Trauma-Sensitive Schools:
An Evidence-Based Approach

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Adverse childhood experiences (ACEs) are a common and pervasive problem. There is a positive correlation between ACEs and difficulties across the lifespan. Unlike healthy forms of stress, ACEs have a detrimental impact on the developing brain. There are three types of trauma: acute, chronic, and complex. Most ACEs are considered complex trauma, the result of abuse by caregivers over time. The effects of complex trauma are not always visible and may manifest in several ways, including behavioral issues at school. Piecemeal community-based interventions and current educational policy do not adequately address the problem of ACEs and children are left to suffer the impacts of trauma. Adaptive capabilities of children who thrive despite having ACEs are important to integrate into any model of intervention. Trauma-sensitive schools understand the impact of trauma on the developing brain and provide support so that students can thrive in the classroom environment. The logic model provided in this article will serve as a guide to help school district administrators create the framework for a healthy school ecosystem that addresses the needs of the whole child.

Keywords: *adverse childhood experiences, positive behavior intervention support, social and emotional learning, trauma-informed care, trauma-sensitive schools*

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> If 20 million people were infected by a virus that caused anxiety, impulsivity, aggression, sleep problems, depression, respiratory and heart problems, vulnerability to substance abuse, antisocial and criminal behavior, . . . and school failure, we would consider it an urgent public health crisis. Yet, in the United States alone, there are more than 20 million abused, neglected and traumatized children vulnerable to these problems. Our society has yet to recognize this epidemic, let alone develop an immunization strategy.
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>   (Perry, B. D., Child Trauma Academy, & Linkletter Media, 2003)

Childhood trauma is a common and pervasive problem, affecting approximately two-thirds of Americans (Centers for Disease Control and Prevention [CDC], 2016). Trauma affects a person's quality of life across virtually all domains (Felitti et al., 1998). In the United States, 90 percent of students attend public schools; therefore, public schools are the ideal medium for comprehensive intervention (National Center for Education Statistics, 2015). As one widely cited study found, the majority of American children receive access to mental health services through the school system (Farmer, Burns, Phillips, Angold, & Costello, 2003; Ko et al., 2008). Additionally, most children remain in the public school system for thirteen crucial developmental years. This article will discuss the impact of trauma on children, as well as the approach to democratizing trauma-informed care and current education policy, and will present a logic model for creating trauma-sensitive schools. The life span impacts of childhood trauma can be mitigated by creating a healthy school ecosystem that addresses the needs of the whole child.

The Impact of Trauma

Stress can have a positive effect on the developing brain. If the stress that a child experiences is predictable, moderate, and controlled, then the child will likely develop resilience (Perry, 2007). However, if the stress is unpredictable, severe, and prolonged, the child will be likely to develop an acute vulnerability to the body's stress response (Center for Youth Wellness, 2014). Trauma is an extreme form of stress that affects the brain development of children. It can cause adverse reactions in all areas of life, including behavior and learning (Wolpow, Johnson, Hertel, & Kincaid, 2009). Simply stated, children experiencing high levels of toxic stress are unable to achieve their full academic potential. Studies demonstrate that, because the brain of a child is more malleable than that of an adult, excessive adversity changes the child's brain chemistry and structure (Center for Youth Wellness, 2014; Wolpow et al., 2009).

There are three distinct types of trauma: acute, chronic, and complex (Department of Children and Families [DCF], 2012). Acute trauma refers to a single event, such as a natural disaster or a parent's suicide. Chronic trauma refers to repeated exposure to assaults on the mind or body, such as repeated sexual assaults or domestic violence. Complex trauma refers to exposure to chronic trauma, generally by the child's primary care-givers, and the impact of such exposure over time (DCF, 2012).

The impact of trauma on the developing brain is significant and man-ifests differently during each stage of development. As people grow, their brains develop from the bottom up and inside out (Bloom, 2014). The central nervous system (CNS), which includes the brain and spinal cord, develops very early in utero through adulthood (Eliot, 2000). Although trauma has the potential to affect all parts of the CNS, some of the cru-cial structures directly affected by childhood trauma include the limbic system, midbrain, and cerebral cortex (Perry, 2002, 2006, 2007; Teicher, 2002; Teicher et al., 2010). For example, the limbic system, which regulates functions such as emotional control, heartbeat, and physical balance, is also responsible for the fight or flight response (Teicher, 2002). If trauma occurs during the development of this part of the brain, a person's stress response; ability to interpret social cues and language; ability to wake, sleep, breathe, and relax; and sexual behavior may be affected (Perry, 2002, 2007). The midbrain, a central part of the brainstem, develops between birth and age six (Perry, 2007). If complex trauma occurs during this stage, a person may have difficulty with motor function, coordination, and spatial awareness. Lastly, the cerebral cortex, which controls higher orders of brain function, begins synaptic pruning around age three and experiences the most active growth before age six (Perry, 2006). Traumas that occur while the cerebral cortex is develop-ing can affect an individual's ability to plan, problem solve, use language, and develop higher order thinking (Perry, 2007; Teicher et al., 2010). In summary, being subjected to prolonged, severe, unpredictable stress will cause a child to operate in the lower orders of the brain more frequently (Perry, 2006).

If subjected to prolonged, severe, unpredictable stress, a child in school may experience either hyperarousal or hypoarousal and may be in con-stant fight, flight, or freeze mode, causing other higher order functions to become secondary in importance (Perry, 2007). The child's body becomes primarily concerned with survival and self-preservation; learn-ing, academic performance, and appropriate behavior will no longer be of the utmost importance. Additionally, the longer children spend in the lower orders of the brain, the more easily they may operate there on

a regular basis (Perry, 2006). Therefore, the more time a child spends in hyperarousal, the more normalized the state of hyperarousal may become. When this happens, learning may become more difficult. A child with difficulties in self-regulation, attention, impulse control, and higher order thinking may struggle in the typical classroom environment. School staff may not attribute difficulties in self-regulation, attention, impulse control, and higher order thinking to a history of interpersonal trauma and may instead mistake these for negative character traits. For example, children who regularly experience abuse or neglect in the home are more likely to act out in the classroom because they experience hyper-arousal, even when they are at school (Perry, 2006). This is because the child's brain gets stuck in survival mode, and the child cannot discrimi-nate between safe and unsafe environments due to the unpredictable nature of the traumatizing events (Perry, 2007). It is important to under-stand that this is not a maladaptive behavior. The child's brain has learned that, in order to survive, it needs to remain in survival mode at all times. Unfortunately, children have no control over the development of their brain. A brain that is developed to survive, left without intervention, will be a brain that has difficulty learning in school (Wolpow et al., 2009).

