



# Adverse Childhood Experiences (ACEs): Translation into Action in K12 Education Settings

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## Abstract

*Question: what detailed practice though?*

Movements toward trauma-informed approaches in K12 education settings represent a critical example of how research on adverse childhood experiences (ACEs) has been translated into policy and practice. The proliferation of attention to research on the impact of childhood trauma has increased awareness of the connections between student life experiences and educational outcomes. However, the overall body of research on the translation into K12 education settings is nascent, with the past decade of work characterized by focus on increasing school staff awareness and intervention specific to those students exhibiting trauma symptoms. Work is just beginning to translate this knowledge to a system approach, meaning integrating multiple intersecting components to trauma-informed care in school policies and practices across tiers of service delivery. In this article, we summarize ACE research with focus on manifestation in K12 education research and practice to date, and describe gaps that have emerged in this translation. Finally, directions for future school-based work are explored toward integration of trauma-informed care with whole child, culturally responsive, and healing-centered approach.

**Keywords** Adverse childhood experiences · Trauma-informed schools · K12 education

## Introduction

Rationale behind the critical need to address adverse childhood experiences (ACEs) has been explored across systems of care, including K12 education settings. Although the original ACE research focused on connections between adult health outcomes and childhood adversities (Felitti et al., 1998), implications have expanded beyond understanding impact in health care. The proliferation of attention to ACEs and the broader umbrella of trauma-informed models of care within human services and subsequently in education represents a noteworthy translation of ACE research into policy and practice. Understanding that childhood exposure to ACEs has spurred a more expansive understanding of trauma, leading many schools to push forward with

trauma-informed as a foundation to supporting students. Challenges exist, however, regarding the translation of ACE research and the implementation of trauma-informed care within K12 education settings. To date, this work has tended to overlook socioecological factors that impact experiences of adversity, reducing the complexity of trauma exposure to the limited set of experiences identified in the original ACE study by Felitti et al. (1998). In addition, the translation of research to practice has yet to fully address the multiple and competing resource demands around implementation in school settings. Overall, the literature translating ACE research to K12 education settings has not fully explored differential quality of trauma-informed approaches, features of sustainable implementation, or evaluated intended and unintended consequences of varying approaches. We explore these issues, beginning with the history of how ACEs have been characterized in K12 education settings and a summary of current evidence for trauma-informed care in schools. We then evaluate that the literature using the critiques of ACEs offered by McEwan and Gregerson (2019), incorporating those concerns into two primary challenges related to K12 educational settings. Finally, we offer directions forward for integration of trauma-informed care with a whole child,

*long term?*

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culturally responsive, and healing-centered approach in education systems.

## History and Current Evidence: ACE Translation in K12 Education Settings

Designed as an epidemiological study of adults, the original ACE study by Felitti et al. (1998) connected life trajectories to cumulative stress exposure during childhood, drawing responsive interest in public health research and surveillance (e.g., Anda et al., 2020; McEwan & Gregerson, 2019). Following the publication of the initial study, government agencies and national organizations increasingly recognized the impact of trauma in their initiatives and policies. Groups such as the American Psychological Association and the Substance Abuse and Mental Health Services Administration (SAMHSA) took leadership roles in defining trauma, developing principles of trauma-informed care, and evaluating evidence for interventions targeting trauma symptoms (SAMHSA, 2014). Six key principles for trauma-informed care were identified: safety; trustworthiness and transparency; peer support; collaboration and mutuality; empowerment, voice, and choice; and cultural, historical, and gender issues (SAMHSA, 2014). This work laid the foundation for calls to expand the application of these trauma-informed care principles in behavioral health to other sectors, including education (SAMHSA, 2014).

Although the initial ACE research focused on connections between adult disorders and experiences as a child, specific efforts also were directed toward understanding a continuum of child-focused services. For example, the National Child Traumatic Stress Network (NCTSN) was established in 2001 through funding administered by the Substance Abuse and Mental Health Services Administration (SAMHSA) in order to provide training, support, resources, and networking around the mission to “raise the standard of care and increase access to services for children and families who experience or witness traumatic events (n.d.).” As the work progressed, recognition of the need to align organizational policies and practices with principles of trauma-informed care grew (Menschner & Maul, 2016). The result has been a proliferation of interest in and attention to the development and evaluation of trauma-informed systems of K12 education.

Although some calls to embed trauma-informed care into education have been noted throughout the decades (e.g., Bloom, 1995), recent reviews have suggested the trajectory of translation into K12 education settings began to surge approximately a decade after publication of the original ACE study (Maynard et al., 2019; Overstreet & Chafouleas, 2016; Thomas et al., 2019). In their scan of federal bills introduced in the period from 1973 to 2015, Purtle and Lewis (2017)

found 49 bills that explicitly noted trauma-informed practice, with the highest proportion targeted toward youth in K12 education settings, and more than half of those introduced in 2015 or later. Similarly, a 2016 informal state scan found at least 17 states that referenced use of an approach referring to trauma-informed schools (Overstreet & Chafouleas, 2016). The increase in school-based initiatives might be viewed as growing acknowledgement of the impact of trauma merging with education research highlighting intersections among trauma, school discipline, social emotional development, and student performance. Studies highlighting the ineffectiveness of punitive and exclusionary approaches to improve student outcomes (Hoffman, 2014), and those documenting the disproportionate impact of these policies on students of color (Skiba et al., 2011; Skiba et al., 2014), proliferated as the concept of ACEs as both a public health and an educational issue began to point toward need for education reform. Education policy shift to emphasis on building student skills to manage stressful life events was further supported by growing evidence of the connection between social emotional development and student academic outcomes (Corcoran et al., 2018). In summary, a confluence between changing policy environments, a shift toward more supportive and holistic approaches in education, and the emergence of models for trauma-informed care served as the stimulus to center childhood trauma as a “major focus of education reform” (Trauma and Learning Policy Initiative, n.d.).

