



Rethinking School-Based Bullying Prevention Through the Lens of Social and Emotional Learning: a Bioecological Perspective

Diana Divecha¹ · Marc Brackett¹

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Abstract

This article makes the case for shifting the national focus from bullying prevention to the systemic integration of evidence-based practices of social and emotional learning (SEL) into US school programs and policies. Several meta-analyses demonstrate that SEL is a promising approach for reducing a range of disruptive behaviors in schools. The data also show that SEL enhances school engagement and climate, interpersonal relationships, well-being, and academic achievement. We critically analyze existing approaches to bullying prevention in the USA and, from a bioecological perspective, describe their limitations, in addition to the importance of emotions in the organization of children's development. We discuss why schools should address the social and emotional development of children and adults in order to decrease harmful behaviors, form positive relationships, support psychological health, and offer more effective education. The bioecological perspective provides a framework for successfully integrating whole-school, evidence-based approaches to SEL, including statewide adoption of SEL standards and increased focus on school climate.

Keywords Bullying prevention · Social and emotional learning · SEL · Emotional intelligence · Education policy

Research throughout the last decade has established that contrary to conventional wisdom, bullying¹ is not a normal rite-of-passage preparing children for the harsh realities of adulthood. It can be a traumatic experience with adverse consequences in all areas of a child's life, persisting well into adulthood (Wolke et al. 2013).

Bullying prevention policies have been adopted throughout the USA, state by state (see U.S. Department of Health and Human Services 2017a). These policies have focused public attention on the importance of preventing violence and aggression, supporting positive youth development, and improving

the school climate. However, data from the U.S. Department of Education shows that bullying rates remained stable in the last decade² (Lessne and Yanez 2016), and research on bullying prevention programs shows that their effects range from contraindicated to modestly positive.

Among the potential reasons for the mixed effects may be: (1) a mechanistic emphasis on campaigns, assessment, reporting, and consequences in traditional bullying prevention programs; (2) the lack of a developmental perspective; and (3) an emphasis on intervention, rather than the promotion of skills and capacities that support psychological health, interpersonal relationships, and a positive school climate. In addition, focusing on a narrow definition of bullying omits other harmful behaviors, such as violence, aggression, conflicts, micro-aggressions, and rudeness.

Prevention requires a shift in all levels of a child's ecosystem. At the macro level, we need to examine the commitment the USA is willing to make to children's healthy social and emotional development. At the mid-level, we must invest in developing skilled adults with proximal relations to children.

¹ Bullying is a repetitious, intentionally aggressive pattern of behavior involving a power imbalance. It may inflict physical, psychological, social, or educational harm. It can be physical or verbal and may occur face-to-face or via technology (Gladden et al. 2014).

✉ Diana Divecha
dianadivecha@gmail.com

✉ Marc Brackett
marc.brackett@yale.edu

¹ Yale Center for Emotional Intelligence and Yale Child Study Center, Yale University, P.O. Box 207900, New Haven, CT 06520-7900, USA

² The most recent survey by the U.S. Department of Education (Lessne and Yanez 2016) showed a decrease in overall bullying, but middle school rates stayed the same. Other negative indicators such as verbal abuse of teachers, sexual harassment, and student fear decreased slightly.

At the micro-level, we need to address children's individual needs, including those who engage in bullying behavior, as well as the targets of, and witnesses to bullying.

The goal of this article is to propose a shift in US policy focus, from bullying prevention to the systemic integration of evidence-based practices of social and emotional learning (SEL) into school programs and policies. SEL involves the teaching of skills, including self-awareness, self-management, social awareness, responsible decision-making, and relationship management (CASEL 2015). A meta-analysis of 213 school-based SEL programs involving 270,034 kindergarten through high school students reported significant positive effects of SEL programs on students' social and emotional skills (mean effect size (ES) = .57), attitudes toward self and others (ES = 0.23), and social behaviors (ES = 0.24). In addition, significant reductions occurred in conduct problems (ES = 0.22) and emotional distress (ES = 0.24). (Conduct problems included bullying and a range of other disruptive behaviors.) Academic performance, assessed in a subset of studies involving 135,396 students, significantly improved an average of 11 percentile points (ES = 0.27). These significant effects continued an average of at least one and one-half years according to a subset of 33 studies, though the effect sizes diminished over time (EF = .32 to .11) (Durlak et al. 2011). A second major review of five meta-analyses of universal school-based SEL programs also showed modest promise for promoting positive skills and reducing behavioral risk. Examining 300 studies and involving more than 300,000 students, the review showed that SEL programming significantly reduced measures of aggression and disruptive behavior, though effect sizes were modest (ES = 0.21 to 0.26). Intervention effects were comparable, regardless of gender, ethnicity, or school setting. Socioeconomic level did not make a difference, or slightly favored those from a lower economic class; age was a moderator in only one of the five reviews (Domitrovich et al. 2017). A meta-analysis of 82 SEL studies showed that the positive effects of SEL on social and emotional skills (ES = 0.23) and disruptive behaviors including bullying (ES = 0.14) remained small but significant at a mean two-year follow-up (Taylor et al. 2017). Indeed, a meta-analysis of 18 studies showed that: self-oriented personal competencies were protective against becoming a victim of bullying; social competence and academic performance were protective against becoming a bully; and positive peer interactions were protective against becoming a bully/victim (Zych et al. 2018). In addition, a cost-benefit analysis of six SEL programs found them to be good investments, with \$11 saved for every \$1 spent (Belfield et al. 2015). In other words, while SEL shows compelling promise for cultivating positive social and emotional skills, it also confers modest, but significant positive impact on a wide range of behavioral issues and academic performance, making it a cost-effective approach supporting students' psychological health.

In this article, we begin with a critical analysis of current bullying prevention programs (BPP) and policies throughout

the USA, and describe their limitations from a bioecological perspective. Next, we present a case for addressing the social and emotional skills of children and adults in order to decrease bullying, form positive relationships, and provide effective teaching and learning. Finally, we employ the bioecological perspective to present a framework and recommendations for successfully integrating whole-school, evidence-based approaches to SEL. Recommendations include statewide adoption of SEL standards, an increased focus on school climate, SEL training dedicated to developing educator and family member skills to facilitate co-construction, modeling, and delivery of effective SEL practices; and implementation of developmentally and culturally responsive SEL interventions for children and youth.

Bullying Prevention Programs: Mechanisms of Change and Outcomes

In the last decade, every state in the USA has passed legislation outlawing bullying or provided school districts with model policies designed to prevent it. Laws and policies vary widely, yet the majority focus on definitions, sanctions, referrals, reporting, and recording (Sacco et al. 2012; U.S. Department of Health and Human Services 2017a).

Bullying rates began to decrease in the early 1990s, when BPPs were initiated, but since then, the rates have remained largely stable. The most recent national survey reported a slight decrease in overall bullying, but bullying among middle schoolers remained stubbornly consistent (see Zhang et al. 2016). And, bullying incidents are likely underreported; one evaluation found that 64% of students who experienced bullying did not report it (Petrosino et al. 2010).

Approximately one decade ago, six major reviews or meta-analyses of the effectiveness of BPPs drew cautionary conclusions: effects ranged from iatrogenic (bullying increased) (e.g., Baldry and Farrington 2007; Vreeman and Carroll 2007; Smith et al. 2004; Ttofi and Farrington 2011), to negligible or "too small to be practically significant" (e.g., Ferguson et al. 2007; Merrell et al. 2008; Smith et al. 2004), to small positive effects (e.g., Vreeman and Carroll 2007). Baldry and Farrington (2007) found that eight of the 16 studies they included produced desirable effect sizes (a 10 % or greater reduction in bullying), but mostly in other countries. Among the US studies, one showed a 6% reduction in bullying; the other revealed a 1% increase in bullying behavior.