The Adverse Childhood Experiences Study

The occurrence of adverse childhood events is pervasive. At any given time, two-thirds of American students are vulnerable to the effects of complex trauma (CDC, 2016). In the United States, adverse childhood experiences (ACEs) are a silent epidemic whose impact extends to adult physical health, mental health, work, and lifespan outcomes (Anda et al., 2004; Corso, Edwards, Fang, & Mercy, 2008; Dube, Anda, Felitti, Edwards, & Williams, 2002; Dube et al., 2006; Felitti & Anda, 2009; Felitti et al., 1998; Stewart, Ricci, Chee, Hahn, & Morganstein, 2003). The pervasive cycle of perpetual trauma in American society will not stop without intervention and is best addressed by educational systems (Wolpow et al., 2009).

The ACE studies are a series of longitudinal studies that measure the correlation between adverse childhood experiences and adult health, psychological, and professional outcomes (CDC, 2016; Corso et al., 2008; Dube et al., 2002; Dube et al., 2006; Felitti et al., 1998). Brought together through collaboration between the CDC and Kaiser Perma-nente, researchers Robert Anda and Vincent Felitti conducted the origi-nal ACE study over a ten-year-period. In this original study, there were

seven predominant types of adverse childhood experiences, all of which participants experienced prior to the age of eighteen (CDC, 2016; Felitti et al., 1998). These adverse experiences included psychological abuse, physical abuse, sexual abuse, substance use in the household, mental illness in the household, violent treatment of mother, and criminal behavior of a household member (Butchart & Harvey, 2006). In subsequent ACE studies, parental divorce and emotional and physical neglect were added, increasing the total number of ACEs to ten (CDC, 2016). Most of the ten categories are considered complex trauma due to their unpredictable nature and their occurrence at the hands of caregivers (DCF, 2012; Felitti et al., 1998).

The findings of the original ACE study were astounding, especially considering the population. The more than seventeen thousand participants were primarily people who were well educated, had good incomes, and had high-quality health care (Felitti et al., 1998; "Origins and Essence," 2003). Outcomes were especially surprising because those three factors are typical measures of success in American society. Despite participants' successful status, the ACE study uncovered astonishingly high rates of trauma among them. This trauma was positively correlated with negative physical health, mental health, and workforce outcomes. Approximately 36.1 percent had no ACEs, 26.0 percent had one ACE, 15.9 percent had two ACEs, 9.5 percent had three ACEs, and 12.5 percent had four or more ACEs (CDC, 2016). This means that approximately two-thirds of the American population has at least one ACE. Therefore, childhood trauma is not rare, but is something that happens to the majority of the population. Additionally, the study found a person with one ACE is approximately 85 percent more likely to have more ACEs. The ten categories of ACEs do not occur independently, but instead are interconnected and likely to be comorbid (Felitti et al., 1998).

National and community-based surveys have demonstrated that between 55 and 90 percent of people experience at least one traumatic event, with an average of five traumatic events per lifetime (Health Foundation for Western & Central New York, 2012). Homelessness, poverty, heart disease, mental health deterioration, suicide, obesity, unintended pregnancy, sexually transmitted diseases, substance abuse, and countless other coping behaviors and physical ailments have been shown to be the direct result of ACEs (Felitti & Anda, 2009; Felitti et al. 1998). In fact, if a person has six or more ACEs, that person is more likely to die twenty years earlier than someone with no ACEs (Anda et al., 2009; Felitti et al., 1998).

The Impact of ACEs on Children

The impact of ACEs on children can manifest in several ways. One impact may be that the child has difficulty with critical brain functions such as focusing, learning, self-regulation, and decision-making (DCF, 2012). This may mimic the symptoms of attention deficit hyperactive disorder although, in fact, it is the result of childhood trauma (Navsaria, 2014). Attachment difficulties, including being unable to trust others, empathize, regulate emotions, or manage stress, are also possible. A child may experience difficulty regulating emotions that may present as appearing withdrawn, expressing a flat affect, or experiencing angry outbursts. A child may also have difficulty regulating behavior that may present as aggression, over-sexualized behavior, or self-injury, for example (Anda et al., 2006; DCF, 2012).

In addition to behavioral effects, ACEs may cause cognitive effects that may manifest as language delays, IQ deficits, learning disabilities, inability to concentrate or complete assignments, inability to learn from experience, or difficulty preparing for events (DCF, 2012). In fact, a study of 701 children by the Center for Youth Wellness (formerly the Bayview Health Clinic) found that a child with four or more ACEs was thirty-two times more likely to be labeled with a learning or behavior problem than a child with no ACEs (Scott, Burke, Weems, Hellman, & Carrion, 2013). Self-concept may also be affected, as children who experience poor treatment may feel helpless, unlovable, or worthless (DCF, 2012). Children may even blame themselves for their ACEs and feel guilt or shame as a result.

Lastly, children who are affected by ACEs may have difficulty with social development, including difficulty forming and keeping friendships and propensity to engage in unhealthy relationships or isolate themselves socially. Clearly, traumatic experiences may have a myriad of detrimental effects on both social and academic performance, which can determine whether a child is ultimately successful in school (DCF, 2012). This is why it greatly behooves teachers and administrators to be aware of the impact of trauma so that they are able to help children succeed and survive in an educational environment (DCF, 2012; Wolpow et al., 2009).

As previously discussed, it is clear that childhood trauma has negative consequences across virtually all domains of life (Felitti et al., 1998). Because current research shows that more than two-thirds of all students experience the trauma of ACEs, it would be prudent to make access to trauma-sensitive education and complementary research-based inter-

ventions available to all students in America (CDC, 2016). The most efficient way to make trauma-sensitive education and complementary research-based interventions available to all students in America is through the public school system because the vast majority (90%) of students attend public school (National Center for Education Statistics, 2015). Currently, no other institution in the United States has such a readily available structure to implement trauma-sensitive education nor such direct, long-term access to children during the thirteen crucial developmental years.