Despite nearly a decade of increasing attention to education practice and policy on issues intersecting with in childhood trauma, the overall body of research is best characterized as limited and just beginning to converge. Heightening awareness of trauma is one of the most salient outcomes of ACE translation to date, with the overall body of evidence characterized by a few key features. First, the current application of ACE research findings within school environments has emphasized the need for educators to *realize* and *recognize* the impact of trauma on students (awareness of impact), with less emphasis on potential ways that they might *respond* to trauma or resist *re-traumatization* of students (Chafouleas et al., 2016; Gherardi et al., 2020). For example, a recent review of content of trauma-informed practices in schools over the past two decades found predominant themes as including (a) building knowledge about trauma, (b) helping schools to shift perspectives and improve school culture, and/or (c) supporting self-care for staff (Thomas et al., 2019). The authors’ analysis included 33 articles representing multiple disciplines and methodologies, reflecting the diverse status of the existing literature and perhaps contributing to the current inconsistent operationalization of trauma-informed care in schools. Emphasis on recognizing trauma is also evidenced by the growing literature on trauma screening and risk identification procedures

defines ACEs

very limited

in school settings. As noted by Eklund et al. (2018), schools can offer an ideal setting for risk identification of trauma exposure and symptoms, yet there are substantial questions regarding scope and focus, psychometric evidence, and consent. Their systematic review evaluated 18 trauma screening measures, finding limited psychometric evidence to support the use of measures in schools. Concerns regarding ACE assessment and related trauma screeners are not specific to K12 education settings, however, as cautions have been raised regarding extension of ACE assessment and use of scores outside of research and surveillance purposes, along with calls for evaluation of both the intended and unintended consequences of use for other purposes and in settings such as schools (e.g., Anda et al., 2020; Chafouleas et al., 2016; McLennan et al., 2020; White et al., 2019).

A related and second characterization of the current landscape of the ACE and trauma-informed care literature in K12 education settings is focus on evidence for trauma-specific intervention provided to individual students or student groups who exhibit trauma symptoms (Chafouleas et al., 2019), as opposed to evidence for a comprehensive system-wide approach as promoted in behavioral health settings. Thomas et al. (2019) found that the majority of available intervention studies targeted individual or groups of students experiencing trauma. Although the overall body of the literature pointed to evidence supporting trauma-informed practices, the authors noted concerns regarding definitions of evidence as well as missing connection to education-relevant indicators such as attendance, school climate, or disciplinary incidents. In addition, detail regarding contexts and demographics associated with the studies draw cautions regarding recommended guidance for education policy and practice. In another recent study, Maynard et al. (2019) conducted a systematic review of the literature on system efforts to implement trauma-informed practices in schools. After reviewing thousands of sources, the authors determined that none of the extant studies met dual criteria of evaluating a trauma-informed system approach and high quality empirical design (i.e., experimental or quasi-experimental design). The authors concluded that although trauma-informed approaches were mentioned in reviewed articles, there is extensive variability in the approaches across local and state levels as well as little consistent evidence regarding effectiveness. Similar findings were found by Berger (2019), who conducted a systematic review of multi-tiered approaches to trauma-informed care in schools. In that review, only thirteen articles were identified as meeting inclusion criteria, and those reviewed reflected minimal empirical evidence.

In summary, this first wave of ACE translation to K12 education settings can be characterized as both diverse and limited, with narrow foci on recognition and realization of the impact of trauma and lack of consensus on defining characteristics to trauma-informed care approaches

or system-level implementation. Work in translation thus far has been heavily directed toward focus on individuals rather than a system-wide approach to understanding and proactively responding to the impacts of adverse childhood experiences (Chafouleas et al., 2016). In addition, it is only beginning to articulate how student learning environments can be informed through expanding the scope of ACEs to fully account for the breadth of traumatic experiences ranging from community-based social determinants to historical and intergenerational impacts of trauma (Stempel et al., 2017; DeGruy Leary, 2005). Taken together, the current landscape of research on ACE translation into K12 education settings can be described as rapidly emerging, yet the body of work is nascent. We posit that this next phase of ACE and trauma-informed care translation in K12 education settings is poised for broader integration across related bodies of the literature in order to fully articulate how the pieces all fit together in sustainable school policies and practices. Next, we further discuss these issues through presentation of two primary challenges to the current landscape of translation in K12 education settings, followed by recommended directions for the next wave of research.

