Social and emotional learning services and child outcomes in third grade: Evidence from a cohort of Head Start participants

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ABSTRACT

A variety of universal school-based social and emotional learning (SEL) programs have been designed in the past decades to help children improve social–emotional and academic skills. Evidence on the effectiveness of SEL programs has been mixed in the literature. Using data from a longitudinal follow-up study of children (n = 414) originally enrolled in a clustered randomized controlled trial (RCT) when they were in Head Start, we examined whether universal SEL services in third grade were associated with the development of children from disadvantaged families. We took advantage of pairwise matching in the RCT design to compare children who had similar family background and preschool experiences but received different doses of SEL services in third grade. The results showed that the frequent (i.e., weekly to daily) exposure to SEL opportunities was associated with favorable social–emotional and academic development in third grade, including increased social skills, student–teacher relationship, and academic skills, as well as reduced impulsiveness.

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1. Introduction

School-based social and emotional learning (SEL) programs were introduced almost two decades ago to support children's emotional and behavioral development as well as to improve the emotional climate of schools (Collaborative for Academic, Social, and Emotional Learning (CASEL), 2003, 2012; Elbertson, Brackett, & Weissberg, 2010). SEL is the process of acquiring and effectively applying knowledge, attitudes, and skills in five major areas of social–emotional competence, including self-awareness (e.g., identifying emotions and recognizing strengths), social awareness (e.g., perspective taking and respecting others), self-management (e.g., managing emotions and goal setting), relationship skills (e.g., communication and cooperation), and responsible decision-making (e.g., evaluation and reflection) (CASEL, 2003, 2012; Elbertson et al., 2010; Zins & Elias, 2006). Some examples of typical SEL activities include those targeting students' development of respect and responsibility, acceptance of others, engagement, anger management, verbal and physical aggression, bullying, conflict resolution, and healthy life choices (Jones, Brown, & Aber, 2008).

In the past decade, a variety of universal SEL programs that are available to all children in a school or classroom regardless of risk status have been designed to help improve children's social–emotional and academic skills. Recently there has been rapid expansion in the implementation of SEL services in schools to support social–emotional, along with academic, domains of children's development (CASEL, 2003, 2012; Elbertson et al., 2010). This effort has been driven by the increasing recognition that, to maximize their effectiveness, school-based, universal interventions that take an integrative, holistic approach to provide more coordinated, sustained, and systematic services may have better chances of greater impact than those programs that are academically-focused alone (Elbertson et al., 2010; Jones, Brown, & Aber, 2011; Social and Character Development (SACD) Research Consortium, 2010; Zins, Bloodworth, Weissberg, & Walberg, 2004).

As detailed below, evidence on the effectiveness of SEL programs has been mixed in the literature. Although the effect sizes of universal SEL programs available to all students in a classroom or school have been found slightly higher than those targeting high-risk students (Jones & Bouffard, 2012), few studies have directly examined the effectiveness of universal SEL services on disadvantaged students who attended high-quality preschool programs such as Head Start. In this study, we used longitudinal follow-up data in a cohort of Head Start participants in a preschool intervention study, the Chicago School Readiness Project (CSRP), to examine how classroom-based promotion of SEL in third grade was associated with children's social–emotional and academic outcomes. As detailed below, the CSRP used a clustered randomized controlled trial (RCT) design and provided multifaceted intervention services to a group of Head Start teachers and children in disadvantaged neighborhoods in Chicago. By taking advantage of the pairwise matching procedure employed in the CSRP design, we compared the outcomes of children who had similar family background and preschool

experiences but received varying doses of SEL services in third grade. In addition, we investigated whether SEL services in third grade played a moderating role as a "booster" of the initial effects of CSRP intervention (e.g., Raver et al., 2011, 2009).

1.1. SEL and child development

School- and classroom-based SEL programs are expected to improve the social–emotional and academic skills of children, especially those in low-income families. Prior research has shown that the benefits of many high-quality early interventions targeting economically disadvantaged children, such as Head Start, tend to dissipate in early years of elementary school (Barnett, 1995; Currie & Thomas, 1995; Magnuson, Ruhm, & Waldfogel, 2007). As the perspective of life cycle skill formation and human capital accumulation suggests, enrichment programs such as SEL services can boost the skill acquisition and school achievement of children with skill advantages gained from high-quality early interventions and also compensate for the skill deficits experienced by at-risk children at school entry (Cunha, Heckman, Lochner, & Masterov, 2006; Hamre & Pianta, 2005; Magnuson et al., 2007). Similarly, improvement in a school's social–emotional climate has been argued to benefit learning, more broadly, and may make important contributions not only to children's social skills but also academic performance. For example, students' perceptions of teacher support and mutual respect are linked to positive changes in academic motivation and engagement (Ryan & Patrick, 2001). A review of risk prevention programs also suggests that promoting mastery of social–emotional competence is associated with positive youth development (Guerra & Bradshaw, 2008).