Democratizing Trauma-Informed Care

Studies have shown that complex trauma greatly affects behavior, academic performance, and drop-out rates in schools (Wolpow et al., 2009). Simply stated, children experiencing complex trauma are unable to achieve their utmost academic potential. As research has demonstrated, the majority of the population is likely to have experienced ACEs; therefore, it is sensible to make trauma-sensitive practices the norm, not the exception. Democratizing trauma-informed care in schools (making it available to all) will provide children with trauma a more adequate level of support to access educational opportunities.

The key to understanding resilience in the face of toxic stress and adversity lies in clearly identifying why some children can develop successfully despite having grown up with ACEs. Child psychologists Masten and Coatsworth outlined three factors that all resilient children have in common (as cited in Cole, O'Brien, Gadd, Ristuccia, Wallace, & Gregory, 2005): (1) a strong parent-child relationship, or, when such a relationship is not available, a surrogate caregiving figure who serves a mentoring role; (2) good cognitive skills, which predict academic success and lead to rule-abiding behavior; and (3) the ability to self-regulate attention, emotions, and behaviors. The authors argue that exposure to complex trauma thwarts these adaptive capabilities; therefore, any worthwhile intervention would bolster these three factors.

The Complex Trauma Task Force of the National Child Traumatic Stress Network (NCTSN) published a paper that both supported these findings and proposed a model of intervention to address the issue. The ARC (attachment, self-regulation, and competency) is a three-pronged model (Cole et al., 2005): "(1) building secure attachments between child and caregiver(s), (2) enhancing self-regulatory capacities, and (3) increasing competencies across multiple domains." Although best practices advocate for educating the whole child, current federal legislation

focuses on addressing negative behaviors in the classroom. Unfortunately, focusing on symptoms of problems instead of the problems themselves means that children may simply demonstrate behavioral compliance in the classroom rather than being empowered and able to learn. This would be the equivalent of firefighters fighting the smoke and not the fire (Family Resources, 2014).

Current Education Policy

Current federal policy for the treatment of behavioral issues in the classroom is influenced by the Every Student Succeeds Act of 2015 (Civic Impulse, 2016) and the reauthorization of the Individuals with Disabilities Education Improvement Act of 2004 (IDEA). These pieces of legislation require teachers to be highly qualified and use evidence-based practices in order to increase academic achievement and mainstreaming of students with disabilities (Yell, Shriner, & Katsivannis, 2006). They were meant to provide greater school accountability for providing a free and appropriate public education to all students regardless of disability status or behavioral needs. Instead of being reactionary, Positive Behavioral Interventions and Supports (PBIS) was added to the 1997 amended version of IDEA to proactively address behavioral needs and emotional disabilities (Office of Special Education Programs [OSEP], 2015). In October of 2013, a new five-year funding cycle for PBIS began. This funding included competitive grant money for, among other things, training all faculty and staff members in schools in the implementation of PBIS (OSEP, 2015).

To implement PBIS, schools identify a leadership team of administration, faculty, and staff to attend PBIS trainings and oversee implementation. Positive Behavioral Interventions and Supports is a three-tiered system of support that has been implemented by more than twenty thousand schools nationwide. School teams participate in a three-year cycle of training, based on the three tiers of PBIS (OSEP, 2015). The first tier involves behavioral interventions on a school-wide level. Some students may not respond to first-tier interventions and will therefore progress to the second tier. Second-tier interventions involve children working in small groups, with more focused interventions. When the needs of these children are still not met through the second tier, they progress to the third tier and receive individual, personalized interventions (OSEP, 2015).

Students' significant emotional and behavioral needs take precedence over their academic needs because, as previously discussed, they will most likely have difficulty learning if their brains are in a hypoaroused or

hyperaroused state (Benner, Kutash, Nelson, & Fisher, 2013; Perry, 2006; Perry, 2007). However, PBIS is used primarily to manage classroom behavior. Although this may have immediate external benefits for teachers and schools, it does not address the underlying causes of student behavior or long-term student outcomes. A quiet, compliant classroom does not necessarily equal a student population that is focused and able to learn. As previously noted, ACEs have a causal relationship with the negative behaviors that PBIS attempts to address (Wolpow et al., 2009). Therefore, PBIS does not address the root cause of negative classroom behavior or the impact of complex trauma on the developing brain. Many schools have successfully lowered the number of office discipline referrals (Bui, Quirk, & Almazan, 2010) that are made when a child's inappropriate classroom behavior in the classroom inhibits peers' ability to learn. However, punishment is not the ideal or correct way to help a child overcome the impact of trauma and enable learning in school (Corcoran, 2006). Instead, a trauma-sensitive school is needed to address the underlying causes of inappropriate classroom behavior (Corcoran, 2006; Wolpow et al., 2009).

School-Based Interventions

Before the impact of childhood trauma and ACEs was discovered and prior to the 1997 federally mandated addition of PBIS to IDEA (Payton et al., 2008), some institutions recognized the need to address the problems of student classroom behavior, engagement, and drop-out rates. The prevalence of negative student behaviors in the classroom demonstrated a significant gap in social and emotional competence. Institutions realized that, to address poor classroom behavior and engagement, students needed to be taught pro-social skills in the school setting (Payton et al., 2008). Social and emotional learning (SEL) has been used within the school environment to address a myriad of challenging social and academic issues. It addresses emotional literacy and problem solving, two of the most recommended resiliency-building capacities for treating childhood trauma and ACEs (Payton et al., 2008), through supportive relationships.

The Momentous School, a laboratory school located in Dallas, Texas, is one example of a school with robust SEL implementation and support. It began with the goal of breaking the cycle of poverty and abuse within families (Momentous Institute, n.d.). According to its website, the Momentous School serves six thousand students and family members per year. The Momentous model focuses on current social and emotional learning practices and current brain biology research. The school takes a

holistic approach to education that includes brain-based SEL curriculum for students and robust training for faculty and administration, as well as family counseling and parent education to implement these strategies based around community intervention. Essentially, faculty, administration, and the community have developed a trauma-sensitive school ecosystem. Schools such as this that utilize current evidence-based SEL practices and brain research create the foundation upon which to build trauma-sensitive schools. Implementing trauma-sensitive practice bolsters children's protective factors, coping skills, and pro-social behaviors (Schonert-Reichl & Lawler, 2010).

