implementation). Participants additionally reported a lack of collaboration between classroom teachers, as well as a lack of multidisciplinary collaboration (i.e., teachers meeting with psychologists, counselors, etc. to plan SEL lessons). It was reported that administrators and schools do not prioritize SEL, despite the evidence of its importance and positive outcomes for students. They reported insufficient SEL funding, a lack of evidence-based curricula and resources, and a general lack of support from the school and SEL personnel.

This pattern of results is consistent with the preexisting literature, as time and preparation are consistently highly reported barriers in multiple studies. Steed et al. (2022) found that SEL training, time for lessons, a lack of feedback from SEL professionals, and time for prepping lessons were amongst the most commonly identified barriers from a sample in Florida. A CASEL report surveying a national sample of teachers across the country found that despite believing in the importance of SEL, most teachers struggle with finding the time and space to prioritize SEL (Bridgeland et al., 2013). Since the sample of the present study consisted only of school-based professionals in New York State, together with previous research, it is reasonable to conclude that there

is continuity in perceptions of SEL across the United States, and more specifically agreeance on what is standing in the way of highly successful and effective SEL.

Limitations

There are multiple potential limitations concerning the results of this study. A first limitation concerns the size of the sample of participants who partook in the survey. As mentioned in the previous section, 298 individuals clicked the survey link and read the terms and conditions of the study, which concluded with requesting consent to participate. However, less than half (147) of those individuals elected to consent and continue with the survey, and even less completed the survey in full (129), indicating a non-response bias. Non-response bias occurs when, for whatever reason, individuals who were given the survey do not respond, or participants cease responding along the way (Davern, 2013). The proposed sample size based on an a priori power analysis for a medium effect size was 250-300 elementary school-based professionals, with 83-100 per experimental group. With half of this goal achieved, only 40-43 participants per group, the results are not nearly as robust as needed to draw strong and assertive conclusions. Had the sample size been larger, it is possible that some of the statistical tests could have yielded more statistically significant findings, adding power and generalizability to the findings of this study.

It is likely that certain features of the recruitment process contributed to the limited sample size of this study. The survey was finalized in June, dispersed via email during the second week of June, emailed again throughout the summer, and circulated additionally via email and social medica through the fall. When attempting to collect data from school-based professionals, it was presumed that catching them at the end of the

school year and during the summer would allow for them more space and time to complete the survey and give it their close attention. However, it is possible that school professionals were not monitoring their work email during this time, and by the time they viewed the survey, they were gearing up for the start of the upcoming school year. While there may not be a designated time of the year that is best to request 30-45 minutes of a school professional's time on a volunteer basis, it is possible that the time frame denoted above was less than ideal, which could have impacted the success of recruitment.

A second potential limitation is a lack of known reliability in the survey items. While the survey and vignettes were reviewed by three professionals in the field of psychology, this study was a built on a survey that was not previously piloted, which can impact generalizability of the results. Further, the wording of survey questions may have led participants to hypothesize a methodological variable or goal of the study that was not rightly being investigated. In addition, upon reflection after concluding the statistical analyses, there were some survey items that were not used for any of the statistical tests. This suggests that some of the items could have been eliminated, which could have shortened the length of the survey, which in turn could have made participation in the survey more appealing and increased the sample size to give the study's findings more power.

A third potential limitation is a design bias on part of the researcher based on the general understanding of tier 1 SEL. By definition, "tier 1" implies universal instruction that is available to all students. The current study explores potential modifications to tier 1 SEL that teachers and other SEL providers can make to improve efficacy of SEL for students with ADHD and ASD in the classroom setting. It is possible that the presence of

the word “tier 1” deterred participants from exploring certain modifications for such students because, at some point, numerous modifications or significant individualization to a student’s instruction will become a tier 2 intervention. The perspective that SEL instruction can be modified at a tier 1 level to increase effectiveness for all students, especially those with ADHD or ASD, may not be widely accepted view, or even a feasible option for many school-based professionals. While the present study represents a first attempt to address these issues, further research examining the overall feasibility of SEL may shed light on these issues.