Additional meta-analyses have found more positive effects of anti-bullying programs. One meta-analysis including 44 evaluations found programs effective for reducing bullying by 20–23% (odds ratio (OR) = 1.36), and victimization by 17–20% (OR = 1.29) (Farrington and Ttofi 2009; Ttofi and Farrington 2011). A second study of 100 evaluations concluded that programs reduced perpetration by 19–20% (OR =

1.209–1.324) and victimization by 15–16% (OR = 1.244–1.248) (Gaffney et al. 2018a). A third meta-analysis of six anti-bullying programs showed that programs were effective in reducing victimization by 17% (OR = 0.83) (Langford et al. 2015). The most promising features of effective programming include schoolwide approaches combined with targeted interventions; a public health, three-tiered model (response to intervention model); procedures ensuring higher dosage, greater fidelity, and sustainability; multiple activities engaging many stakeholders at multiple levels; parent training; and consistent supervision, classroom management, and discipline (Bradshaw 2015; Cohen et al. 2015).

Numerous BPPs are currently used with varied mechanisms of change. Earlier programs tended to rely on punishment, consequences, or classic behavior management; more recent initiatives teach social cognition, rely on the peer group, focus on relationship repair, add a component of SEL, or attempt school-wide climate change. Many programs rely on mechanisms of change that are activated after-the-fact; hence, they are based on intervention, rather than prevention. Only programs that proactively build skills, teach replacement behaviors, and focus on creating a positive school climate should be considered preventative.

Examples of popular approaches, their mechanisms of change, and the evidence for their effectiveness follow. It should be noted that some programs specifically address bullying, while others address childhood aggression in general. We include the entire continuum, since the degree to which the etiologies, prognoses, or targeted interventions overlap is not well understood, yet schools are charged with addressing the full range of problematic behaviors.

Operant Conditioning and Information Dissemination The first widely used initiative was the Olweus Bullying Prevention Program (OBPP) and its offshoots. The mechanisms of change are primarily school-wide information dissemination about a new no-bullying stance at the systems level and improved supervision, identification, and punishment/consequences at the individual level (Olweus and Limber 2010b). In the New National Initiative project, Olweus (2005) reports that bullying reduced 42% among boys and 48% among girls, and victimization decreased 32% and 35% for boys and girls, respectively. Though successful in Norway where it originated, research efforts with elementary and middle school students in Seattle, South Carolina, and Philadelphia in the USA failed to yield significant results (see Olweus and Limber 2010a).

Positive Behavioral Intervention and Support (PBIS) uses behavior modification to reward good behavior and impose consequences for unwanted behavior. In addition, individualized interventions are created for at-risk students. Behavioral analysis approaches often employ an elaborate system for tracking behavior and communicating throughout the

educational setting (Bradshaw et al. 2015; Sugai et al. 2011). A four-year, randomized control trial of PBIS of more than 12,000 elementary children in 37 Maryland public schools found it effective for reducing general disciplinary problems among high-risk students (ES = 0.12 to 0.39) (Bradshaw et al. 2015). PBIS had some impact on bullying behavior among younger children, but this result was based on teacher reports that tend to underrepresent bullying (Waasdorp et al. 2012). Calling the program “disempowering” and “authoritarian,” Cohen et al. (2015) critique PBIS for being too focused on disciplinary problems, and failing to focus enough on building positive skills, relationships, and environments.

Social Cognitive Processing Another approach focuses on at-risk children, rather than the whole school, and is based on childhood aggression and social cognition research. These programs teach social information processing skills, such as how to accurately appraise intentions, assess goals, and choose constructive behavioral responses. For example, the Fast Track program teaches elementary school children social information processing and problem-solving skills, emotional understanding, and self-control in short weekly meetings. In a ten-year study with approximately 900 at-risk kindergarten children, Fast Track significantly reduced conduct problems among the most high-risk children (ES = 0.2 to 0.4) (Lochman and Wells (2004); delinquent offenses reduced 27%; and participants were 39% more likely never to be arrested as a juvenile, and 34% more likely to never be arrested as an adult (Conduct Problems Prevention Research Group 2011; Sorensen and Dodge 2015). The Coping Power Program for at-risk boys entering middle school showed short-term reductions in delinquency and substance use (ES = 0.25 and 0.31, respectively), and improvements in school behavior (ES = 0.38) (Lochman and Wells 2004). One multi-site investigation of social cognitive models for violence prevention among more than 5500 middle school students showed mixed results, with increased aggression in some cases (Simon et al. 2009). One program aimed at reducing hostile attribution bias among 20 aggressive third- to fifth-grade boys showed significant reductions in bias, and in the endorsement of hostile retaliation following a 12-lesson intervention. However, the assessments were hypothetical scenarios presented in a laboratory setting, and while teachers rated the boys as less aggressive after treatment, they still accounted for the largest proportion of office referrals. In addition, bias was not reduced to levels comparable to nonaggressive peers (Hudley and Graham 1993).

None of the above social cognitive processing interventions specifically assessed bullying behavior. Critics of these approaches point out that bullies may not be deficient in social information processing. In fact, they can be quite skilled at theory of mind, reading social dynamics, and exploiting people and situations (see Sutton et al. 1999). In addition, social cognitive approaches frequently overlook the victims of

aggression who often need help with self-blaming attributions and heightened rejection sensitivity (Juvonen and Graham 2014; Zimmer-Gembeck 2016).

One suggested prevention for potential victims of bullying is based on implicit theories of personality (Dweck 2006). Yeager et al. (2011) showed that ninth- and tenth-grade students who were targets of bullying and held a fixed mindset (e.g., “I’m a loser,” “I must not be a likable person”) were more likely to want to get revenge than students with a growth mindset (e.g., “people can change”). A randomized field study showed that a six-session mindset intervention with ninth- and tenth-grade students was effective in reducing vengeful desires ($ES = 0.48$), vengeful intentions ($ES = 0.44$), and vengeful behaviors ($ES = 0.47$). It also increased prosocial responses in the intervention group compared to controls ($ES = 0.86$) (Yeager et al. 2013). The study did not address participants other than potential bully-victims, and the ecological validity of a growth mindset approach to bullying prevention has not been fully explored.

Psychodynamic Interventions Children experiment with their growing sense of personal power. This process can include developing a sense of agency and self-efficacy, attempting to influence others, trying to control resources or the thoughts and actions of others, and inflicting harm through bullying, aggression, and violence. Psychodynamic interventions treat bullying as one symptom of a dysfunctional approach to expressing power in the school environment (Fonagy et al. 2009). For example, in one study of 10,000 third- through ninth-grade students, 10–20% experienced a “vicarious thrill” when watching someone being bullied (Twemlow et al. 2001). Schools demonstrate their orientation to power through their approach to discipline, use of coercion, and definitions of academic achievement. Psychodynamic interventions create new “mental models” about power for school administrators, principals, and students.

Two programs utilize a psychodynamic approach. The School Psychiatric Consultation Model offers outside psychiatric consulting to high-needs children with disruptive behavior problems. The Creating Peaceful School Learning Environment (CAPSLE) uses multiple strategies, including training teachers to replace punitive discipline with relationship-based strategies, adult mentoring, respectful problem-resolution training, and student martial arts training. A three-year intervention study showed that CAPSLE positively impacted peer reports of aggression ($ES = 0.20$) and victimization ($ES = 0.20$), as well as achievement scores among third- to fifth-graders (ES not reported), but the School Psychiatric Consultation Model, alone, did not (Fonagy et al. 2009). Again, bullying behavior was not individually specified.