Although the Momentous Institute's wraparound services model is certainly comprehensive, a meta-analysis of 213 school-based SEL programs strongly demonstrated that effective SEL programming can be achieved by utilizing only current school personnel and that it can be woven into the existing school-day curriculum (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). One of the first schools to begin adopting a trauma-sensitive approach was Lincoln High School, in Walla Walla, Washington (Stevens, 2012). Community leaders and school personnel made the connection early between the ACE study and classroom behavior. Prior to the implementation of this approach, Lincoln High School had 798 suspensions, 50 expulsions, and 600 office discipline referrals in one school year (Stevens, 2012; Walla Walla Public Schools, 2013). One year after existing school personnel implemented a trauma-sensitive approach within the regular school-day curriculum, there were only 135 suspensions and 30 expulsions (Stevens, 2012). Within five years, the number of office discipline referrals decreased to 95 (Walla Walla Public Schools, 2013). Because PBIS had already been mandated by the state before this intervention, these results clearly demonstrate that a trauma-sensitive approach to PBIS is more efficacious than a solely compliance-based PBIS model (Stevens, 2012).

Creating Trauma-Sensitive Schools: Logic Model

The purpose of the logic model presented here (see appendix) is to help school district administrators create the framework for a healthy school ecosystem that addresses the needs of the whole child. In particular, this model focuses on mitigating the impacts of trauma using the most recent brain research and evidence-based practices. There are several resources that suggest how to screen particular children for trauma. However, the impacts of trauma are not always readily apparent. Thus, the corner-

stone of this logic model is the creation of a trauma-sensitive school culture that will help enable all children, regardless of trauma history, to reach their full academic potential. Additionally, the federally mandated PBIS tiered framework is the ideal scaffolding for the training and implementation of trauma-sensitive practices.

This model is intended to be flexible so that each district can individualize its program based on student needs and community culture; however, there are five core components of trauma-sensitive schools that must be included in every model (Milwaukee Public Schools, 2015): (1) training faculty and staff on the impact and prevalence of trauma; (2) adopting a school-wide perspective shift; (3) creating healing relationships among staff, caregivers, and students; (4) maximizing caregiver capacity; and (5) facilitating student empowerment and resiliency. First, it is suggested that faculty and staff be trained in the basic biology of trauma and how it affects brain development. Second, informing staff about ACEs can help give faculty and staff a perspective shift, which enables them to see student problem behaviors as an attempt to get needs met instead of disobedience. Third, faculty and staff members in a trauma-sensitive school concentrate on building healing relationships. Teachers must be empowered to build relationships with students based on trust, which will help students feel safe in school. Fourth, maximizing caregiver capacity means having a collaborative, team-oriented environment in which ample support is given. Lastly, it is important to empower students as much as possible and to foster building resilience skills in the classroom through interventions that go hand in hand with PBIS. Children who have felt hopeless and powerless will feel empowered and begin to trust teachers who help them effect change in their own lives (Milwaukee Public Schools, 2015).

Resources

Many of the resources necessary for creating a trauma-sensitive school are already components of American public schools. For instance, PBIS is mandated to have a school leadership team (OSEP, 2015). Trauma-sensitive practices can be dovetailed into PBIS implementation by this leadership team, effectively making them the school's trauma champions without creating extensive extra work (Family Resources, 2014). The trauma champions will serve as the school experts on trauma-sensitive practices, ensuring that their use of PBIS is evidence based and trauma sensitive at every level of intervention.

Training

School-based mental health professionals need to be trained in evidence-based practices (National Association of Social Workers [NASW], 2012). Much of the current research surrounding trauma-sensitive mental health services involves cognitive-behavioral therapy (Barron, Abdallah, & Smith, 2013; Brackett, Hagelskamp, Rivers, & Salovey, 2013; Goodkind, LaNoue, & Milford, 2010; Stein et al., 2003). As of the date of publication of this article, a web-based learning course for trauma-focused cognitive behavioral therapy (TF-CBT) is currently available at the Medical University of South Carolina (2015). Although the online course does not offer certification to practice TF-CBT, it can serve as an introduction and CEUs for some mental health providers in several states.

Caseload

Another important resource for mental health professionals is an appropriately sized caseload. In order to provide adequate support to students and staff, mental health professionals cannot be overloaded; this is unhealthy for students, staff, and the mental health professionals themselves. Currently, in a school building serving general education students, the recommended ratio for school social workers is a minimum of 1 school social worker per school building, with a ratio of 1 school social worker to every 250 students in the building (NASW, 2012). The American School Counseling Association (n.d.) also suggests the ratio of 1 counselor to every 250 students in a general education school. However, if a school serves students with high needs, the recommended ratio is 1 school social worker for every 50 students. These numbers must not be considered static, however, because every school is different and mental health professionals must be ready to meet the needs of their particular schools. It is important to remember that mental health professionals provide support not only for students, but for families and teachers as well. They are an important component of a comprehensive support system for all parties involved in the school setting.

Funding of Supplies

Although most components of implementation do not involve additional expenses, some funding should be allocated to this area for purposes such as staff development. All district faculty and staff members need to be trained in trauma-sensitive methods to ensure a district-wide

perspective shift (Wolpow et al., 2009). Costs incurred here may include pay for staff, depending on timing of training, and fees for a competent trainer if an expert is not available within the school district. Another possible implementation expense is for the creation of trauma tool kits for each classroom (Bailey, 2010). These tool kits would be placed in a "safe space" in each classroom and would include many different sensory application tools to either activate or calm hypoaroused or hyperaroused students. The idea behind these tool kits is that each person responds to sensory experiences differently and the tools empower students to find out what helps them to achieve an optimal level of functioning so that they can maximize learning (Bailey, 2010; Perry, 2007).

Program Assessment Tool

Lastly, school districts will need to obtain a comprehensive research-based program assessment tool such as Creating Cultures of Trauma-Informed Care: A Self-Assessment and Planning Protocol, Services Implementation Plan, and Program Self-Assessment Scale (Fallot & Harris, 2009). This tool should be used by district PBIS leadership teams to assess the overall areas of strength and need within the school district. It will help schools build a comprehensive, evidence-based trauma-sensitive culture based on existing strengths.