## Challenges to Current Translation of ACEs in K12 Education Settings

Although the significance of the original work must be acknowledged, there are many questions regarding whether the translation in various systems of care has adequately addressed the practical implications of ACE research (McEwan & Gregerson, 2019; White et al., 2019; Zak-szeski et al., 2017). In their recent critique, McEwan and Gregerson (2019) articulate four limitations of ACE research in general: (1) emphasis on adult outcomes that overlook the impact of adversity on children and intergenerational impacts; (2) focus on individual medical or therapeutic responses to adversity rather than systemic solutions; (3) failure of the original 10-item ACE index to explore aspects of adversity stemming from social inequality; and (4) deficit orientation that undermines the importance of protective factors. The increasing application of trauma-informed practices to K12 education settings reflects one way in which the first limitation (emphasis on adult outcomes) is being addressed, particularly within the past decade. In aligning the remaining three limitations with key trends in applying ACE research to K12 education settings, we identify two primary gaps. The first gap combines the third and fourth points brought forth by McEwan and Gregerson (2019), exploring how the translation of ACE research to education has overlooked the social context of trauma, resulting in an individualistic and deficit-based focus. We propose that this gap reflects a decontextualized approach to trauma-informed

care in schools. Second, the “focus on medical or therapeutic interventions” identified by McEwan and Gergerson (2019) closely mirrors the concerns previously presented regarding the limited focus on a system approach to trauma-informed care in schools. We further propose that this gap may be articulated as a challenge with attending to implementation determinants that identify complexities in uptake and sustenance of a system approach to trauma-informed care in schools. Next, we explore each gap in more detail.

### Decontextualized Approach to Trauma-Informed Care

The first gap in translation to K12 education systems is that understanding of and responses to trauma in education have been largely removed from their socio-ecological and cultural context, which has been referred to as a decontextualized approach to trauma-informed care (Gherardi et al., 2020; Henfield et al. 2019). One example is the current tendency to observe demographic trends in exposure to ACEs without directly responding. Although the original body of ACE literature articulated that trauma and toxic stress are pervasive human experiences that span racial, ethnic, socio-economic, and other lines, these experiences are not evenly distributed (Sacks & Murphey, 2018). Although not an exhaustive list, adverse experiences are correlated with identity on the basis of race, ethnicity, income, gender, sexuality, religion, and immigration status (Andersen & Blosnich, 2013; Crosby et al., 2018; Ridgard et al., 2015; Slopen et al., 2016). In K12 education settings, this disproportionality is often presented as a rationale for the adoption of trauma-informed practices, with these practices presented as social justice imperatives (Ridgard et al., 2015), even though the root causes of these correlations are not often fully explored.

Two key issues emerge from this decontextualized approach to applying the lessons of ACE research in schools. The first is failure to consider socially situated sources of trauma that are likely to impact students. In schools, this means not only responding to sources of trauma that occur within the household (such as those identified in the original ACE study), but also the impact of identity-based trauma and toxic stress including racism, sexism, classism, homophobia, transphobia, historical and cultural trauma. The second issue that emerges from decontextualizing trauma is a missed opportunity to probe the social structures and policies that contribute to these experiences. In schools, this has been evidenced by not questioning and challenging the ways in which schools serve to perpetuate larger structures which generate circumstances within which social identities correlate strongly with adverse experiences (Gherardi et al., 2020). Henfield et al. (2019) explain:

It feels dishonest and disingenuous for conversations about trauma and trauma informed care to occur without considering how racism and other forms of social oppression pervade social systems and institutions (e.g., juvenile justice, K-16 educational pipeline) where marginalized students are habitually exposed to forms of psychological and physical trauma (p.537).

The second issue stemming from a decontextualized understanding and application of trauma-focused research to K12 education settings is the potential to depict students and families who have experienced ACEs as damaged or deficient (White et al., 2019). The emphasis on realizing and recognizing the impact of trauma has resulted in reciprocal de-emphasis of natural sources of strength and resilience or the potential for post-traumatic growth. Where resilience is addressed, it is often framed as something that occurs beyond or outside of a student's family or community, leading educators to adopt a deficit orientation toward their students, families, and communities, and thus limiting opportunities for schools to function as protective factors (Gherardi et al., 2020; White et al., 2019).

Some researchers have sought to ensure that their work fully embodies all six principles of trauma-informed care and is deeply embedded in attention to the socio-ecological and cultural context of students. For example, the New Orleans Trauma-Informed Schools Learning Collaborative has initiated this work through their “environment scan checklist” (personal communication, 2019). The checklist describes school-specific manifestations of the six principles articulated by SAMHSA, with the principle of cultural humility guiding their model. Thomas et al. (2019) highlight the ways in which a shift toward “asset-based perceptions and actions” (p. 446) as well as a shift from trauma-informed to “healing centered” practice represent potential next steps for the application of this work. At this time, critical voices are only beginning to emerge (Vericat Rocha & Ruitenberg, 2019); data evaluating their impact are not yet available. In summary, an important first gap in the literature is to move beyond a decontextualized approach.

### Implementation Determinants of a Trauma-Informed School System

The second identified gap addresses the limited focus on a system approach to trauma-informed care in schools, which calls for attention to the literature on implementation science. Broadly, ACE research is fundamental in rethinking both the root cause and potential continuum of responses, including implications for how schools can and should respond to students. As previously noted, however, current actions have been more heavily focused on effort to build awareness and empathy around traumatic experiences than

on understanding contributions of school environments and enacting system change across policy and practice. McIntyre et al. (2019) noted that although trauma-informed frameworks exist, there is need for research directed to the necessary features involved in adoption and implementation. Their recent study examined teacher knowledge and acceptability following a 2-day professional learning program, with results suggesting perceived system fit was an important indicator of acceptability and knowledge growth. Knowledge growth was associated with increased acceptability when system fit scores were higher, whereas knowledge growth was associated with lower acceptability when lower system fit scores were present. The authors hypothesized that increased knowledge when fit was low may serve to highlight barriers, and thus contradict the intent of training. Perhaps not surprisingly, these findings suggest need for research to fully explicate the determinants—facilitators and barriers—to system change across stages of implementation.