Peer-to-Peer Interventions Peer-mediated strategies in which the perpetrator and victim attend the same meeting for

corrective action can be ineffective, or worse, can backfire, and may be clinically contraindicated. Several meta-analyses and reviews draw cautious conclusions about peer-based approaches. For example, a review of 19 randomized control trial studies showed that grouping high-risk children or youth together for treatment yielded adverse effects across a wide variety of settings (e.g., schools, classrooms, group homes, wilderness camps), for a wide range of problems (e.g., behavior disorders, aggression, substance abuse, eating disorders), and a wide variety of ages (e.g., kindergartners to college freshmen) (Dodge et al. 2006). Though bullying behavior was not specifically identified in that review, another study showed that the presence of bullying prevention programs was negatively related to peer victimization ($OR = 1.24$) (Jeong and Lee 2013). Another meta-analysis reported that “work with peers” was associated with a nonsignificant increase in bullying and a significant increase in victimization ($OR = 1.13$) (Ttofi and Farrington 2011). Dodge et al. (2006) recommend the rigorous evaluation of all interventions for peer aggregation effects.

Two popular peer-focused bullying intervention approaches are restorative justice (RJ) and bystander intervention. RJ uses peer- and community-group processes to repair relationship harm. RJ practices have been adopted rapidly by schools in the last two years in reaction to the punishments, sanctions, school expulsions, and school-to-prison pipelines that disproportionately target African-American children by nearly four-to-one (U. S. Department of Education 2016). Anecdotal reports suggest some positive impact on expulsions and suspensions, school climate, and some disciplinary problems, but the adoption rate appears far ahead of an evidence base (Fronius et al. 2016; Song and Swearer 2016).

A bystander intervention approach to bullying presumes that everyone in the social context has the ability and responsibility to disable bullying. A meta-analysis of more than 9000 New Zealand high school students found that when students take action against bullying, it is more effective than when teachers are responsible (Denny et al. 2015). A randomized control trial of Finland’s successful KiVa anti-bullying program showed stronger effect sizes for bullying and victimization in lower grades ($OR = 1.33$ to 1.53) than grades seven through nine ($OR = 1.13$ and 1.21 for victimization and bullying, respectively). KiVa’s success has not been replicated in US schools (Kärnä et al. 2013).

However, standing up to bullying is not appropriate for everyone. Successful bystander intervention requires taking risks and is associated with a sense of high self-efficacy, high empathy for victims, moral engagement, and high social status (Thornberg and Jungert 2013). Even among adults, the ability to intervene is correlated with altruism, extraversion, peer acceptance, emotion regulation, and autonomous sense of self (Moisuc et al. 2018).

In sum, increased monitoring, rule-making, punishment and operant conditioning, and social information-processing, as well

as peer-to-peer, psychodynamic, and bystander interventions, have not created a reliable impact on bullying behavior, and some have even been counter-productive. In the next section, we provide a bioecological perspective to explore possible reasons why these approaches may be ineffective, and why SEL as a universal primary prevention is promising.

From Bullying Prevention to Evidence-Based Social and Emotional Learning: a Bioecological Perspective

Numerous reviews of BPPs have examined the ecology of implementation and critical roles of micro- and mesosystems for making BPPs work, such as classroom climate, peer group dynamics, teacher-student relationships, and home-school links (e.g., Espelage and De La Rue 2012; Swearer and Doll 2001). These reviews were based on Bronfenbrenner's (1979) earliest formulation of the ecological model of human development. However, Bronfenbrenner (2005) "reassessed, revised, extended," and even "regretted and renounced" parts of the earlier model (p. 106). Here, he added the developing individual (Person), the period of historical and developmental time (Time), and interpersonal relationships (Process) to the better-known environmental settings (Contexts). Notably, Bronfenbrenner called proximal processes, or one-to-one relationships the "primary engines of development." Their power, however, remains "a function of the characteristics of the developing Person, of the immediate and more remote environmental contexts, and time periods, in which the proximal processes take place" (Bronfenbrenner and Morris 2006, p. 795). In other words, developmental outcomes arise through the joint characteristics of the developing person and the environment, in which relationships play a critical delivery role. This updated model is the Process-Person-Context-Time (PPCT) model; to obtain a truly bioecological interpretation, all four elements should be present.

In this section, we review Bronfenbrenner's four properties of Person, Process, Context, and Time, and their implications for bullying prevention. A consideration of proximal processes is interwoven throughout the discussions of Person and Contexts. We also offer a rationale for a paradigm shift that would place SEL at the center of bullying prevention.

The Developing Person

The characteristics of the person at a given time in his or her life are a joint function of the characteristics of the person and of the environment over the course of that person's life up to that time (Bronfenbrenner 2005, p. 108).

Beginning in utero, emotions and their contexts are important organizers of developmental systems. A pregnant woman's emotions can affect the growth of the fetus' stress regulation physiology through epigenetic changes that have behavioral, emotional, and cognitive consequences into childhood (Monk et al. 2012), and physical health consequences in adulthood (Godfrey and Barker 2001). Quality of care for newborns continues to shape their stress regulation system well into adolescence (Curley and Champagne 2016). The infant's quality of attachment with caregivers impacts self-regulation and exploration of the environment, a foundation for cognitive and intellectual growth. Attachment quality has consequences for academic achievement, as well as social, emotional, and cognitive development into adolescence and early adulthood (Sroufe et al. 2009). Numerous life course studies link childhood emotional health and social competence to positive adult outcomes, such as education, employment, mental and physical health, and life satisfaction (e.g. Heckman et al. 2006; Moffitt et al. 2011). The reverse also is well-documented; early childhood adversity predicts poor social and emotional developmental as well as health outcomes (see Shonkoff et al. 2012). In sum, emotions are deeply interwoven with human development.

Early environments are impactful and require less effort and cost to effect change than remedial efforts later in life (Center on the Developing Child 2007), emphasizing the importance of early positive scaffolding. This section highlights key social and emotional developmental capabilities by age and shows how some SEL programs support these emerging competencies, while reducing problematic behaviors. Currently, 11 states are creating developmental benchmarks for SEL (Dusenbury and Weissberg 2017).

Early Childhood, Ages 0–5 Infants vary in their ability to self-regulate (auto-regulate) or regulate with the help of another person (Schore 2015). By age 2, these differences are predictive of later autonomy and adjustment (Eisenberg et al. 2004; Lawson and Ruff 2004). With increasing language facility, preschoolers are better able to name feelings, as well as their causes and consequences. The hallmark of preschoolers' emotional development is the rapid growth of neural structures supporting advances in executive function, in addition to behavioral and emotional regulation (Diamond 2013).

The roots of prosocial development appear in infancy. A rudimentary capacity for empathy is evident in newborns, and during the first two years of life, concern for others, prosocial helping behavior, and an understanding of others' motivations, intentions, and states gradually increase (Eisenberg et al. 2015). By preschool age, young children respond more to others' feelings (Denham et al. 2011).

Numerous SEL programs for young children facilitate the development of emotional and social skills, create positive classroom climates, and reduce aggression (see McClelland

et al. 2017, and casel.org for reviews). For example, based on neurological developmental processes, Promoting Alternative Thinking and Learning Strategies (PATHS) teaches SEL constructs like emotion recognition, self-control, and interpersonal problem-solving. PATH has positive effects on internalizing and externalizing behavior problems as mediated by enhanced inhibitory control and verbal fluency (Riggs et al. 2006).