Activities

After acquiring resources, a school district will begin taking action toward creating a trauma-sensitive school culture.

Role of the School Social Worker.   School social workers are specially trained mental health professionals whose role it is to support the academic mission of the school through various services, including but not limited to therapy, consultation with teachers, and behavior support. The school social worker plays a vital role and acts as a facilitator throughout the process by ensuring that activities are carried out in a succinct, organized way that keeps empathy for the whole child at the heart of policy changes and activities. School social workers will act as facilitators for assessing the school culture; evaluating school discipline policies; identifying an evidence-based social and emotional learning curriculum; collaborating with outside agencies; and educating students, staff, and families on the prevalence and impact of trauma. Although they are flexible, the activities in the logic model (appendix) are organized linearly, which will likely be the most efficient and sensible order of implementation.

However, if the order in which activities are presented does not work for a school district, the district is advised to modify the framework so that it can be used easily and sensibly. Again, this framework is meant to be flexible and adaptable.

Assessment of School Culture.   First, school districts must complete an assessment of their current school culture to determine strengths and areas of need (Fallot & Harris, 2009). The school social worker's role is to help facilitate the assessment of school culture in a way that is sensitive to the needs of students, staff, and the community. The assessment itself will be completed by the PBIS leadership team which, as previously discussed, is made up of select administrators, faculty, and staff members. The time it takes to complete this assessment is entirely dependent upon existing workloads, accessibility of data, and number of leadership team members. Additionally, the Fallot and Harris tool is meant to serve as a general guideline. Some questions and data fields may need to be slightly modified in order to fit the context of the school environment. After data are collected, they must be evaluated by the PBIS leadership team and school district administrators. They will identify areas of strength and need and the results will help to determine the trajectory of future steps.

Evaluation of Discipline Policies.   Next, leadership team members should evaluate school district discipline policies. The PBIS approach involves rewarding students for positive behavior, which is more effective than punitive discipline measures (Corcoran, 2006; OSEP, 2015). However, schools may not have addressed existing discipline policies during implementation of PBIS. It is imperative that they be evaluated as part of the process of creating a trauma-sensitive school culture. Consequences should be logical instead of punitive, they should be respectful, they should never involve humiliation, and they should be nonviolent (Corcoran, 2006; Wolpow et al., 2009). The first line of defense in school discipline policies is the development of healing relationships between faculty and students (Search Institute, 2014). If staff members are able to develop mutually respectful and positive relationships with students, then students are more likely to feel safe and respected and to be positive and present (Search Institute, 2014). Additionally, there is a need to balance accountability and an understanding of traumatized behavior. Consequences throughout school environments should be uniform, and students should be educated about the purpose of consequences (Wolpow et al., 2009). After evaluation and analysis of existing policies, the school district should create a strategic plan to fuse trauma-sensitive practices with PBIS and the whole school environment. The

strategic plan will be based specifically on the results of the Fallot and Harris program evaluation tool and the evaluation of district discipline policies. This plan will serve as a strong foundation for the PBIS leadership team to develop district-wide guidelines for training, education, and overall school culture.

Identification of Social and Emotional Learning Curriculum. One of the most important steps is for the team to identify a social and emotional learning curriculum (Zins, 2004). Although the curriculum will be chosen based on specific school district and student needs, it should follow a few specific guidelines. First, it should be evidence based (Payton et al., 2008). Second, the curriculum should ideally be implemented throughout the entire school year. Students are far more likely to be successful if they are constantly working on emotional competency rather than piecemeal lessons. Additionally, faculty and staff can model assertive behavior when interacting with students to demonstrate how students are expected to behave (Wolpow et al., 2009). The social and emotional learning curriculum would ideally help shape the whole school climate, focusing on developing emotional literacy, coping skills, empathy, and other pro-social behaviors such as respect. Finally, the curriculum should utilize developmentally appropriate lessons (Wolpow et al., 2009; Zins, 2004).

Creation of a School Crisis Plan. A school crisis plan is important because it helps ensure that all staff are educated and understand the process of de-escalation and assisting children who are in crisis or having a behavioral outburst that needs to be addressed (Milwaukee Public Schools, 2015). A comprehensive crisis plan should include (1) de-escalation techniques, such as using the safe space in the classroom and sensory application tools; (2) identification of the crisis team members and their roles; and (3) contact information for each team member (Bailey, 2010; Milwaukee Public Schools, 2015). Crisis plans should be given to every staff member in the school and posted prominently in every room. Every staff member should be briefed on what to do in the event of behavior escalation or a crisis event for a child. This will ensure that every staff person in the entire school district is aware of exactly how to help children who have been traumatized and that there is a continuity of care across the entire district.

Trauma-Informed Staff. One very important step is to educate staff on the prevalence and impact of trauma. A perspective shift enables them to understand the purpose of creating a trauma-sensitive school and better understand the traumatized children with whom they work

(Butchart & Harvey, 2006; Milwaukee Public Schools, 2015; Wolpow et al., 2009). By educating staff about the impact of trauma, the school district is effectively teaching them the causal relationship between ACEs and behavior. This is the missing piece behind the implementation of PBIS. For the school to be trauma-sensitive not only in writing, but also in practice, it is recommended that school staff clearly understand the prevalence of child trauma, the purpose of becoming a trauma-sensitive school, and the outcomes of becoming trauma-informed.

Maximizing Caregiver Capacity.   Maximizing caregiver capacity involves understanding that teachers and staff are not immune to the impacts of ACEs and need adequate support and self-care. Additionally, school staff members are potentially vulnerable to the effects of vicarious trauma that may occur as a result of interacting with traumatized children (Wolpow et al., 2009). Because ACEs are incredibly common, the majority of teachers are likely to have experienced interpersonal trauma and therefore may be unintentionally triggered in the classroom by children who are attempting to process their own trauma (CDC, 2016; Felitti et al., 1998). School staff also would benefit from acknowledging the impact on them of helping students who have been traumatized, ensuring that they recognize the importance of self-care, and attending to self-care activities. Teachers who are unable to regularly attend to their own care and develop burnout, compassion fatigue, or vicarious trauma may be unable to adequately respond to their students. Self-care activities for teachers include but are not limited to getting appropriate nutrition, maintaining physical fitness, seeking comfort in a friend, attending to spiritual wellness, and generally finding ways to relax or blow off steam so that they feel rejuvenated and ready for the classroom and assisting children who have experienced ACEs (Wolpow et al., 2009).