Future Directions

In terms of future research, it would be useful to extend the current findings by allocating more research towards general impressions of SEL in the school system. The present study did not aim to gauge overall satisfaction with SEL programming in the participants’ respective schools. However, the data alludes to a degree of dissatisfaction with SEL in terms of training, evidence-based resources, lesson planning time, and so on, suggesting that SEL satisfaction is an important area to further investigate in the realm of school psychology and education. Huck et al. (2023) sought to create a measure that can be administered to school personnel to survey their satisfaction with SEL programming in participants’ respective schools. While only a pilot study, the researchers found that it is vital to assess school professionals’ readiness as well as barriers to SEL program implementation to increase buy-in and overall effectiveness of SEL (Huck et al., 2023). Further, they found that gathering input from the teachers involved in SEL implementation provides constructive feedback for school leaders, curriculum developers, and educators (Huck et al., 2023). It is evident that the field of education and

psychology are beginning to understand the importance of monitoring SEL implementation and effectiveness across schools in the United States, and the current study builds on this view.

Additionally, the present study did not consider the large percentage of individuals who are diagnosed with both ADHD and ASD. The design of the study divorced the two diagnoses into separate entities, despite the fact that 50 to 70% of individuals with one diagnosis also hold the other (Hours et al., 2022). Therefore, it will be important for future studies to consider this overlap when investigating the social and emotional deficits for these children, and look further into how the presence of both diagnoses impacts not only how these students present in the classroom, but also how professionals conceptualize their profiles as academic, social, and emotional learners.

Clinical Implications

Despite these limitations, the present study has enhanced our understanding of the relationship between SEL effectiveness and ADHD and ASD students, from the perspective of school-based professionals. The researcher hopes that the present study will stimulate further investigation of this important area, especially regarding the circulation of clinical information throughout schools and how it relates to SEL implementation. If, as the present study suggests, school professionals are not aware of the increased social and emotional needs of mainstreamed students with ADHD and ASD, then there is need for research on how schools are educating their staff on clinical diagnoses and symptoms. While many students with clinical diagnoses are placed in special education cohorts, there are students with ADHD and ASD in general education

settings, as the current study discusses. It is imperative that school staff are aware of and celebrate the differences of these students.

Previous research suggests that there may be a lack of understanding of ADHD and ASD children's challenging behaviors. Whitaker (2007) surveyed parents of mainstreamed students with ASD and found that more than 40% of parents reported that school personnel lack understanding or are unwilling to accept how the child's symptoms contribute to their unexpected behaviors in school, and consequently they are ill-equipped to deal with such challenging behaviors. Further, Ashburner et al. (2010) examined teachers' perceptions of their ASD students and found that many teachers observe increased emotional lability, social problems, and oppositionality in students with ASD compared to their neurotypical students. However, the students are being taught the same way, regardless of the observed deficits in social and emotional functioning, which is detrimental, counterintuitive, and doing a disservice to these students in the long run. More work remains to be done to fully understand how ADHD and ASD students are viewed and understood in their general education classrooms, and how they are benefitting from the tier 1 SEL being delivered compared to their neurotypical peers. Such findings can better inform professionals entering the workforce in psychology and schooling, and lead to more positive outcomes for ADHD and ASD students.

CHAPTER VII: IMPLICATIONS FOR SCHOOL PSYCHOLOGY

The National Association of School Psychologists (NASP, 2021) defines the mission of a school psychologist as supporting students' learning as well as teachers' teaching. This unique role allows for us to apply years of knowledge and training on child development and mental health to advocate for each student's academic, social, emotional, and behavioral success. In order to fulfil this duty in the most effective way, it is imperative that we invest in school-based professionals as well as the students. Despite the lack of statistical support for many of the current study's hypotheses, it is evident that the participants highly value SEL and acknowledge the positive outcomes it can have for students. The majority of participants reported that SEL was as important as academics, physical well-being, and the students' involvement in art, music, and other special subjects. In many circumstances, persuading a group of people about the importance of a certain doctrine can be the most difficult part. If school-based professionals already hold the opinion that SEL is vital, then schools can proceed to the next step: action.