RULER is an empirically based approach to SEL based on emotional intelligence (Mayer and Salovey 1997) and Ecological Systems Theories (Bronfenbrenner and Morris 2006). RULER teaches preschool to high school students and adults the skills to recognize, understand, label, express, and regulate emotions (Brackett et al. 2015) through four sequential, developmentally scaled “Anchor Tools.” For example, the Mood Meter enables educators and students to check in with their bodies and minds to identify and name their emotional experiences and learn effective strategies to manage them. RULER’s “Feeling Words Curriculum” integrates SEL into the standard curriculum and teaches emotion concepts through storytelling, character analysis, engaging families, and cooperative learning exercises focused on emotion regulation. In one evaluation, 3- to 5-year olds in RULER classrooms showed a greater knowledge of emotions, including recognizing and naming emotions, compared to children in control classrooms (ES = 0.52, 1.39, respectively) (Nathanson et al. 2016).

Elementary School, Ages 6–10 Social and emotional skills develop in tandem with cognitive ability. For example, school-age children increasingly differentiate internal from external experiences and can gradually intersect multiple cognitive dimensions. Similarly, children come to understand that their internal thoughts, not just external events, can create their feelings (Flavell et al. 2001), and they use external problem-solving and internal coping strategies to manage emotions (Saarni 2000). They start to understand mixed and multiple simultaneous emotions, and self-conscious emotions like shame and guilt (Tracy et al. 2005; Zajdel et al. 2013), in addition to gaining a more nuanced vocabulary (Harter 1999). They learn display rules and are better able to mask emotions (Misailidi 2006). Their ability to take others’ feelings into account improves (McDowell and Parke 2000).

Many SEL programs have demonstrated effectiveness in elementary schools, though the emphasis is more on social skills than emotional development. For example, the 4Rs (Reading, Writing, Respect, and Resolution) uses literature to teach pre-k through fifth-grade students about interpersonal relationships and conflict resolution. Target outcomes include handling anger, listening actively, cooperating, being assertive, celebrating differences, reducing bias, and building community (Brown et al. 2010). The 4Rs has been effective for improving hostile attributional bias, aggressive interpersonal negotiation strategies, ADHD, and depressive symptoms in

children. In addition, students at greater behavioral risk (aggression and conduct disorder) showed higher improvements in math and reading achievement scores (ES = 0.56 and 0.60, respectively) compared to students with lower baseline behavioral risk (ES = 0.14 and 0.06, respectively) (Jones et al. 2011). Similarly, PATHS reduces aggressive behavior and conduct problems and improves social information processing, prosocial behavior, and academic engagement. It is effective for children with disabilities, and those children in more disadvantaged schools. (Effect sizes were mild to moderate, ranging from .1 to .4) (Bierman et al. 2010; Crean and Johnson 2013).

Early Adolescence, Ages 11–15 In puberty, sex hormone changes impact brain structure and function (Casey and Caudle 2013). Reward circuitry and social-affective circuitry are remodeled, accompanied by changes in dopamine, serotonin, and testosterone, making affective and social processes highly salient. This social reorientation increases the need to belong, activates concerns about status, and stimulates identity formation (Crone and Dahl 2012; Yeager et al. 2017). While these changes prepare teens to transition into adulthood, they also make them more emotional; more sensitive to belonging, social inclusion-exclusion, and peer evaluation; more stress-sensitive; and more reward- and sensation-seeking (Crone and Dahl 2012; Yeager et al. 2017). During this stage, bullying peaks, and psychiatric disorders emerge.

Often, this is also when programs once effective with younger students no longer work, with the break point around the eighth-grade (Yeager et al. 2015). The rise in testosterone (in boys and girls) fuels status- and respect-seeking, making them especially sensitive to threats to their agency and autonomy (Yeager et al. 2017). Autonomy threat can be triggered by the manipulation of rewards, punishments, imposed goals, surveillance, or choice constraints (Ryan and Deci 2000). Thus, programs that are overly prescriptive or disrespect teens may trigger their disengagement. However, programs that leverage teen agency, interest in relationships, and desire for prestige and social competence will be more effective.

At the upper elementary and middle school levels, students in RULER classrooms take an active role in their learning by conducting real-world experiments about emotion themes and concepts. In one study of fifth- and sixth-graders, compared with control classrooms, students in RULER classrooms achieved higher end-of-year academic performance, as well as higher teacher-rated social and emotional competence ($\eta^2 = 0.05$ and 0.04 , respectively) (Brackett et al. 2012). But implementation quality is a moderator. In a separate study, RULER classrooms with the highest quality implementation resulted in students with greater emotional intelligence ($E = 0.16$), social competence (ES = 0.23), and conflict resolution skills (ES = 0.19) after one year (Reyes et al. 2012).

Used in the eighth-grade, Second Step is designed to facilitate emotion regulation and reduce aggression and violence (Committee for Children 2008). Improvements were shown in anger management, impulse control, empathy, social competence, prosocial goals and behaviors, and externalization of behaviors and hyperactivity (ES ranged from 0.039 to 0.249) (Edwards et al. 2005). A randomized controlled trial of Second Step in 61 schools from five districts found the program most effective among students with the least social and emotional competence and greater conduct problems and aggression, based on teacher reports (Low et al. 2015).

High School, Ages 16–18 Older teenagers' psychological tasks include greater autonomy and identity formation, formation of affiliative peer groups, and exploration of romance, competencies, and commitments to beliefs, goals, and activities. Effective high school programs align with youths' desire to "matter," and to be respected, accountable, and autonomous. According to Yeager (2017), "These programs do this both in how they talk to young people—by offering opportunities for authentic choice and input—and in what they teach—e.g., by helping young people envision a desirable future..." (Yeager 2017, p. 79). Effective programs engage youths' emerging value systems and support their genuine desire to understand how the real world works (Yeager 2017; Yeager et al. 2017). For example, the SEL program, Facing History and Ourselves, incorporates into curricula discussions about social justice, racism, religious intolerance, and other themes. The program demonstrated numerous benefits for high school students, such as improved empathy, greater maturity in social conflicts, reduced racist attitudes, and fewer conduct problems (Facing History and Ourselves 2015).

Children Are Different Developmental scientists refer to temperament (Goldsmith et al. 1987), inhibition and shyness (Kagan et al. 1988), biological sensitivity to context (Boyce and Ellis 2005), or differential susceptibility (Belsky and Pluess 2009) to explain how individual children respond differently in similar environments. For example, children with low-reactive phenotypes may thrive in most any condition, shy children may be fearful in social situations, and sensitive children may be more easily overwhelmed by stimulation. Biologically sensitive children often experience more harm in adverse circumstances, while also reacting more positively in supportive environments (Boyce and Ellis 2005).

A program with a singular mechanism of change extrinsic to the child, like those that employ operant conditioning, zero-tolerance, or punishment as behavior change levers, may be ineffective simply because it fails to acknowledge individual differences. For example, research shows that children bully for diverse reasons, including social status (Pellegrini 2002), social control (Merten 1997), poor modeling (Espelage et al. 2000), marginalization (e.g. Warburton et al. 2006), or even

sadism (Jacobson 2012). Targets of bullying also vary. Most recently, the top reason given for being bullied was physical appearance (Lessne and Yanez 2016). Other victimized children may be withdrawn, inhibited, and passive. Some children fight back, and others are inclined to ignore the bullying or seek support (Waasdorp and Bradshaw 2011). Witnesses also vary. Some may be popular and find it easy to intervene as an upstander, but children who are sensitive, introverted, withdrawn, or anxious may have difficulty becoming an upstander or speaking up in a restorative justice circle. A shy child may be able to befriend a victim later, but a socially withdrawn or anxious child is more likely to be victimized by helping (Rubin et al. 2006). Groups also have different stressors (e.g., poverty, trauma, discrimination); thus, prevention practices should be sensitive to the individual and context, as well as using an equity lens (Simmons et al. 2018).