Continuing Education for Staff.   Lastly, even after successful implementation, a school district must continue to provide ongoing training for staff, consisting of the latest best practices in teaching children affected by trauma (Cole et al., 2005; OSEP, 2015). Ongoing training should educate and encourage staff members to develop strong relationships with students, demonstrate the important role that caregivers play in the lives of traumatized children, and continue to teach staff members about social, emotional, and academic supportive resources to help their students (Cole et al., 2005). Because all staff groups are different, districts should consider trainings that can be slightly modified in order to best fit with the faculty and staff needs at each school. Suggested train-

ing topics include partnering with children's caregivers, understanding the impacts of domestic violence on children, and implementing strategies for communication with students and families (Cole et al., 2005). Trainings should continue to build on teacher competencies and skills in the areas of social and emotional development.

Outputs

In some states, PBIS alone has made progress in decreasing office discipline referrals (Bui & Almazan, 2010). In a meta-analysis of schools that had implemented social and emotional programming, there was a marked decrease in disruptive behavior, noncompliance, aggression, delinquent acts, and office discipline referrals (Durlak, Weissberg, & Pachan, 2010). Additionally, it has been well established that the addition of trauma-sensitive resources into schools means that students with trauma histories will be better equipped to reach educational attainment goals (Adelman & Taylor, 2000; Elias et al., 1997; Perry, 2007). The meta-analysis also found that student performance increased an average of eleven to seventeen percentage points on standardized tests (Durlak et al., 2010). Much like Lincoln High School in Walla Walla, Washington, a trauma-sensitive school can expect a decrease in suspension, expulsion, and drop-out rates (Durlak et al., 2010). As students develop a feeling of safety in their school environment and school personnel build trust with the students, students with a trauma history will be able to get their needs met in appropriate ways (Wolpow et al., 2009).

Outcomes

The original ACE study suggested that health-risk behaviors, such as smoking, drug abuse, and unsafe sexual activities, are often used as coping mechanisms by individuals with trauma histories (CDC, 2016). Empowerment and unconditional positive regard are a part of the trauma-sensitive school approach and are paramount to building resilience (Wolpow et al., 2009). Building this resilience and teaching healthy coping skills in schools will decrease the need to engage in health-risk behaviors. As evidenced in the original ACE study, it follows that there will be an improvement in long-term positive health outcomes and decreased cost of health care, including prescription drug costs (Felitti & Anda, 2009). Furthermore, the promotion of resiliency skills leads to a decreased likelihood that children will pass down adverse experiences to their children (Butchart & Harvey, 2006) and increased potential for breaking the intergenerational cycle of trauma. With adequate

support and understanding of the effects of trauma, teachers will be better equipped to manage challenging classroom behaviors. These changes should improve teacher job satisfaction and reduce burnout (Wolpow et al., 2009). Lastly, children with trauma histories are commonly misdiagnosed with learning disabilities (Center for Youth Wellness, 2014). Once schools are trauma sensitive, the number of misdiagnosed students should decrease due to the use of more holistic interventions in conjunction with PBIS (Gordon, 2006). This will help districts reduce spending on special education services. In a cost-benefit analysis of SEL programs, there was an $11 return on investment for every $1 spent implementing SEL, which is highly significant (Belfield et al., 2015). As schools struggle in the current education funding climate, empirical evidence suggests that this is one place to bolster spending in order to greatly reduce long-term costs.

Conclusion

Childhood trauma is a common and pervasive problem. School-based interventions are the ideal way to reach the vast majority of American children and thereby mitigate the impact of ACEs. This type of intervention helps to break the intergenerational cycle of trauma by providing positive coping skills and adequate support to students and teachers. Current educational policy has helped to achieve some improvement of disruptive classroom behavior; however, a trauma-sensitive model will go further and empower students and staff to understand and take control of their responses to trauma. This article has discussed the impact of trauma on children, democratizing trauma-informed care, and current education policy and has presented a logic model for creating trauma-sensitive schools. Following the logic model presented here will give school districts a flexible framework to begin creating a healthy school ecosystem that addresses the needs of the whole child and can help mitigate the detrimental consequences of childhood trauma.

References

Adelman, H. S., & Taylor, L. (2000). Moving prevention from the fringes into the fabric of school improvement. *Journal of Educational and Psychological Consultation, 11*, 7–36.

American School Counseling Association. (n.d.). *ASCA national model: A framework for school counseling programs executive summary.* Retrieved from http://schoolcounselor.org/ascanationalmodel /media/anm-templates/anmexecsumm.pdf

Anda, R. F., Dong, M., Brown, D. W., Felitti, V. J., Giles, W. H., Perry, G. S., . . . Dube, S. R. (2009). The relationships of adverse childhood experiences to a history of premature death of family members. *BMC Public Health, 9*, 106.

Anda, R. F., Felitti, V. J., Bremner, J. D., Walker, J. D., Whitfield, C., Perry, B. D., & Giles, W. H. (2006). The enduring effects of abuse and related adverse experiences in childhood. *European Archives of Psychiatry & Clinical Neuroscience, 256*, 174–186.

Anda, R. F., Fleisher, V. I., Felitti, V. J., Edwards, V. J., Whitfield, C. L., Dube, S. R., & Williamson, D. F. (2004). Childhood abuse, household dysfunction, and indicators of impaired worker performance in adulthood. *The Permanente Journal, 8*, 30–38.

Bailey, B. (2010). How to reach our most difficult children: The gifts of challenging, out-of-control children. Retrieved from https://consciousdiscipline.com/downloads/resources/2010 -FrogStreet-DifficultChildren.pdf

Barron, I. G., Abdallah, G., & Smith, P. (2013). Randomized control trial of a CBT trauma recovery program in Palestinian schools. *Journal of Loss & Trauma, 18*, 306–321.

Belfield, C., Bowden, B., Klapp, A., Levin, H., Shand, R., & Zander, S. (2015). *The economic value of social and emotional learning.* New York: Center for Benefit-Cost Studies in Education. Teachers College, Columbia University.