Although focused on trauma-specific interventions rather than trauma-informed systems, a recent review by Powell et al. (2019) can provide some insight into the determinants (facilitators and barriers) of trauma-informed care implementation. The authors reviewed the literature to identify not only the types of determinants that were described but also characteristics most emphasized in various stages of implementation. Their search yielded 23 studies focused on those providing trauma-specific interventions delivered in school or community settings to individuals under the age of 19 who experienced trauma. Results supported greater focus on determinants in implementation phases over initial exploration or sustainment phases. Across studies, determinants referenced most often related to fidelity, client perceptions, client barriers such as transportation needs, and interventionist characteristics and attitudes. In their comments specific to school-based studies, the authors noted organizational culture and climate to be important facilitators, and particularly leadership support (e.g., time to build buy-in, physical space). Together, this review highlights key considerations for focal points to work that supports school personnel in implementation of trauma-informed approaches.

Congruence theory can facilitate describing the complexities of determinants in translating ACE research to system implementation in K12 education settings. Congruence theory posits that organizational change requires alignment among the expected work of the organization, the people within the organization, the culture of the organization, and the structure of the organization (Nadler & Tushman, 1980). Challenges arise when there is a lack of congruence across components, thus potentially limiting capacity to bring about desired change. As previously noted, congruence between professional learning about trauma-informed practices (the work and the people expected to do it) and existing organizational structure and culture has been found to influence

perceptions of such training (McIntyre et al., 2019). The current predominant landscape of ACE translation to K12 education settings must extend beyond providing promising staff learning experiences that share strategies for responding to students impacted by trauma as this alone is insufficient to foster organizational change. That is, there must be attention to align not only the work (i.e., trauma-informed practices) and people (e.g., professional learning to build knowledge and skills) but also the structure (e.g., exclusionary disciplinary policy, positive social emotional climate) and culture (e.g., system fit such as leader support). Misalignment limits capacity to establish school systems that are fully responsive to the implications of ACE literature, and can unintentionally create further harm to students with policies and practices that can re-traumatize. Congruence theory also has broader implications given the complex network of district, state, and federal structures within which schools exist.

Additionally, schools are embedded within community networks of supports, services, and interfacing systems (e.g., health care, juvenile justice), all of which exert influence on policy and practice within schools. As such, schools encounter the need for both horizontal and vertical congruence to be fully responsive as a trauma-informed system. In summary, an important second gap in the literature involves extending research to fully understand implementation determinants that can inform recommendations that strengthen capacity of K12 education systems to respond to the call to action inspired by the original ACE study.

Taken together, the current landscape of ACE translation in K12 education settings reflects a focus on sources of and responses to trauma at the individual level, with limited attention to features of system implementation within schools or influences from outside of schools (socio-ecological, cultural context). Although frameworks for a system approach to trauma-informed care in schools are emerging, and contextualized approaches to intervention are being developed, evidence to date is highly limited. Next, we offer directions forward in the next generation of ACE research and translation to a trauma-informed system approach in K12 education settings that works to close these gaps in decontextualization and system implementation. We propose building upon existing systems of school service delivery to trauma-informed care that integrates a whole child-centered, culturally responsive, and healing-centered approach.

## Directions Forward in Enabling Trauma-Informed School Systems

Life experiences outside the classroom shape the context of students' school experience, filtering their perceptions of self, others, and the importance of fully engaging in school

(Huebner et al., 2001). The potential potent impact of ACEs on student outcomes has been documented, ranging from academic achievement (Slade & Wissow, 2007) to behavioral and emotional well-being (Hunt et al., 2017). Implications of findings have been cited as impetus for using a whole child approach to enable a positive learning environment for students (Bethell et al., 2014). Ginwright (2018), for example, notes concern about using “trauma-informed care” as the organizing framework for providing holistic student supports. The author suggests that framing this work as “healing-centered” offers a critical shift that orients toward system-level, culturally grounded, and asset-driven work. In this section, we offer directions forward in closing identified gaps in the translation of ACE research to K12 education settings, with focus on addressing gaps and enabling more culturally humble, strength-based, and system-focused responses to the impact of student adversity.

We propose an integrated whole child, culturally responsive, and healing-centered approach grounded in an ecological framework. Specifically, this integrated approach accounts for the adverse impact of ACEs, protective factors, and cultural factors influencing individuals and the environments in which they are situated to provide an opportunity for a more systemic approach to trauma-informed education. Building on the established six principles for

trauma-informed care (SAMHSA, 2014) and the public health model involving multi-tiered service delivery (MTSS) already familiar to K12 education systems (e.g., Lane et al., 2020), an ecological framework applied to a trauma-informed approach in schools interweaves whole school and whole community supports to enable a tiered system framework to supporting the whole child. Our illustration as to what this can look like is presented in Fig. 1. As noted, the trauma-informed care principles serve as the basis, cutting across all tiers of service delivery. Services are organized using a public health framework that places core supports provided to all as the foundation, with supplemental and intensive supports provided to address non-responsiveness to core supports. Trauma-informed school systems attend to service delivery at both child and school levels, and are situated within community contexts that enhance service delivery to support whole child and school functioning. At the school level, all staff understand their role in enabling a positive and inclusive environment, and have the knowledge and skills to enact policies and practices that promote safety and connection, address issues of inequity, and avoid re-traumatization. At the child level, students are actively engaged in developing their social identities and self-concept through social emotional learning, are provided opportunities to connect and strengthen protective factors, and have access to