SEL programs vary in the degree to which they accommodate individual differences. Some programs teach one or two emotion regulation strategies (e.g., mindfulness or deep breathing), while others offer more granulated strategies. For example, an outgoing child might seek out a friend to deal with stress; an introverted child might read a book, listen to music, or regroup in solitude. Personality traits are neither hindrances nor boosters—they are guides toward helpful strategies. RULER supports students in discovering approaches that work best for each one, allowing strategies to be emotion- and context-specific, personalized, and culturally responsive. This requires unconventional flexibility in the classroom environment.

In sum, many BPPs tend to omit "the Person." In contrast, a bioecological approach to embedding SEL would acknowledge emotional development as central to human life, be specific to developmental processes, begin early in life, and facilitate differentiation for unique contexts and individuals. Most SEL programs foster students' academic, social, and emotional growth, while supporting children to learn positive replacement behaviors for aggression, power assertion, and bullying.

Context: Microsystem

A microsystem is a pattern of activities, social roles, and interpersonal relations experienced by the developing person in a given face-to-face setting... (Bronfenbrenner 2005, p. 147).

Primary caregivers and the family setting have the most prominent role in co-constructing children's early development, but as children grow, other microsystems, such as teachers, neighborhoods, and peers, become increasingly influential.

The Family Research has established that certain parenting practices are linked to positive child outcomes, while others are linked to challenges such as aggression, school bullying, and victimization.

Parenting for a secure attachment (Sroufe et al. 2009) and authoritative parenting (Baumrind 1978) are associated with lower behavioral risk and positive child outcomes, including increased prosocial behavior and improved social skills; healthier friendships and closer relationships; autonomy and self-agency; self-esteem; responsibility, creativity, and leadership; and achievement and academic success. Specific caregiving behaviors, or proximal processes, contribute to sculpting an infant's stress reactivity and emotion regulation. Sensitive caregiving and serve-and-return interactions help to organize hierarchical neural circuitry that processes, communicates, and regulates social and emotional information. Effective caregivers modulate their own emotions to avoid inducing excessively high or low levels of arousal in their infants, and they accurately read their baby's signals to upregulate pleasant feelings and downregulate unpleasant feelings. Parents' emotions also create a family atmosphere that provides a background of well-being for children's development (Schore 2015). Later, proximal processes co-construct children's emotional knowledge and behaviors, like emotion vocabulary and regulation, as well as empathy and prosocial tendencies. For example, children's emotional understanding and vocabulary are associated with parents' emotion skills (Fivush and Haden 2005; Laible and Thompson 2002). Caregivers also teach children to manage their feelings internally and externally; navigate social interactions; manage conflict; and continue to cultivate positive emotions, empathy, and prosocial tendencies (Eisenberg et al. 2013).

By contrast, family violence and parenting practices that are overly controlling, harsh, or lacking in discipline or supervision are associated with bullying perpetration. Victimization is associated with negative family interactions, or child maltreatment that creates rejection sensitivity, low confidence, and poor self-esteem in children (see Hong and Espelage 2012). Perpetration of aggression and victimization by siblings also increases the chances of bullying perpetration and victimization at school. However, the quality of parenting mediates sibling relationships. When parents use harsh practices with children, sibling aggression increases; when parents use positive practices, sibling aggression decreases (see Tippet and Wolke 2015).

Effective bullying prevention and the co-construction of positive replacement behaviors should involve the entire family. Numerous evidence-based interventions improve parenting practices and child outcomes (see Teti et al. 2017), from universal parenting education programs that teach authoritative parenting to time-limited, structured counseling with parents at risk for violence (e.g., Cowan et al. 2009). It is noteworthy that focusing on the co-parents' relationship can be

more effective than teaching parenting skills (Cowan and Cowan 2015). SEL interventions like RULER offer developmentally and culturally informed practices enabling parents to learn the same SEL skills their children learn in schools.

Teachers Teachers can knowingly or unknowingly enable bullying. Studies have shown that teachers miss most incidents of bullying (Swearer and Cary 2003). Some fail to help students when asked (Twemlow et al. 2006), bully students themselves (Twemlow et al. 2006), reinforce gender-based and sexual orientation-based bullying (Kosciw et al. 2012), or show a lack of empathy toward victims (Tettegah and Anderson 2007). They can overreact by confusing normal developmental conflicts with bullying, or over relying on harsh interventions, especially with preschool children (Gilliam 2005) and African-American boys (Gilliam et al. 2016).

Teachers with higher SEL have better relationships with their students. They display more positive emotions toward students and have higher job satisfaction (Brackett et al. 2010). They also create a more emotionally supportive learning environment and have fewer problems with classroom management (Brown et al. 2010). They use more strategies that cultivate creativity, choice, and autonomy (Jones et al. 2013). A study of 36 first-grade teachers showed that when teachers were more emotionally supportive of students, children were less aggressive and had greater behavioral self-control. Interestingly, behavior management was not related to student self-control (Merritt et al. 2012).

Neighborhoods Neighborhoods that are unsafe or lack parental supervision frequently have schools with higher rates of bullying, violence, and school suspensions (see Swearer and Hymel 2015). Numerous neighborhood-level interventions (e.g., community gardens, social vigilance, graffiti reduction efforts) improve quality of life, yet community and school interventions rarely engage directly with each other (Shonkoff and Phillips 2000). Neighborhoods are unique, complex systems, making a one-size-fits-all approach as inappropriate as it is for individuals. For example, in a study of the Coping Power program, parent support developed more successfully in the more advantaged neighborhoods, but children's aggression reduced more in neighborhoods with poorer social organization (Lochman et al. 2013).

Peers Peer relationships become increasingly salient with development and they track changes in cognitive, neurological, emotional, and social growth. To prevent peer maltreatment, it is helpful for educators to understand the normal developmental trajectory of peer relationships and specific issues that arise during sensitive periods. Some examples follow.

Most toddlers experiment with aggression, so caregiving requires positive tactics like redirection and teaching constructive, alternative communication strategies. In early childhood,

young children's play, though rich in emotional and social exploration, vacillates between solitary, parallel, and cooperative modes (Meyers and Berk 2014; Rubin et al. 1983). However, a long day with large groups of children in a structured setting can challenge a child's self-control, since their executive function and emotion regulation are just emerging. However, preschool aggression is very responsive to positive social problem-solving strategies (Vaughn et al. 2003). Persistent aggression at this age is predictive of later adjustment problems (Crick et al. 2006).

In elementary school, children sort themselves into stable friendship groups based on the psychological qualities of mutuality, reciprocity, interests, sensitivities, and trust. This sorting is ripe for skills development as new relationships are formed and others are reorganized (Cairns et al. 1998; Hartup and Abecassis 2002). Children demonstrate prevailing attitudes about power, privilege, dominance, and status, and some begin to use aggressive tactics toward low-status peers, socially awkward children, and those who simply appear "different" (Buhs et al. 2010). This is an important period for children's emerging moral development, perspective-taking abilities, and internalization of social rules; it offers valuable opportunities to teach emotional awareness and interpersonal skills.

With the onset of puberty and its significant social reorientation, peer dynamics are highly salient for better and worse. On the one hand, teens can be more inclusive, sensitive to others, community-minded, and idealistic (see Twenge 2017). On the other hand, the presence of peers can degrade attention, decision-making, and performance (Blakemore and Robbins 2012). The intensity and range of young teens' emotions change, e.g., they show heightened responses to others' facial expressions (Thomas et al. 2007), and an increase in self-conscious emotions like humiliation, pride, and guilt (Burnett et al. 2009). Teens' social groups become more complex (see Brown and Larson 2009), and aggression, dating violence, and physical, relational, and online bullying peak in middle school (e.g., Card et al. 2008). Thus, middle school is a critical period to address issues of power and respect, as well as healthy relationship skills and decision-making. Later, high school students navigate a deepening sense of self in the context of relationships, raising relevant questions about individuality, identity, intimacy, and autonomy.