Benner, G. J., Kutash, K., Nelson, J. R., & Fisher, M. B. (2013). Closing the achievement gap of youth with emotional and behavioral disorder through multi-tiered systems of support. *Education and Treatment of Children, 36*(3), 15–29.

Bloom, S. (2014, April 4). Dr. Sandra Bloom speaks at Jefferson population health colloquium [Video file]. Retrieved from https://www.youtube.com/watch?v=X9zEb1YCprg

Brackett, M. A., Hagelskamp, C., Rivers, S. E., & Salovey, P. (2013). Improving classroom quality with the ruler approach to social and emotional learning: Proximal and distal outcomes. *American Journal of Psychology, 10*(51), 530–543.

Bui, X., Quirk, C., & Almazan, S. (2010). *Positive behavioral interventions and supports research and practice.* Maryland Coalition for Inclusive Education. Retrieved from http://www.mcie.org/usermedia /application/3/pbs_final.pdf

Butchart, A., & Harvey, A. P. (2006). *Preventing child maltreatment: A guide to taking action and generating evidence.* World Health Organization. Retrieved from http://whqlibdoc.who.int /publications/2006/9241594365_eng.pdf

Center for Youth Wellness. (2014). *An unhealthy dose of stress: The impact of adverse childhood experiences and toxic stress on childhood health and development* [White paper]. Retrieved from http://www.centerforyouthwellness.org/resources/

Centers for Disease Control and Prevention. (2016). *Adverse childhood experiences (ACEs)*. Retrieved from http://www.cdc.gov/ace

Civic Impulse. (2016). S. 1177—114th Congress: Every Student Succeeds Act. Retrieved from https://www.govtrack.us/congress/bills/114/s1177

Cole, S. F., O' Brien, J. G., Gadd, M. G., Ristuccia, J., Wallace, D. L., & Gregory, M. (2005). *Helping traumatized children learn: Supportive school environments for children traumatized by family violence.* Boston, MA: Massachusetts Advocates for Children.

Corcoran, J. (2006). *Cognitive-behavioral methods for social workers: A workbook.* Boston: Pearson Education.

Corso, P. S., Edwards, V. J., Fang, X., & Mercy, J. A. (2008). Health-related quality of life among adults who experienced maltreatment during childhood. *American Journal of Public Health,* 98, 1094–1100.

Department of Children and Families, State of Connecticut. (2012). Trauma informed care practice guide. Department of Children and Families. Retrieved from http://www.ct.gov/dcf/cwp/view.asp?a=4368&Q=514042

Dube, S. R., Anda, R. F., Felitti, V. J., Edwards, V. J., & Williams, D. F. (2002). Exposure to abuse, neglect, and household dysfunction among adults who witnessed intimate partner violence as children: Implications for health and social services. *Violence and Victims, 17,* 3–17.

Dube, S. R., Miller, J. W., Brown, D. W., Giles, W. H., Felitti, V. J., Dong, M., & Anda, R. F. (2006). Adverse childhood experiences and the association with ever using alcohol and initiating alcohol use during adolescence. *Journal of Adolescent Health, 38,* 444.e1–10.

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development, 82,* 405–432.

Durlak, J. A., Weissberg, R. P., & Pachan, M. (2010). A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *American Journal of Community Psychology, 45,* 294–309.

Elias, M. J., Zins, J. E., Weissberg, R. P., Frey, K. S., Greenberg, M. T., Haynes, N. M., . . . Shriver, T. P. (1997). *Promoting social and emotional learning: Guidelines for educators.* Alexandria, VA: Association for Supervision and Curriculum Development.

Eliot, L. (2000). *What's going on in there?: How the brain and mind develop in the first five years of life.* New York: Bantam Books.

Fallot, R. D., & Harris, M. (2009). Creating Cultures of Trauma-Informed Care: A Self-Assessment and Planning Protocol, Services Implementation Plan, and Program Self-assessment Scale [Measurement instrument]. Retrieved from http://www.communityconnectionsdc.org/web/page/617/interior.html

Family Resources. (2014). *Trauma and violence exposure.* Davenport, IA: Quad Cities Trauma Consortium.

Farmer, E. M., Burns, B. J., Phillips, S. D., Angold, A., & Costello, E. J. (2003). Pathways into and through mental health services for children and adolescents. *Psychiatric Services, 54,* 60–66.

Felitti, V. J., & Anda, R. F. (2009). *The hidden epidemic: The impact of early life trauma on health and disease.* Lanius & Vermetten (Eds.). Cambridge: Cambridge University Press.

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine, 14,* 245–258.

Goodkind, J. R., LaNoue, M. D., & Milford, J. (2010). Adaptation and implementation of cognitive behavioral intervention for trauma in schools with American Indian youth. *Journal of Clinical Child and Adolescent Psychology, 39,* 858–872.

Gordon, R. H. (2006). *Responding to childhood trauma: The promise and practice of trauma informed care.* Pennsylvania Office of Mental Health and Substance Abuse Services. Retrieved from http://www.dpw.state.pa.us/cs/groups/public/documents/manual/s_001585.pdf

Health Foundation for Western & Central New York. (2012). *Greater Buffalo trauma-informed system of care community plan: Trauma-informed community initiative of WNY coalition.* Retrieved from http://www.bakervictoryservices.org/files/documents/HFCWNY.trauma-report.PrintFinal_1.pdf

Ko, S. J., Ford, J. D., Kassam-Adams, N., Berkowitz, S. J., Wilson, C., Wong, M., & Layne, C. M. (2008). Creating trauma-informed

systems: Child welfare, education, first responders, health care, juvenile justice. *Professional Psychology: Research and Practice, 39,* 396.