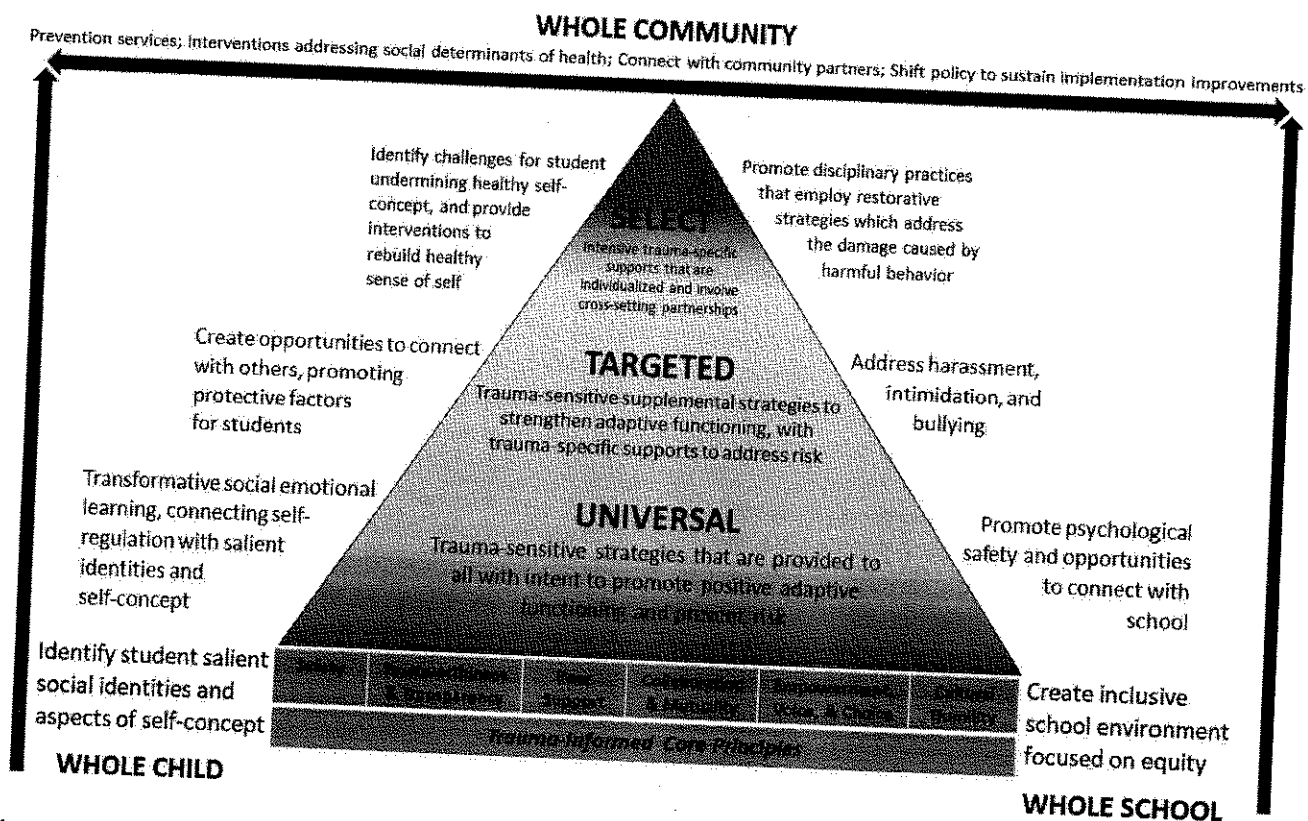


Fig. 1 Illustration of a system approach to trauma-informed care in schools. *Note.* An ecological framework applied to a trauma-informed approach in schools interweaves whole school and whole community supports to enable a tiered system approach to supporting the whole child

intensive interventions that heal and rebuild a sense of self. Together, related bodies of the literature (e.g., exclusionary discipline, racism, social determinants) are integrated with ACE research in informing a complete system approach to trauma-informed care in schools. Such integration demonstrates how trauma-informed care is critical to articulated goals in education around inclusion, equity, and social justice (Ridgard et al., 2015). To accomplish this vision for integration, the continuum of strategies informing a trauma-informed approach must reflect an understanding of the cultural context shaping student life experiences. An emerging body of the literature suggests whole child support includes school practices that reflect holistic engagement of students' social identities and account for cultural factors shaping their academic experience (Blitz et al., 2020; Jagers et al., 2019, Lewallen et al., 2015). We explore these issues further.

### **Integration of Cultural Responsiveness and a Healing-Centered Approach**

Enabling healing-centered school systems that deeply understand and effectively respond to the needs of students impacted by adverse life events can be facilitated through the integration of culturally responsive practices (Mayfield & Garrison-Wade, 2015). Culturally responsive pedagogy posits the learning experiences of students are highly impacted by how the school culture incorporates salient aspects of students' identities (Boykin, 1983; Cohen & Garcia, 2008). Banks (2006) outlines that culturally responsive school environments involve actively challenging prejudicial assumptions in curriculum while positioning educators to create an equitable school climate responsive to students' learning styles and cultures. Evidence suggests that culturally responsive teaching practices improve outcomes relevant to educator shifts toward holistic approaches to teaching, such as educators' efficacy for managing student behavior (Siwatu, 2007) and student academic performance by infusing student life experiences into the learning environment (Garcia & Chun, 2016).