The current study highlights multiple barriers standing in the way of implementing SEL to each school professional's full potential. Schools must take action to break down the barriers standing in the way of highly effective SEL implementation. The evidence-base for SEL outcomes is robust throughout previous research, and it is time that SEL funding, time for planning and lessons, trainings and professional development, and access to curricula and progress monitoring tools are prioritized in the school setting.

There are implications for the role of school psychologists based on the findings of this study. Historically, there has been discord regarding the specific role and

responsibilities of the school psychologist, and researchers and professionals in the field have worked toward better defining the role in the past few decades (Ross et al., 2002). A school psychologist has a unique responsibility over the general social, emotional, and behavioral well-being of students. The training that school psychologists receive equip them with the knowledge base of social and emotional needs of students, clinical classifications, and behavioral interventions, which overall emphasizes the importance and value of SEL programming in schools. However, due to the plethora of responsibilities involving special education laws and mandates to which a school psychologist must abide, the role of SEL implementation cannot solely fall on the school psychologist. Rather, the school psychologist must use their expertise and skills to help guide and coach other school personnel on SEL best practices (Wong, 2021). As proven by this study, school-based professionals acknowledge the significance of SEL programming in schools. Yet, the study also demonstrates that there are barriers that stand in the way of implementing the best SEL for our students.

School psychologists should be given the opportunity to provide trainings, professional development, workshops, and continuous consultation to school personnel to increase their knowledge on SEL and support their ability to implement it. When more school-based professionals are empowered with the knowledge and skillset necessary to implement SEL, school-wide competency and social-emotional well-being, of both students and staff, can be maintained (Wong, 2021). However, to fulfill this duty and provide training for others, school psychologists themselves must feel adequately trained in SEL programs and best practices. While these trainings exist for individuals or schools to seek out, school psychology graduate programs can better prepare their students with

educational resources and opportunities. School psychologists should enter their roles feeling not only well-versed in SEL programs and implementation, but also prepared enough to spread that knowledge and teach other school-based professionals how to best implement SEL and collaboratively support their students social, emotional, and behavioral needs.

Lastly, schools across the country continue to feel the effects of the COVID-19 pandemic on social and emotional well-being for children. Previous researchers have found that compared to before the pandemic, there is a decrease in general positive mood, satisfaction with peers and socialization, family satisfaction, and overall life satisfaction for elementary aged children (Steinmayr et al., 2022). In their longitudinal study, the authors also found that post-pandemic, there was an increase in reported symptoms of anxiety and depression compared to pre-pandemic levels (Steinmayr et al., 2022). Now more than ever, it is pertinent that schools and society prioritize the social-emotional well-being of students and rely on pre-existing SEL research alongside the current study to guide their practices.

APPENDICES

Appendix A

Email to Superintendent/Principals

Good [morning/afternoon] [Ms./Mr./Dr/etc.],

My name is Alissa Pellegrino, and I am a school psychologist and a doctoral candidate in school psychology at St. John's University. I am conducting research on school-based professionals' (e.g., teachers, counselors, psychologists, social workers, etc.) experience with and perceptions of Social-Emotional Learning (SEL) for specialized populations (e.g., ADHD, ASD, ODD, CD, etc.) for my dissertation. To facilitate this research, I am seeking out school-based professionals who:
(1) currently work in a school that implements tier 1 SEL curricula in the classrooms, (2) currently implement (teach SEL in the classrooms or in small groups/counseling settings, create SEL material for other teachers, attend SEL trainings, etc.) SEL programming in their classroom or school (3) currently are employed in an elementary school in New York State, and (4) have access to the internet to participate in online vignettes and surveys.

I would greatly appreciate if you could please forward my email to your elementary-level staff members. Individuals who are interested in participating can click here to register, view the participant consent form, and read about next steps if they want to participate. All participants will have an opportunity to enter into a raffle for a $50 Amazon gift certificate. Thank you for your time and consideration and please feel free to contact me with any questions or concerns.