Neuropsychological models of learning in the context of adversity provide more theoretical and empirical foundations for SEL programs. These models, as supported by empirical research, identify a neurological basis for the links between children's emotional experience within stressful versus supportive environments and their social and academic performance in those contexts (Blair & Raver, 2012; Greenberg, Kusché, & Riggs, 2004; Riggs, Greenberg, Kusché, & Pentz, 2006). For example, models that combine affective and academic processes have been used in the development of multiple universal prevention curricula for promoting children's social–emotional development in preschools and elementary schools, such as the broadly implemented Incredible Years and the Promoting Alternative Thinking Strategies (PATHS) (Greenberg, 2006; Riggs et al., 2006; Webster-Stratton, Reid, & Hammond, 2004). These affective–cognitive models suggest that young children's regulation of their own emotions (as well as their responses to others' emotions) may alternately support or disrupt attention, working memory, and other prefrontal cortical processes central to learning in the classroom (Ursache, Blair, & Raver, 2012). The elementary school years have been hypothesized to serve as a developmental sensitive period, when children's behavior problems become evident and may be exacerbated by exposure to stressful experiences with teachers and peers (SACD Research Consortium, 2010; Thornberry, Huizinga, & Loeber, 2004). Empirical evidence from recent field experiments of SEL interventions is aligned with this hypothesis. For example, research shows that the PATHS curriculum increases inhibitory control and verbal fluency (i.e., two mediators of social competence), which, in turn, are related to the reduction in behavior problems (Riggs et al., 2006).

Despite their promise, the findings on the effectiveness of SEL programs have been mixed in the literature. Many empirical studies conducted in the past decade on a variety of SEL programs found positive associations with children's developmental outcomes in preschool through high school years (CASEL, 2012; Greenberg et al., 2003; Jones et al., 2011; Payton et al., 2008; Zins & Elias, 2006). In a meta-analysis of 213 school-based, universal SEL programs that included 270,034 students from kindergarten to high school during 1970–2007, SEL

participation was found to be associated with improved social–emotional skills, attitudes about self, others, and school, prosocial behaviors, and academic performance, as well as reduced conduct and internalizing problems (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). An earlier meta-analysis of 165 studies of school-based prevention of conduct problems from kindergarten to high school found that self-control or social competence promotion instruction as well as non-instructional cognitive and behavioral methods effectively reduced alcohol and drug use, dropout and nonattendance, and other conduct problems (Wilson, Gottfredson, & Najaka, 2001). In contrast, other studies found little evidence that SEL programs improved children's development. For example, a study of seven social and character development programs implemented in 84 schools from third grade (in 2004) to fifth grade (in 2007) found little impact of these programs on student outcomes (SACD Research Consortium, 2010). These findings were consistent with two previous meta-analyses of a wide range of SEL and anti-bullying interventions implemented in kindergarten through 12th grade, which did not find meaningful change in children's outcomes to be associated with social–emotional curricula (Merrell, Gueldner, Ross, & Isava, 2008; Park-Higgerson, Perumean-Chaney, Bartolucci, Grimley, & Singh, 2008).

The mixed findings on the impact of SEL programs on children's outcomes are mainly due to the variations in program definitions, designs, and fidelity of implementations as well as the measures of SEL activities across studies. One inherent challenge in SEL research is that SEL has been widely defined or characterized, varying from conflict resolution, anti-bullying, and civic engagement, to a host of other important but quite different topics (CASEL, 2012; Jones & Bouffard, 2012). Universal SEL programs available to all students in a classroom or school have slightly smaller effect sizes (approximately 0.2 to 0.3 of a standard deviation) than those of more targeted programs for high-risk students who are identified by teachers as having substantial problems (effect sizes of approximately 0.5) (Durlak et al., 2011; Jones & Bouffard, 2012). On balance, high-quality evaluations of individual programs that base their work on carefully articulated theories of action that are closely aligned with SEL theory and practice (e.g., PATHS) tend to reveal positive effects on children (e.g., Aber, Brown, Jones, Berg, & Torrente, 2011; Durlak et al., 2011). In contrast, in some other evaluations, the underlying theories or the combinations of SEL activities might be inadequate to alter students' overall social–emotional outcomes because a subset of students who had developmental deficits may require more targeted and intensive interventions than school-wide programs (CASEL, 2012; SACD Research Consortium, 2010). In addition to the definition and design of SEL programs, implementation fidelity and quality are also critically important factors contributing to SEL effectiveness. Well-implemented SEL programs are usually associated with positive outcomes, while poorly implemented programs have been found to have small or no effects no matter how well they may have been initially designed (CASEL, 2012; Durlak et al., 2011; Jones & Bouffard, 2012; SACD Research Consortium, 2010; Wilson, Lipsey, & Derzon, 2003). Moreover, many states have legislation that requires or promotes SEL activities in school and thus, to estimate the impact of SEL, it would be impractical to identify a comparable control group that does not have any SEL activities. Therefore, it has been suggested that SEL practices be measured as continuous variables, rather than as all-or-none phenomena, to assess the extent or the comprehensiveness of using active learning techniques (Durlak et al., 2011).

1.2. The present study

Using longitudinal data from the CSRP, we examined how the number of SEL activities that teachers used in class, a continuous measure of SEL practices as one aspect of implementation, were associated with children's social–emotional and academic outcomes in third grade. The initial CSRP program was a preschool intervention targeting self-