Numerous SEL programs have shown modest promise for improving peer-to-peer relationships. For preschoolers, programs like PATHS (Bierman et al. 2010), Incredible Years Training Series (Webster-Stratton et al. 2008), Tools of the Mind (Barnett et al. 2008), and RULER (Nathanson et al. 2016) demonstrate small-to-moderate effectiveness for developing preschoolers' emotional, social, problem-solving, and conflict resolution skills, along with reducing conduct problems and improving pre-academic skills.

Children's social relationships increase dramatically in elementary school. A systematic review of 11 SEL programs for elementary school showed "robust" effects on SEL skills, and small, "but important" effects on aggression, depression, and academic outcomes (Jones et al. 2017, p. 62). A randomized controlled trial of RULER showed that it created stronger emotional climates and better relationships in the classroom compared with the control schools (Rivers et al. 2013). Steps to Respect (STR) reduced observed bullying (Frey et al. 2005) and other forms of aggression, while improving students' social skills (Shetgiri et al. 2015). Other programs like MindUP improved empathy and perspective-taking. PATHS reduced hostile attribution biases and the use of aggression in social conflicts, and 4Rs improved social processes in classrooms (Brown et al. 2011).

More research is needed regarding the effectiveness of SEL programs in improving teen social skills and reducing aggression, bullying, and harmful behavior. The Second Step program positively impacted homophobic name-calling and sexual harassment in one of two states tested, but did not show the desired declines in bullying, physical aggression, and victimization (Espelage et al. 2015). Promising programs focus on group-level dynamics such as changing social norms, training influential adults, and increasing respect in schools (Yeager 2017; Yeager et al. 2017). Efforts to improve social problem-solving and mindsets about others are also promising (Yeager et al. 2018).

Context: Mesosystem

The mesosystem is comprised of "the linkages and processes taking place between two or more settings containing the developing person...a system of microsystems" (Bronfenbrenner 2005, p. 148).

Bronfenbrenner cautioned that a breakdown of mesosystem connections risks making schools "breeding grounds of alienation" (Bronfenbrenner 1979, p. 231). Children have better outcomes when their mesosystem connections are continually and densely linked, especially through personal relationships. Developmentally supportive mesosystems have common goals, positive orientations, emotional and trusting relationships, bi-directional communication, and an evolving balance of power in favor of the child. Three mesosystems relevant for bullying reduction and the cultivation of SEL are school climate, home-school partnerships, and mental health partnerships.

School Climate A school's climate reflects its "heart and soul" (Freiberg and Stein 1999, p. 11) and its "quality and character" (National School Climate Center n.d.). School climate can be operationalized in a variety of ways, e.g., as the

sum of students', parents', and educators' experiences of the norms, values, relationships, pedagogy, and even the organizational structures they encounter; or the quality of teaching, learning, and relationships. In practice, though, it often simply refers to safety. Schools with a positive climate foster healthy development among all students, while a negative school climate is associated with higher rates of student bullying, aggression, victimization, and lack of feeling safe (Cohen et al. 2015).

Social norming in schools can be achieved in a variety of ways and can modify a school's culture so *desired* behaviors and feelings are positively identified and cultivated. BPP and SEL research shows that stakeholder support at every level is critical, and student input is essential to leverage peer dynamics and create positive peer pressure (Hinduja 2018). The Italian anti-bullying program, No Trap!, leverages peer educators to affect norms, behaviors, and climate to reduce traditional bullying and cyberbullying, though to our knowledge this has not been replicated in the USA (Palladino et al. 2016). Though elements of school climate vary among different institutions, the following are important considerations:

- Norms about feelings and relationships: Traditionally, schools communicate lists of unwanted behaviors, but they do not cultivate replacement behaviors or strategies. An embedded SEL approach leads with its explicit value on feelings, and strategies for intra- and interpersonal emotion regulation.
- Norms about power: The peer social fabric includes complex power dynamics involving popularity, rejection, discrimination, social scripts, crowds, cliques, teams, clubs, social mobility, inclusion, exclusion, and more. Individual children occupy roles varying by status, influence, and prognosis. For example, *popular prosocial* children are socially competent, friendly, and admired and have good social problem-solving skills. Although *neglected* children have low rates of interactions and may be shy, they are also socially skilled, satisfied with their social life, and not at developmental risk (see Newcomb et al. 1993). *Popular antisocial* children with social power and high status who behave poorly and have the power to lead others astray, along with rejected aggressive/withdrawn and controversial children, are at risk for poor outcomes and in need of support (Dijkstra et al. 2009; Lieberman 2013). Power is also held unequally between groups of children, based on gender, class, ethnicity, sexual orientation, etc. For example, a recent survey of 80,000 students in grades 5 through 12 across 24 states found that a majority of students rated their school climate negatively, and most felt that discipline was especially unfair for African-American students (García 2016).
- Norms about media: Video games and pornography saturate teen culture and detrimentally skew cognition, beliefs, feelings, physiologies, and behaviors of children, depending on

their exposure (American Psychological Association 2007; American Psychological Association 2015). Cyberbullying (and research on it) is a recent phenomenon, though there is a significant overlap between online and offline bullying (Olweus and Limber 2018). The most recent meta-analysis of 24 published studies showed that anti-cyberbullying programs reduced perpetration by 10–15% (OR = 1.233), and victimization by 14% (OR = 1.233) (Gaffney et al. 2018b). More effective programs address social skills training; use peer educators; share information about wise internet use among teachers, staff, and families (Espelage and Hong 2017); confer clear consequences; support student resilience (Hinduja and Patchin 2017); and improve school climate (Patchin and Hinduja 2012).

Almost all school leaders believe school climate is important. Eighty percent of teachers who consider negative school climate a problem view SEL as the preferred solution. Reforming school climate involves forming a council of students, parents, and teachers to lead a bottom-up process responding to the specific needs of a school (Cohen et al. 2015).

Home-School Partnerships Traditional BPPs are more effective when policies are communicated to parents (Ttofi and Farrington 2011), and the same is true for SEL programming. When parents are educated about, and involved in their children's SEL, children benefit (Albright and Weissberg 2010). This is especially true when the relationship involves two-way communication between home and school, when families are involved in activities at home and school, and when the activities are child-centered, constructive, clear, concrete, continuous, and proactive.

In the RULER approach, for example, families, like classrooms, are encouraged to create a "charter" in which family members decide together how they want to feel in the family and identify behaviors that will cultivate those feelings (Brackett 2019). Children are also assigned homework with their families, such as interviewing parents or other significant adults about their experiences with different feeling words (e.g., alienation, elation). This fosters sharing and psychological closeness and contributes to a shared emotion vocabulary at home.

Mental Health Partnerships Students who are bullied or witness bullying are frequently advised to seek help from a safe adult; thus, mental health practitioners with expertise in child development should be available at schools. Pediatricians, nurses, and psychologists receive continuing education in bullying prevention and intervention, and are well-positioned to screen for bullying and victimization during routine physicals, especially for students with diagnoses or qualities known to be at greater risk for bullying (e.g., LGBTQ students, students with disabilities). However, families of students who

experience bullying report that coordination of services between schools, families, and health practitioners is often lacking. Barriers include inaction by school personnel, poor investigation procedures, inadequate follow-up with parents, and inadequate screening and counseling by medical providers (García 2016).

Context: Exosystem

The exosystem comprises the linkages and processes taking place between two or more settings, at least one of which does not contain the developing person, but in which events occur that influence processes within the immediate setting that does contain that person (e.g., for a child, the relationship between the home and the parents' workplace....) (Bronfenbrenner 2005, p. 148).

Exosystems are settings that do not involve the child directly, but whose effects penetrate the microsystems. Exosystems relevant to bullying prevention include policies and laws, teacher training, and parent workplaces.