Sincerely,

Alissa Pellegrino, M.S.
She/her/hers
Doctoral Student, School Psychology
St. John's University

Appendix B

Participant Consent Form

Introduction:
You are being asked to participate in a research study conducted by Alissa Pellegrino and Dr. Mark Terjesen, of St. John's University. The purpose of this research is to examine school-based professionals' perceptions of tier 1 Social-Emotional Learning (SEL) programs in schools, as well as the importance of accommodations or modifications of SEL. To participate in this study, you must be willing and able to report some background information (i.e., age, degree(s), year degree was earned, title/profession in the school, years of experience with special education populations, and years of experience with SEL). Participation in this study will total approximately 30-60 minutes.

Procedures:
Should you choose to participate, you will first receive supplemental materials describing the five core components of SEL determined by CASEL (2022). Next you will complete a brief demographic and background information questionnaire to gain more information on your professional backgrounds and experiences with SEL and special education students. You will then be asked to complete a short General SEL survey to gauge your perceptions of tier 1 SEL programs. Next you will read a case vignette of a student, and complete a final survey based on your thoughts about the vignette.

Benefits:
By participating in this study, you will inform research on the importance of SEL for general and special education populations, and help encourage/inform adaptations for special groups. All participants will have an opportunity to enter into a raffle for a $50 Amazon gift certificate.

Risks, Inconvenience, Discomfort:
There are no physical risks involved with participation in this study. Participation in this study is completely voluntary; there is no penalty for refusal to participate, and you may discontinue at any time without penalty.

Confidentiality:
All information from this study will be kept strictly confidential and only seen by the researchers. If any publications result from this study, you will not be identified. Any data from this study will be reported in aggregate form only; individual data responses will not be reported. Data will be transferred in a HIPAA-compliant manner and will be kept in de-identified, password-protected files.

Questions:
If you have any questions regarding this research study, please contact Alissa Pellegrino at (631) 413-7360. For questions regarding your rights as a research participant, please contact Dr. Raymond DiGiuseppe from the Institutional Review Board at (718) 990-1440.

Thank you very much for your consideration. If you agree to participate, please consent by pressing the button below. Please print a copy of this form for your records.

- I voluntarily give my consent to participate as a clinical trainee in this study. I understand that my signing below indicates that I have read and understood the information provided here. I understand that my participation is completely voluntary, and that my name will not be tied to the information I am providing. If at any time I do not wish to further participate, I have the right to withdraw my participation.

Name:_____

Signature: _____

Date:_____

Appendix C

Core Components of SEL

From Collaborative for Academic, Social, and Emotional Learning (CASEL, "What is the CASEL Framework?" 2022).

1. **Self-awareness**: The abilities to understand one's own emotions, thoughts, and values and how they influence behavior across contexts. This includes capacities to recognize one's strengths and limitations with a well-grounded sense of confidence and purpose.

Including:

- Integrating personal and social identities
- Identifying personal, cultural, and linguistic assets
- Identifying one's emotions
- Demonstrating honesty and integrity
- Linking feelings, values, and thoughts
- Examining prejudices and biases
- Experiencing self-efficacy
- Having a growth mindset
- Developing interests and a sense of purpose

2. **Self-management**: The abilities to manage one's emotions, thoughts, and behaviors effectively in different situations and to achieve goals and aspirations. This includes the capacities to delay gratification, manage stress, and feel motivation and agency to accomplish personal and collective goals.

Including:

- Managing one's emotions

- Identifying and using stress management strategies
- Exhibiting self-discipline and self-motivation
- Setting personal and collective goals
- Using planning and organizational skills
- Showing the courage to take initiative
- Demonstrating personal and collective agency

3. Social awareness: The abilities to understand the perspectives of and empathize with others, including those from diverse backgrounds, cultures, and contexts. This includes the capacities to feel compassion for others, understand broader historical and social norms for behavior in different settings, and recognize family, school, and community resources and supports.