### **Adverse Community Experiences and Disproportionate Discipline**

Findings related to cultural pedagogy in schools are particularly relevant for students from communities vulnerable to both individual adverse life experiences and adverse community experiences (Burke et al., 2011; Corbin et al., 2013). As noted by seminal research such as the "Urban ACEs" studies (Cronholm et al., 2015; Wade et al., 2014) and Ellis and Dietz (2017), a public health framework must expand ACEs to include adverse community experiences such as discrimination and community violence. The cumulative impact of

adverse life experiences at home and in the community can create psychological wounds requiring significant healing. When applied to the school setting, these psychological wounds may reveal themselves as students' behavioral disruption. A healing-centered approach rooted in culturally responsive and trauma-informed principles warrants a supportive response focused on understanding how student life experiences lead to post-traumatic stress reactions; schools, however, may default to punitive responses—particularly for ethnic minority youth (Gonzalez et al., 2019).

The well-documented history of disproportionate disciplinary practices for ethnic minority students has prompted a re-imagining of school responses to student misbehavior through a whole child lens (Crosby et al., 2018). Trauma-informed practices infused with culturally responsive pedagogy have emerged as a promising disciplinary framework to meet this need (Plumb et al., 2016). Although the promise of employing culturally responsive practices is its potential to translate the public health perspective of ACEs into a lens for viewing student behavior as a reflection of the injury and resilience gained from traumatic life experiences, its full potential lies in connecting this understanding with a healing process that values the intersecting social identities contributing to the whole child.

### **Cumulative Impact of ACEs and Identity Development**

Facilitating a healing-centered approach contextualized to the cultural and life experiences of students and their social identities requires understanding the developmental implications of multiple adverse life experiences during childhood. A primary contextualizing consideration centers on the distinction between ACEs and the broader concept of complex trauma. Complex trauma extends the concept of ACEs to reflect the cumulative impact of multiple traumatic events and include traumatic experiences beyond the original ACEs—which primarily focus on experiences within the home and neglects the impact of these experiences on students' developmental outcomes (Blodgett & Dorado, 2016). The literature examining the unique contribution of multiple co-occurring traumatic events beginning early in childhood toward behavioral health outcomes has consistently documented developmental injuries that have implications for academic achievement and social emotional development (Turner et al., 2017). In a review of the complex trauma literature, O'Neill et al. (2010) note a pattern of severe disruption in educator–student relationships when complex trauma is present and untreated. The co-occurrence of these traumatic events can undermine students' belief in their ability to find safety, manage stressful life experiences, and productively connect with others.



Underlying the breadth of potential damage from complex trauma is an injury to self-concept that may require adjustments in how educators access the whole child for students impacted by trauma. A key feature of untreated complex trauma is experiencing a scattered sense of self that prompts coping behaviors focused on survival; these coping behaviors may interrupt healthy relationships. Such understandings of self and others without relational experiences to counter self-narratives shaped by traumatic experiences can interweave with blossoming social identities that govern decisions about the importance of school (Oyserman et al., 2006). As reflected in identity-based motivation theory—a conceptual framework for understanding how dynamic aspects of self-identity intersect with demands of situations to shape goals and actions—self-concept is a pathway to making meaning of situations and spurring motivation and self-regulation to achieve goals deemed worth pursuing (Oyserman et al., 2017). For students from vulnerable populations most likely to experience complex trauma, understanding social identities based on multiple adverse life experiences can become integral to structuring school environments that have achievement motivators aligned with student self-concept. Examining the confluence of school expectations, behavior reflecting academic pursuit, and alignment with social identity among low-income and minority students, Oyserman (2013) found students were more likely to pursue academic goals when viewed as relevant. Relevance of academic goals reflects alliance with important social identities such as social class or race, connection with relevant behavioral strategies such as studying, and interpretation of difficulties when pursuing goals as reflective of importance of the task and not impossibility of achievement. Because identity is a critical factor in making the academic experience salient, the potential impact of traumatic experiences on identity formation becomes foundational for designing a healing-centered school environment that incorporates practices to facilitate school engagement among trauma-impacted students. At present, a nuanced understanding of complex trauma and the resulting intersections with identity development and academic structures has been largely unaddressed by models seeking to translate ACE research into K12 education settings, and is an area for future growth. The advancement of healing-centered frameworks can support schools in acknowledging the impact of adversity on identity development while exercising vigilance to ensure that experiences of adversity do not define the boundaries of student identity.

### Practices to Promote Healing-Centered Approaches in Schools

Implications from emerging research on healing-centered approaches to adverse life experiences have stimulated

exploration into whether the integration of culturally responsive and trauma-informed practices may more effectively employ a whole child lens for students impacted by trauma (Blitz et al., 2016). In one of the few studies exploring the integration of trauma-informed and culturally responsive practices, Blitz et al. (2020) employed qualitative methodology to identify themes for whole school practices that build the capacity of educators to both account for the injury caused by traumatic events and honor salient aspects of student cultural identity. Importantly, the authors center family engagement as one of four elements of culturally responsive trauma-informed schools, cautioning schools against the tendency to increase support for students while blaming families for student challenges. Enabling a healing-centered approach in schools extends to work with families and communities. Such frameworks would support educators in understanding and responding to the impact of adverse lived experiences as well as the impact that racial, cultural, and historical trauma has on families. Additionally, they would also center family-driven, culturally grounded opportunities for engagement as critical opportunities for healing.