Policy and Laws Anti-bullying policies in the USA were adopted following the Columbine High School massacre in 1999. They were predominantly piecemeal, biased in favor of schools, and punitive rather than preventative. An analysis of 166 school-based bullying suits showed that among adjudicated cases, the final rulings favored schools over families (see Cornell and Limber 2015). School policies emphasize the careful definition of the term bullying, awareness of school training, reporting, investigating, and disciplining. One-third of states recommend counseling for involved students (Cornell and Limber 2015; U.S. Department of Health and Human Services 2017b), but they are increasingly taking a law-enforcement approach, applying criminal sanctions for cyberbullying, harassment, and bullying (Levick and Moon 2010). Meaningful bullying prevention policies should arise from collaborations between developmental scientists, educators, and lawmakers.

Other kinds of policies are also important. For example, bullying is more common in schools with greater income inequality (Due et al. 2009). Some policies concentrate violence, school violence, and bullying into particular neighborhoods, a kind of "social apartheid" that is devastating for youth (see Spike 2015). Even the nation's political climate can permeate schools. In the last presidential election, a poll of 2000 school leaders nationwide showed a rise in school-based aggression against students whose cultures were also verbal targets of national political candidates (Costello 2016).

Parents' Work Adult bullying in the US workplace mirrors school-based bullying. Approximately 37% of adults say they

have experienced workplace bullying, 44% have witnessed bullying (Namie et al. 2014), and similar to school absenteeism, 80% of workers said they would rather work alone because of hostile work environments (Mental Health America n.d.). Workplace bullying is also associated with suicidal ideation (Nielsen et al. 2015).

The prevalence of adult bullying may explain the belief that bullying is normal, and the hope that "standing up to it" in childhood might somehow prepare one for adulthood. However, the continuity suggests that it is not a childhood problem; it is a human problem. Therefore, the expectation that children alone can fix the problem is misplaced. A comprehensive approach to prevention would also address the embedded problem of adult bullying.

Teacher Preparation

A majority of teachers feel unprepared to deal with classroom bullying (Flower et al. 2017). Teachers traditionally receive little pre-service training in classroom management (Mason and Downing 2014). They are unlikely to interfere between students (Mason and Downing 2014), or they base their disciplinary strategies on the discipline they experienced in their families of origin (Kaplan 1992).

A review of 70 articles (1985–2014) showed seven areas of SEL functioning in which teachers wanted more support, including burnout, their students' feelings, and their own SEL skills (Uitto et al. 2015). Numerous SEL programs emphasize teacher training, especially teachers' SEL skills and classroom routines (Jones et al. 2013). For example, RULER training begins with building teacher, leader, and staff member emotional intelligence skills prior to student programming (Nathanson et al. 2016). When teachers use SEL programs, they feel better (Domitrovich et al. 2016), and their social and emotional competencies improve (see Schonert-Reichl 2017).

However, there is a growing disconnect between the offerings of teacher training programs in colleges and universities, and what teachers are expected to know about SEL in the classroom. A survey of teacher certification requirements throughout the USA showed that all states require some teacher SEL competencies, like social awareness and relationship skills, but few require personal emotional skills such as building teacher's own emotion regulation skills. Slightly more than one-half require student SEL (Schonert-Reichl et al. 2017).

Context: Macrosystem

The macrosystem consists of the overarching pattern of micro-, meso-, and exosystems characteristic of a given

culture, subculture, or other broader social context... with particular reference to the developmentally instigative belief systems, resources, hazards, lifestyles, opportunity structures, life course options and patterns of social interchange that are embedded in each of these systems... (Bronfenbrenner 2005, p. 149–150).

More than one decade ago, Bronfenbrenner criticized the USA for its “national neglect of children,” a stance “so deep and pervasive as to threaten the future of our nation...” (Bronfenbrenner 2005, p. 211). In order to make true progress on bullying prevention, the USA needs to change its mindset about children in some important ways.

Prioritize Children’s Well-being The USA is singular among industrialized nations in its poor treatment of children: It ranks 26 of 29 rich countries on UNICEF’s measures of overall child well-being. US teens have lower life satisfaction compared to teens in other wealthy nations, and they rank 27 of 28 nations in their quality of relationships with peers and parents (UNICEF Office of Research 2013). Childhood bullying in the USA ranks in the middle among most international comparisons (Musu-Gillette 2017). Stress, depression, anxiety, and psychopathology among US teens are at an all-time high, and have increased steadily in the last six years (Center for Collegiate Mental Health 2016; Twenge 2017). The USA ranks in the middle of other OECD countries on teen suicides (The Organisation for Economic Co-operation and Development Family Database 2017), but the incidences are increasing (Curtin et al. 2017). When a country’s youth trail the world on measures of school achievement, but are among the world leaders on youth risk, “it’s time to admit that something is wrong with the way that country is raising its young people” (Steinberg 2014, p. 1).

Enact Evidence-Based Policies That Support Children’s Well-being The USA lags worldwide in enacting policies that support families and children. It is the only UN member nation that refused to ratify the UN Convention on the Rights of the Child (UNCRC), and one of the world’s few developed countries without a comprehensive family policy. The USA lacks paid parental leave (Addati et al. 2014), support and standards for early childcare (OECD 2017), and measures to combat child poverty, despite increasing evidence of its link to adverse brain development and self-regulatory processes (Evans and Kim 2013). The UNCRC and the U.S. Department of Education stipulate that students have the right to a safe educational environment (U.S. Department of Education 2001), yet children in the USA are frequently forced to return to the site of their abuse day after day (Dwyer 2006).

Drop a “Spare the Rod” Orientation and Co-Construct Positive Behaviors The USA has a long history of employing

harsh practices toward children (Pinker 2011). Corporal punishment in schools remains legal in 19 states, and in 2014, an estimated 838 children were hit each day in public schools (The Children’s Defense Fund 2014). About ten years ago, two-thirds of US parents reported spanking their toddlers (Regaldo et al. 2004), and 85% of teenagers reported that they had been hit (Bender et al. 2007). Globally, 53 nations have banned spanking at home and corporal punishment in schools (Global Initiative 2015). The tide is finally beginning to turn in the USA. A recent study showed a decline in spanking of kindergarteners by almost one-half across all socioeconomic levels (Ryan et al. 2016).

Invest in Prevention The 19th US Surgeon General, Vivek Murthy, observed that the USA prefers to spend more money on responding to social ills, rather than preventing them (Murthy 2017). The federal government spends less on children now than 30 years ago, and the USA ranks ahead of only Mexico and Turkey in spending on children (Hoynes and Whitmore Schanzenbach 2018). The USA incarcerates more youth than any other developed nation, thus reducing the likelihood of high school graduation and increasing the probability of later criminal involvement (Aizer and Doyle 2013). Spending on incarceration over the last 40 years increased at three times the rate of K-12 educational spending (Stullich et al. 2016). Nearly every forecaster, from economists (e.g., Deming 2015; Heckman et al. 2006) to futurists (Prince and Swanson 2017), including the World Economic Forum (Soffel 2016), calls for the development of SEL skills in young people in order to prepare them for future workplaces. As mentioned, the price tag for bullying is extremely high, but the cost savings of implementing an SEL program is \$11 for every \$1 spent on students, schools, and communities (Belfield et al. 2015).

Chronosystem/Historical Time

The life course of individuals is embedded in and shaped by the historical times and events they experience over their lifetime (Bronfenbrenner and Morris 2006, p. 821).