Including:

- Taking others' perspectives
- Recognizing strengths in others
- Demonstrating empathy and compassion
- Showing concern for the feelings of others
- Understanding and expressing gratitude
- Identifying diverse social norms, including unjust ones
- Recognizing situational demands and opportunities
- Understanding the influences of organizations and systems on behavior

4. Relationship skills: The abilities to establish and maintain healthy and supportive relationships and to effectively navigate settings with diverse individuals and groups. This includes the capacities to communicate clearly, listen actively, cooperate, work

collaboratively to problem solve and negotiate conflict constructively, navigate settings with differing social and cultural demands and opportunities, provide leadership, and seek or offer help when needed.

Including:

- Communicating effectively
- Developing positive relationships
- Demonstrating cultural competency
- Practicing teamwork and collaborative problem-solving
- Resolving conflicts constructively
- Resisting negative social pressure
- Showing leadership in groups
- Seeking or offering support and help when needed
- Standing up for the rights of others

5. Responsible decision making: The abilities to make caring and constructive choices about personal behavior and social interactions across diverse situations**.** This includes the capacities to consider ethical standards and safety concerns, and to evaluate the benefits and consequences of various actions for personal, social, and collective well-being.

Including:

- Demonstrating curiosity and open-mindedness
- Learning how to make a reasoned judgment after analyzing information, data, and facts
- Identifying solutions for personal and social problems

- Anticipating and evaluating the consequences of one's actions
- Recognizing how critical thinking skills are useful both inside and outside of school
- Reflecting on one's role to promote personal, family, and community well-being
- Evaluating personal, interpersonal, community, and institutional impacts

Appendix D

Demographic Questionnaire

1. What is your primary title/profession in the school in which you are currently employed?
    a. Counselor
    b. Social worker
    c. General education teacher
    d. Special education teacher
    e. School psychologist (M.S.)
    f. Psychologist (PsyD/PhD)
    g. Other: _____
2. What is your highest degree earned and in what subject area?
    a. Bachelor's in _____
    b. Master's in _____
    c. Doctorate in _____
    d. Other:_____
3. What year did you earn this degree? _____
4. Please state your age. _____
5. Please rate your approximate level of experience working with (e.g., teaching, counseling) special education populations, including (but not limited to) students with:
    - Attention-Deficit/Hyperactivity Disorder (ADHD)
    - learning disabilities (LD)

- Autism Spectrum Disorder (ASD)
- Generalized Anxiety Disorder (GAD)
- Oppositional Defiant Disorder (ODD)
- Conduct Disorder (CD)

No experience Considerable experience

1 2 3 4 5 6 7

"Considerable experience" is understood as five days per week for more than 10 years

a. Please elaborate here on this experience (i.e., which populations, context, etc.):

_____

_____

6. Approximately how often do you currently implement tier 1 (universal/school wide) SEL?
    a. Daily
    b. Weekly
    c. Monthly
    d. Other: _____
        i. Please elaborate here on this experience (i.e., settings, populations, role, etc.):

        _____

        _____

7. What tier 1 SEL program(s) are currently being implemented at your school?

    _____

---

8. To what extent does your SEL program(s) emphasize the following CASEL-determined Core Components of SEL? Please reference the "Core Components of SEL" document and select a rating for each (1 = not emphasized, 7 = highly emphasized)

    a. **self-awareness** skills 1 2 3 4 5 6 7

    b. **social-awareness** skills 1 2 3 4 5 6 7

    c. **self-management** skills 1 2 3 4 5 6 7

    d. **relationship** skills 1 2 3 4 5 6 7

    e. **responsible decision-making** skills 1 2 3 4 5 6 7

Appendix E

General SEL Survey

Participants will complete the following four items on the general SEL survey after submitting consent, receiving the supplemental materials, and completing the Demographic Questionnaire; and prior to receiving a vignette and answering the SBPP survey).

Please respond to the following question by using the provided rating scale from 1 to 7. Some questions will indicate ratings specific to that item.