### Building System-Level Responses

As noted throughout the paper, a critical gap in the translation of ACE research to K12 education settings involves a system-wide shift from punitive responses to traumatic stress reactions that perpetuate systemic bias and toward a healing-focused response promoting equitable and justice-centered schools. In moving toward a system approach to trauma-informed care in schools that accounts for the unique needs of individual students and addresses the need to employ whole school responses to student behavior challenges, the public health model that has become commonly referred to in K12 education settings as MTSS can provide a useful framework (see Fig. 1). The tiered framework facilitates understanding as to how schools can respond directly with targeted student interventions without neglecting the systemic implications of trauma in facilitating a positive school environment for every student (see Chafouleas et al., 2016). The body of research on MTSS, and specifically the growing base of knowledge around implementation determinants, can inform directions for expansion of MTSS to include a whole child, culturally responsive, and healing-centered lens. Specifically, research to move beyond increased knowledge to addressing barriers to system sustainment of this lens could be focused on implementation determinants such as interventionist attitudes, fidelity, and leadership support.

An important direction forward for future research in enabling a continuum of whole child and whole school supports lies in focus on core services provided universally (i.e., to all students). As noted by Becker-Blease (2017), the growing



evidence behind trauma-specific interventions in students' recovery should not serve to displace strength-based frameworks such as universal social emotional learning and positive behavior supports (Becker-Blease, 2017). Strength-based practices focused on addressing the damage caused by trauma and promoting resilience has potential to scale to universal approaches in social emotional learning (Chafouleas et al., 2016; National Child Traumatic Stress Network, 2017). Linking evidence supporting features of tiered delivery and associated practices for cultivating positive social emotional impact offers one direction, and might be drawn from research demonstrating improved social emotional skills for students receiving trauma-informed interventions (Phifer & Hull, 2016) as well as positive social, emotional, behavioral, and academic outcomes resulting from universally delivered social emotional learning programs (Durlak et al., 2011).

The intersection of trauma-informed approaches and social emotional programming creates opportunities to promote student self-regulation and has additional potential to engage a culturally responsive lens. The emerging perspective of transformative social emotional learning illustrates this potential (Jagers et al., 2019). Building upon traditional forms of social emotional education (CASEL, n.d.), transformative social emotional learning explains a student's social emotional development by accounting for life experiences and emerging identities shaping their self-understanding and social connections with others. Jagers et al. (2019) have initially anchored this emerging understanding in exploring the role of race and ethnicity in manifesting core social emotional skills and guiding school practices contributing to social justice. Although traditional social emotional learning frameworks intersect with trauma-informed principles by promoting self-regulation (Jones & Doolittle, 2017), enhanced whole school and whole child social emotional learning approaches that account for cultural identity such as transformative SEL have the potential to further bolster shifts toward a system approach to trauma-informed care in schools.

In summary, directions forward in translation of ACE research into K12 education settings necessitates attention to the intersectionality across the related literature such as cultural responsiveness, social emotional learning, exclusionary disciplinary, systemic racism, and social determinants. Directions forward must articulate connections to a system approach to trauma-informed care in K12 education settings in ways that are usable in school-based policy and practice, clearly illustrating fit and value of integration within existing service delivery frameworks and community contexts that support the whole child and school. Work must move from the *why* to *how* in trauma-informed schools to close the gap around the practical capacity of K12 education service delivery frameworks that can sustain recommended policy

and practice. To actualize this goal, this next generation of work must attend to implementation determinants (Chafouleas et al., 2016; Powell et al., 2019) to provide guidance on how the articulated principles of trauma-informed care can be adapted to K12 educational contexts. Adaptations must include attention to implementation features such as consensus around core features, measurement of outcomes, evidence-informed practices across service delivery tiers, and system-level supports such as workforce development and evaluation of inputs, fidelity, and outcomes (Chafouleas et al., 2016; Hanson & Lang, 2016), which are guided by whole child, culturally responsive, and healing-centered approaches inviting contribution from all school stakeholders. Although a complex process, school-based mental health professionals and researchers are well-positioned to lead directions given expertise that cuts across related components to trauma-informed approaches.

## Conclusion

From its inception, research into the impacts of and interventions relating to adverse childhood experiences has held critical implications for K12 education settings as schools are a primary system of care. The implications of ACE research for K12 education settings extend beyond identifying the presence of ACEs or understanding their impact, instead requiring comprehensive responses to organizational change and integrating a holistic understanding of the whole child. The embrace of questions regarding not only the *why* but *how* to integrate principles of trauma-informed care represents an important shift toward student-centered and supportive educational policies and practices. Work to date has set the stage for burgeoning understanding of not only the importance of childhood experiences, but also the services and systems required to foster nurturing learning environments that are responsive to adversity. The intersection of the evidence base behind elements such as alternative disciplinary practices, secondary traumatic stress, school climate, and student–teacher relationships as contributing to a trauma-informed framework are becoming more widely recognized. Although this shift has begun, the work has not yet managed to grapple with the social context of trauma or the complexity of creating educational structures that fully integrate trauma-informed practices within and between systems. Building on existing school service delivery frameworks has the potential to address gaps relating to decontextualization and implementation determinants, moving to advance trauma-informed care that integrates a whole child, culturally responsive, and healing-centered system approach. Such a focus to directions forward has the potential to catalyze future efforts that bridge science, policy, and practice