Historically, the dominant view of children was to consider them property—inherently evil, ill-behaved, and in need of subjugation in order to become functioning adults. Maltreatment was normalized and legal. Child abuse was not outlawed in the USA until 1974 (Malousek et al. 2016), and as late as the 1980s, surgeries were performed on infants without anesthesia or pain medication (Johnston and Strada 1986). In 1928, the President of the American Psychological

Association, John B. Watson, warned that love is dangerous for children (Watson 1928). True empathy for children is a “late historical achievement” (deMause 2002, p. viii).

As recent as the twentieth and twenty-first centuries, science has shown conclusively that children grow best with loving care and acknowledgement that their feelings matter. Bowlby’s work on attachment (1969), Harlow’s research on the power of comfort (1959), and Rutter’s work on failure to thrive among institutionalized children deprived of caregiving (Rutter et al. 2007) show how crucial warmth, responsive care, and children’s feelings are to their long-term outcomes. The direct study of children’s emotions began in the late twentieth century (e.g., Lewis 2013; Harris 1989; Saarni 1999; Campos et al. 1989), and charted the development, differentiation, and relevance of children’s emotions. As methodologies improved, research revealed the emotional, social, and cognitive biases in pre-verbal infants, and how environmental conditions can amplify these tendencies (Bloom 2013). The growing field of developmental affective neuroscience confirms the relationships between early experience, emotions, and brain and nervous system development. The Collaborative for Academic and Social and Emotional Learning (CASEL), a policy and advocacy organization, was established in 1994 to support research, policy, and evidence-based practices to make social and emotional learning an integral part of children’s education. The history of childhood, then, is bending away from power-assertive approaches, and toward helping children to flourish with emotionally positive, evidence-based practices.

Summary and Recommendations

Bullying has often been called a problem in the peer relationship network (Salmivalli 2010), but Bronfenbrenner’s bioecological model of human development shows that it is rooted in multiple levels of the human ecology. While previous ecological analyses focused predominantly on school-level dynamics, this examination adds important levels of the developing person, and the larger exo-, macro-, and chronosystems where intervention efforts must also take place. Such a bioecological analysis leads to several recommendations.

First, the USA needs to decide to take the needs of children seriously. Our poor international standing suggests that the declining mental health of our students is due, at least in part, to the choices we make as a nation. The USA should make children’s well-being central to policy decisions. This is fiscally beneficial and more sustainable for the society and the economy.

Second, we must acknowledge that emotions and feelings matter. Research across multiple fields increasingly places the emotion system at the heart of development. Evidence shows

that the environment has a role in shaping children’s emotion systems, and in turn, altering the life course into adulthood, and that SEL can be taught effectively in schools (Aspen Institute 2018).

Third, schools should take on the responsibility of intentionally co-constructing children’s emotional and social lives from pre-k through the 12th-grade. Even in its nascent state, the research on a universal approach to SEL suggests that it can boost a school’s “immune system” by improving some aspects of children’s mental health and learning, preventing some problems from occurring, and helping a classroom or school to function more efficiently and positively.

Fourth, an SEL approach should balance the development of *personal* emotional and *interpersonal* social skills. SEL should not be a Trojan horse for increasing classroom management and social control, but should focus on authentically cultivating the positive, full development of the child and the adult educator, including caregivers. This requires reframing classroom management from emphasizing behavioral control to cultivating psychological health. Two reviews of SEL programs for preschool and elementary school show that many more programs focus on social skills, social problem-solving, conflict resolution, academic skills, and conduct issues, rather than improving individual emotion skills (CASEL 2013; Jones et al. 2017). Emotional intelligence in children and adults enhances their thinking and learning, relationships, decision-making, and mental and physical health (Brackett et al. 2016). Personal emotional skills are also fundamental to developing agency and autonomy required for resilience, so when bullying or other stressful life events occur, ill effects can be mitigated (Hinduja and Patchin 2017).

Fifth, the adoption of a universal SEL approach should occur in the context of a tiered public health model. This means that in addition to universal SEL education in tier 1, schools should coordinate with more skilled local mental health professionals for tier 2 and tier 3 interventions for at-risk children and families. At tier 1, a universal SEL approach will promote the skills that foster intra- and interpersonal well-being and will address normal challenges and difficult feelings and behaviors that arise in children that do not require outside intervention. These issues may include managing unpleasant feelings and impulses, friction from changing friendships, accidentally hurting someone’s feelings, and experimenting with power, micro-aggressions, manipulations, and humiliations. However, once bullying, harassment, or school violence occurs, a more differentiated response is required at a tier 2 or tier 3 level of intervention. This broader focus will require coordination between previously separate practitioners, teachers, and educational leaders.

Sixth, adult development should be prioritized before child development. Children’s development is co-constructed and scaffolded through interactions with others, and proximal processes with others are the “engines of development.” Children

can learn some SEL skills in a didactic, de-contextualized format, but they also need to have the lived experience of emotional and social skill building via real-time relationships. Therefore, adults need to be competent in their own emotional and social skills, including self-awareness, interpersonal problem-solving, and conflict resolution in order to model the skills, and co-construct skills in others. Therefore, SEL should be incorporated upstream into pre-service teacher training, as well as ongoing professional development. It also should be infused district-wide and embodied by everyone from leaders to transportation staff. Families (including siblings) should have access to ongoing training and support, but this component needs further research, as it has not been well-explored in any SEL program.

Seventh, programs should be developmentally wise. This means not simply scaling a one-size-fits-all to different ages, but tailoring curriculum to the salient emotional and social issues that arise during sensitive developmental phases, and basing pedagogy on cognitive, emotional, social, and moral development accordingly. This may mean that programs are qualitatively different at different ages. Programs should also be flexible and specific to allow diverse individuals and communities to adapt different but relevant means to the same ends. Programs may have a didactic component, but at a minimum SEL goals and skills should be continually enacted and refined in the everyday, lived experience of school life.

Eighth, SEL approaches need to be culturally sensitive. SEL practices developed and implemented within a Western culture may not sufficiently address cultural subgroups and might alienate students from different backgrounds (CASEL 2013). For example, more than 160 different languages are spoken by students and their families in New York City public schools, and norms related to social and emotional skills vary greatly by culture. This includes the rules related to social interactions and relationships that vary according to race, ethnicity, language, and religion (see Simmons et al. 2018; Aspen Institute 2018).

Ninth, more research is needed on the intersection of bullying prevention and SEL program implementation. For example, limited research exists on effective practices that promote school leader, teacher, and parent buy-in for SEL programming as a method to decrease bullying. More research also is necessary on the key ingredients of high-quality implementation of SEL practices to prevent bullying, aggression, and other negative behaviors. This only can be established with a comprehensive research agenda focusing on SEL practices, SEL program fidelity, long-term sustainability in schools and districts, and demonstrated impact on bullying behavior and other key outcomes such as improved school climate.

Schools cannot do this alone. Systems outside the schools, particularly in the meso-, exo-, and macro-systems, need to align with these developmental goals for children. This may

mean that schools become a “hub” of meso-system networks including education for families, coaches, teachers, and more, as well as navigators for local professionals and social services for tiers 2 and 3 care. It may mean changing university education department curricula to develop teachers as whole people. It may mean fostering adult emotional skill competence in workplaces, and raising awareness about workplace bullying, aggression, and harassment. It may mean providing extra resources to neighborhoods and communities in need. It may mean changing mindsets about how children grow and develop—that they become better adults through positively cultivating their capabilities, rather than harshly punishing their imperfections. It may mean improving harmful cultures of masculinity, feminine objectification, “differentness,” and violence-saturated media. And it may mean paying attention to the unintended consequences of US macro-level policies that contribute to rising inequality, as well as other policies undermining the ability of families and educators to tend to the “gardens” in which our children grow. Bronfenbrenner pointed out that “There is no more critical indicator of the future of a society than the character, competence, and integrity of its youth” (Bronfenbrenner 1996, p.1).

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