(1) Strongly Disagree (2) Disagree (3) Somewhat Disagree (4) Unsure (5) Somewhat Agree (6) Agree (7) Strongly Agree

1. SEL is an important part of the curriculum in a general education classroom setting.

1 2 3 4 5 6 7

2. Please rank the following aspects of elementary education in order of importance by providing each with a number from 1 to 5 (1 least important, 5 most important)

   _____Academics (e.g., math, reading/writing, science, social studies/history)

   _____Physical Health/Phys. Ed (e.g., gym class, outdoor time)

   _____Special subjects (e.g., art, music)

   _____Social-Emotional Learning (SEL)

   _____Classroom Behavior Management

3. How much instructional time do you believe should be spent on SEL?

   (1) 0-1 periods/week (2) 2-3 periods/week (3) 4-5 periods/week

   (4) Unsure

(5) Daily (6) Embedded throughout the day (7) Embedded in every lesson

1 2 3 4 5 6 7

4. What barriers (limits or restraints to progress or success) to successful implementation of tier 1 SEL do you foresee in a general education setting? Please rate the following proposed barriers using this scale:

Not a barrier *Potential barrier* *Significant Barrier*

1 2 3 4 5 6 7

a. Time constraints for SEL lessons

1 2 3 4 5 6 7

b. Time constraints for SEL lesson planning

1 2 3 4 5 6 7

c. Limited access to SEL resources/materials/curricula

1 2 3 4 5 6 7

d. Lack of SEL-centered Professional Development/training

1 2 3 4 5 6 7

e. Lack of progress monitoring tools

1 2 3 4 5 6 7

Appendix F

Student Vignettes

Please read the assigned vignette and utilize the information to answer the survey questions.

A. Neurotypical Student

Sam is a seven-year-old student in 2nd grade at a local public school. Sam has two siblings, one older brother and one younger sister. They live at home with their siblings, parents, and dog. Sam enjoys playing with Legos, watching animated movies, reading, and swimming. Sam's academic performance in school is average, and their best subject is Social Studies. Sam can be shy around new people but is often friendly toward others and open to making friends. When Sam is experiencing a strong emotion (e.g., anger/frustration, upset, disappointed, etc.) they often ask for help from their teacher or take a break outside the classroom.

B. Student with ADHD

Sam is a seven-year-old student in 2nd grade at a local public school. They are diagnosed with Attention-Deficit/Hyperactivity Disorder (ADHD), combined type. Sam has two siblings, one older brother and one younger sister. They live at home with their siblings, parents, and dog. Sam enjoys playing with Legos, watching animated movies, reading, and swimming. Sam's academic performance in school is average, and their best subject is Social Studies. Sam tends to become fidgety and/or restless, often blurts out answers, and engages in side conversations with peers during academic work. When Sam is experiencing a strong emotion (e.g., anger/frustration, upset, disappointed, etc.) they

shout/cry, crumble up their paper, or give up on the task. They are working on using a fidget and asking their teacher for a break.

C. Student with ASD

Sam is a seven-year-old student in 2nd grade at a local public school. They are diagnosed with Autism Spectrum Disorder (ASD). Sam has two siblings, one older brother and one younger sister. They live at home with their siblings, parents, and dog. Sam enjoys playing with Legos, watching animated movies, reading, and swimming. Sam's academic performance in school is average, and their best subject is Social Studies. Sam sometimes has difficulty socializing with peers who have different interests from their own. Sam will sometimes choose to spend time alone during lunch, recess, or free time to avoid loud volumes and crowds. When Sam is experiencing a strong emotion (e.g., anger/frustration, upset, disappointed, etc.) they often cry or shout and attempt to escape the situation. Sam is working on consistently asking for a break.

Appendix G

School-Based Professionals' Perceptions of SEL (SBPP) Survey

Please reference the "Core Components of SEL" document and your student vignette to best respond to the following items, and respond using the below Likert scale:

(1) Strongly Disagree (2) Disagree (3) Somewhat Disagree (4) Unsure (5) Somewhat Agree (6) Agree (7) Strongly Agree

1. Given what I know about tier 1 SEL curricula, **self-awareness** skills in SEL as currently instructed is effective for the student described in my vignette.