Medical University of South Carolina. (2015). *Trauma-focused cognitive behavioral therapy* [Online training course]. Retrieved from http://tfcbt.musc.edu

Milwaukee Public Schools. (2015). *Trauma & mental health.* Retrieved from http://mps.milwaukee.k12.wi.us/en/Families/Family -Services/Intervention—-PBIS/Trauma.htm

Momentous Institute. (n.d.). *Momentous School.* Retrieved from http://momentousinstitute.org/services/momentous-school

National Association of Social Workers. (2012). *NASW standards for school social work services.* Retrieved from http://c.ymcdn.com /sites/www.sswaa.org/resource/resmgr/imported/naswschool socialworkstandards.pdf

National Center for Education Statistics. (2015). *The condition of educa-tion.* Retrieved from https://nces.ed.gov/programs/coe

Navsaria, D. (2014). *Early brain & child development as a foundation for policy & practice* [PowerPoint slides]. Retrieved http://www .iowaaces360.org/uploads/1/0/9/2/10925571/dsm_ developing_brains_conference_eeee.pdf

Office of Special Education Programs. (2015). *Positive behavioral inter-ventions and supports.* Retrieved from https://www.pbis.org /school/swpbis-for-beginners/pbis-faqs

Origins and essence of the study. (2003, April). *ACE Reporter, 1*(1). Retrieved from http://www.acestudy.org/yahoo_site_admin /assets/docs/ARV1N1.127150541.pdf

Payton, J., Weissberg, R., Durlak, J., Dymnicki, A., Taylor, R., Shellinger, K., & Pachan, M. (2008). *The positive impact of social and emo-tional learning for kindergarten to eighth-grade students.* Collabora-tive for Academic Social and Emotional Learning. Retrieved from http://static1.squarespace.com/static/513f79f9e4b05ce 7b70e9673/t/526a25cae4b0f35a9effc678/1382688202240 /the-positive-impact-of-social-and-emotional-learning-for -kindergarten-to-eighth-grade-students-technical-report.pdf

Perry, B. (2002). Childhood experience and the expression of genetic potential: What childhood neglect tells us about nature. *Brain and Mind, 3,* 79–100.

Perry, B. (2006). Applying principles of neurodevelopment to clinical work with maltreated and traumatized children: The neurose-quential model of therapeutics. *Working with traumatized youth in child welfare* (p. 27). New York: Guilford Press.

Perry, B. (2007). *Stress, trauma and post-traumatic stress disorders in children: An introduction.* The Child Trauma Academy. Retrieved from https://childtrauma.org/wp-content/uploads/2013/11/PTSD_Caregivers.pdf

Perry, B. D., Child Trauma Academy, & Linkletter Media (2003). *Understanding traumatized and maltreated children: The six core concepts* [Video recording]. Sherbourn, MA: Aquarius Healthcare Videos.

Schonert-Reichl, K. A., & Lawler, M. (2010). The effects of a mindfulness-based education program on pre- and early adolescents' well-being and social and emotional competence. *Mindfulness, 1*, 137–151.

Scott, B. G., Burke, N. J., Weems, C. F., Hellman, J. L., & Carrion, V. G. (2013). The interrelation of adverse childhood experiences within an at-risk pediatric sample. *Journal of Child & Adolescent Trauma, 6*, 217–229.

Search Institute. (2014). A research update from Search Institute: Developmental relationships. Retrieved from http://www.search-institute.org/sites/default/files/a/Dev-Relationships-Framework.pdf

Stein, B. D., Jaycox, L. H., Kataoka, S. H., Wong, M., Tu, W., Elliott, M. N., & Fink, A. (2003). A mental health intervention for schoolchildren exposed to violence: A randomized controlled trial. *Journal of American Medical Association, 290*, 603–611.

Stevens, J. E. (2012). Lincoln High School in Walla Walla, WA, tries new approach to school discipline—Suspensions drop 85%. *ACEs Too High News.* Retrieved from http://acestoohigh.com/2012/04/23/lincoln-high-school-in-walla-walla-wa-tries-new-approach-to-school-discipline-expulsions-drop-85

Stewart, W. F., Ricci, J. A., Chee, E., Hahn, S. R., & Morganstein, D. (2003). Cost of lost productive work time among US workers with depression. *Journal of the American Medical Association, 289*(23), 3135–3144.

Teicher, M. H. (2002). Scars that won't heal: The neurobiology of child abuse. *Scientific American, 286*(3), 68–75.

Teicher, M. H., Rabi, K., Sheu, Y., Saraphin, S. B., Andersen, S. L., Anderson, C. M., . . . Tomada, A. (2010). Neurobiology of childhood trauma and adversity. In R. A. Lanius, E. Vermetten, & C. Pain (Eds.), *The impact of early life trauma on health and disease: The hidden epidemic.* Cambridge: Cambridge University Press.

Walla Walla Public Schools. (2013). Lincoln High School discipline referrals continue to shrink. Retrieved from http://www.wwps.org/news/spotlight/3090-lincoln-high-school-discipline-referrals-continue-to-shrink

Wolpow, R., Johnson, M. M., Hertel, R., & Kincaid, S. (2009). *The heart of learning and teaching: Compassion, resiliency, and academic success.* Olympia, WA: Office of Superintendent of Public Instruction (OSPI) Compassionate Schools.

Yell, M. L., Shriner, J. G., & Katsivannis, A. (2006). Individuals with Disabilities Education Improvement Act of 2004 and IDEA Regulations of 2006: Implications for educators, administrators, and teacher trainers. *Focus on Exceptional Children, 39,* 1–24.

Zins, J. E. (Ed.). (2004). *Building academic success on social and emotional learning: What does the research say?* New York: Teachers College Press.

Appendix

Trauma-Sensitive Schools LOGIC MODEL

Create a healthy school ecosystem which addresses the needs of the whole child

Resources	Activities	Outputs	Outcomes
• Fallot & Harris assessment tool • PBIS leadership team • School-based mental health professionals with appropriate caseload • Training materials • Support system within the school • Toolkit for every classroom • 2015 CASEL Guide: Effective Social and Emotional Learning Programs	• Complete assessment • Analyze assessment results • Evaluate discipline policies • Create a strategic plan to infuse trauma-sensitive practices into PBIS • Identify social-emotional learning curriculum • Develop a school crisis plan • Educate staff on prevalence and impact of trauma • Maximize caregiver capacity • Provide ongoing training concerning latest best practices	• Increased educational attainment • Decreased office discipline referrals • Decreased suspension, expulsion, and dropout rates • Increased school attendance of students and staff	• Improved school climate • Decreased intergenerational trauma • Improved health and mental health outcomes • Fewer health-risk behaviors • Lower healthcare costs, including prescription drug costs • Improved job satisfaction for faculty and staff • Decreased amount of disability diagnoses

Plumb, Bush, & Kersevich, 2016