1 2 3 4 5 6 7

2. Given what I know about the student described in my vignette, they would require modifications to benefit from the SEL content on **self-awareness**.

1 2 3 4 5 6 7

3. Given what I know about tier 1 SEL curricula, **self-management** skills in SEL as currently instructed is effective for the student described in my vignette.

1 2 3 4 5 6 7

4. Given what I know about the student described in my vignette, they would require modifications to benefit from the SEL content on **self-management.**

1 2 3 4 5 6 7

5. Given what I know about tier 1 SEL curricula, **social awareness** skills in SEL as currently instructed is effective for the student described in my vignette.

1 2 3 4 5 6 7

6. Given what I know about the student described in my vignette, they would require modifications to benefit from the SEL content on **social awareness**.

1 2 3 4 5 6 7

7. Given what I know about tier 1 SEL curricula, **relationship skills** in SEL as currently instructed is effective for the student described in my vignette.

1 2 3 4 5 6 7

8. Given what I know about the student described in my vignette, they would require modifications to benefit from the SEL content on **relationship skills**.

1 2 3 4 5 6 7

9. Given what you know about tier 1 SEL curricula, **responsible decision-making skills** in SEL as currently instructed is effective for the student described in my vignette.

1 2 3 4 5 6 7

10. Given what I know about the student described in my vignette, they would require modifications to benefit from the SEL content on **responsible decision-making**.

1 2 3 4 5 6 7

11. I believe that the student described in my vignette would benefit from SEL programming described in the Core Components of SEL designed for all students.

1 2 3 4 5 6 7

12. I believe that SEL programming described in the Core Components of SEL would be helpful and effective for students with clinical classifications (e.g., Anxiety, Depression, Attention-Deficit/Hyperactivity Disorder, Autism Spectrum Disorder, Oppositional Defiant Disorder, Conduct Disorder, etc.)

1 2 3 4 5 6 7

13. How much instructional time do you believe should be spent on SEL with the student described in your vignette?

(1) 0-1 periods/week (2) 2-3 periods/week (3) 4-5 periods/week

(4) Unsure

(5) Daily (6) Embedded throughout the day (7) Embedded in every lesson

1 2 3 4 5 6 7

14. What degree of modifications/type of modifications would be necessary for the described student? Please rate the following using the below Likert scale:

(1) Strongly Disagree (2) Disagree (3) Somewhat Disagree (4) Unsure (5) Somewhat Agree (6) Agree (7) Strongly Agree

The student in my vignette would…

a. … benefit from extra time with SEL lessons (e.g., 1 hour versus 30 minutes; 40 minutes versus 20 minutes, etc.).

1 2 3 4 5 6 7

b. …benefit from small-group instruction (breaking into groups versus whole-class instruction)

1 2 3 4 5 6 7

c. …benefit from movement breaks during instruction

1 2 3 4 5 6 7

d. …benefit from visual aids (e.g., posters, illustrations, etc.) to portray SEL materials

1 2 3 4 5 6 7

e. …benefit from increased individualized attention during SEL lessons (e.g., smaller teacher-student ratios, immediate positive reinforcement and feedback, sporadic check-ins [e.g., monitoring for frustration, offering individual help], etc.)

1 2 3 4 5 6 7

f. …benefit from modified instruction (tasks broken down into smaller steps)

1 2 3 4 5 6 7

15. How willing are you to make these modifications in your classroom?

1 2 3 4 5 6 7

16. What barriers (limits or restraints to progress or success) to successful implementation of tier 1 SEL do you foresee for your described student? Rate the following using this scale:

Not a barrier *Potential barrier* *Significant Barrier*

1 2 3 4 5 6 7

a. Time constraints for SEL lessons

1 2 3 4 5 6 7

b. Time constraints for SEL lesson planning

1 2 3 4 5 6 7

c. Limited access to SEL resources/materials/curricula

1 2 3 4 5 6 7

d. Lack of SEL-centered Professional Development/training

1 2 3 4 5 6 7

e. Lack of progress monitoring tools

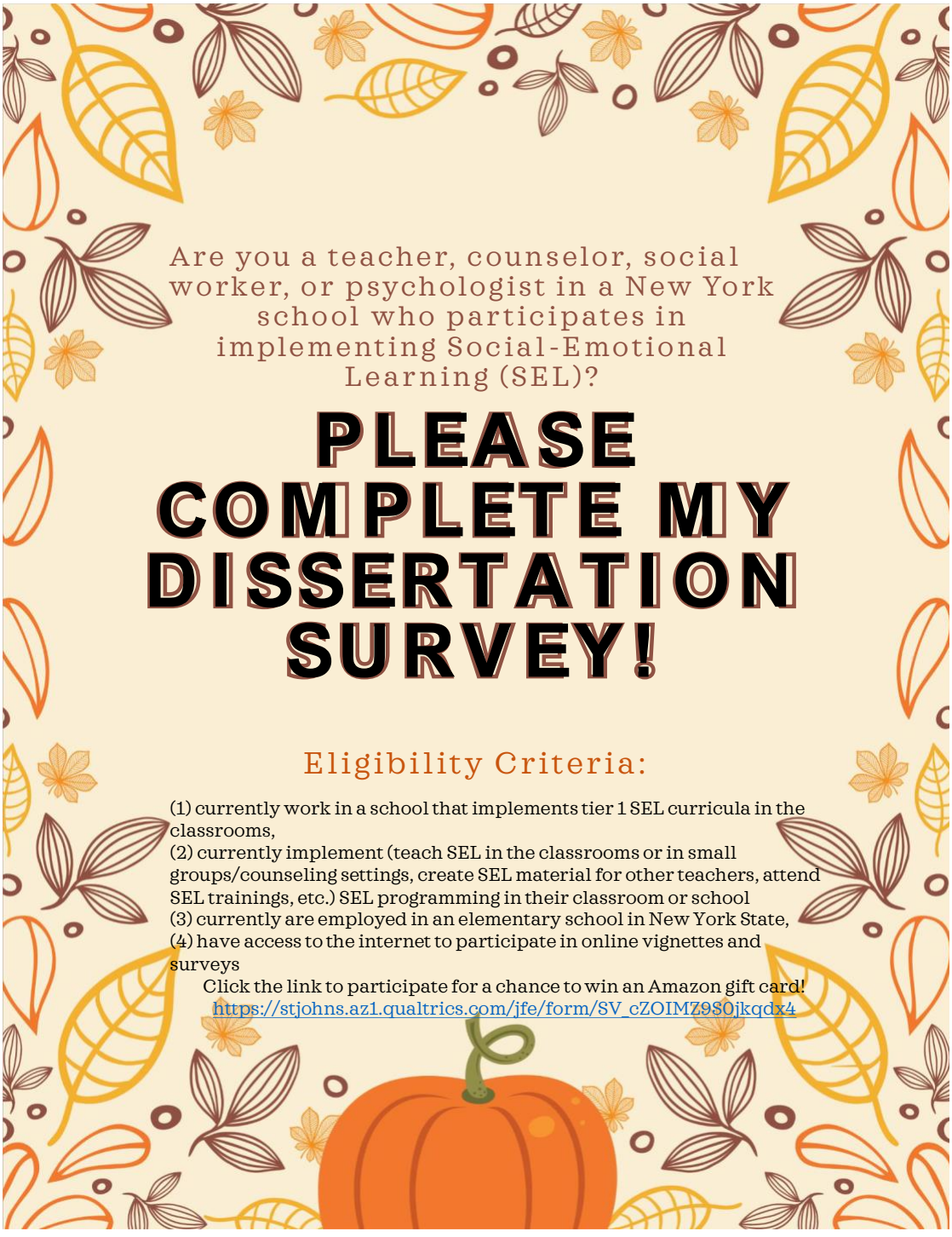
1 2 3 4 5 6 7

17. **For classroom teachers only** In addition to the above barriers, what supports (from schools, districts, administrators, etc.) would you need to successfully modify the way you implement SEL classroom-wide for all students?

_____

Appendix H

Social Media Recruitment Flyer



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