- Corbin, T. J., Purtle, T. J., Rich, L. J., Rich, J. A., Adams, E. J., Yee, G., & Bloom, S. L. (2013). The prevalence of trauma and childhood adversity in an urban, hospital-based violence intervention program. *Journal of Health Care for the Poor and Underserved*, 24(3), 1021–1030.
- Cronholm, P. F., Forke, C. M., Wade, R., Bair-Merritt, M. H., Davis, M., Hartkins-Schwarz, M., Pachter, L. M., & Fein, J. A. (2015). Adverse childhood experiences: Expanding the concept of adversity. *American Journal of Preventive Medicine*, 49(3), 354–361.
- Crosby, S. D., Howell, P., & Thomas, S. (2018). Social justice education through trauma-informed teaching. *Middle School Journal*, 49(4), 15–23.
- DeGruy Leary, J. (2005). *Post traumatic slave syndrome: America's legacy of enduring injury and healing*. Uptone Press.
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82, 405–432.
- Eklund, K., Rossen, E., Kortakin, T., & Chatoulias, S. M. (2018). A systematic review of trauma screening measures for children and adolescents. *School Psychology Quarterly*, 33, 30–43.
- Ellis, W. R., & Dietz, W. H. (2017). A new framework for addressing adverse childhood and community experiences: The building community resilience model. *Academic Pediatrics*, 17(7), S86–S93.
- Fellit, 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(4), 245–258.
- Fennig, P., & Rose, J. (2007). Overrepresentation of African American students in exclusionary discipline: The role of school policy. *Urban Education*, 42(6), 536–559.
- Garcia, C., & Chun, H. (2016). Culturally responsive teaching and teacher expectations for Latino middle school students. *Journal of Latino Psychology*, 4(3), 173.
- Gherardi, S. A., Fitm, R. E., & Jaure, V. B. (2020). Trauma-sensitive schools and social justice: A critical analysis. *Urban Review*. <https://doi.org/10.1007/s11256-020-00553-3>
- Ginwright, S. (2018). *The future of healing: Shifting from trauma informed care to healing centered engagement*. Medium. Retrieved from: <https://gwrightbmedium.com/the-future-of-healing-shifting-from-trauma-informed-care-to-healing-centered-engagement-634f557ce69c>.
- Gonzalez, T., Elow, A., & De La Vega, C. (2019). Health Equity, School Discipline Reform, and Restorative Justice. *The Journal of Law, Medicine & Ethics*, 47(2-suppl), 47–50.
- Hanson, R. F., & Lang, J. M. (2016). A critical look at trauma-informed care among agencies and systems serving maltreated youth and their families. *Child Maltreatment*, 21, 95–100.
- Henfield, M., Washington, A. R., Beresvic, Z., & De La Rue, L. (2019). Introduction to trauma-informed practices for mental health and wellness in urban schools and communities. *The Urban Review*, 51(4), 537–539.
- Hoffman, S. (2014). Zero benefit: Estimating the effect of zero tolerance discipline policies on racial disparities in school discipline. *Educational Policy*, 28(1), 69–95.
- Huebner, E. S., Ash, C., & Laughlin, J. E. (2001). Life experiences, locus of control, and school satisfaction in adolescence. *Social Indicators Research*, 55(2), 167–183.
- Hunt, T. K. A., Slack, K. S., & Berger, L. M. (2017). Adverse childhood experiences and behavioral problems in middle childhood. *Child Abuse and Neglect*, 67, 391–402.
- Jagers, R. J., Rivas-Drake, D., & Williams, B. (2019). Transformative social and emotional learning (SBEL): Toward SEL in service core-competencies. Retrieved from: [https://casel.org/Collaborative of Academic, Social, and Emotional Learning \(CASEL\). Core SEL competencies](https://casel.org/Collaborative of Academic, Social, and Emotional Learning (CASEL). Core SEL competencies).
- Anda, R. F., Porter, L. E., & Brown, D. W. (2020). Inside the adverse childhood experience score: strengths, limitations, and misconceptions. *American Journal of Preventive Medicine*. <https://doi.org/10.1016/j.amepre.2020.01.009>
- Andersen, J. P., & Blomquist, J. (2013). Disparities in adverse childhood experiences among sexual minority and heterosexual adults: Results from a multi-state probability-based sample. *PLOS ONE*, 8(1), e54691.
- Banks, J. (2006). *Cultural diversity and education: foundations, curriculum and teaching* (5th ed.). Allyn and Bacon.
- Becker-Blease, K. A. (2017). As the world becomes trauma-informed, work to do. *Journal of Trauma & Dissociation*, 18, 131–138. <https://doi.org/10.1080/15299732.2017.1253401>
- Berger, E. (2019). Multi-tiered approaches to trauma-informed care in schools: A systematic review. *School Mental Health*, 11, 650–664. <https://doi.org/10.1007/s12310-019-09325-0>
- Bethell, C. D., Newacheck, P., Hawes, E., & Halfon, N. (2014). Adverse childhood experiences: assessing the impact on health and school engagement and the mitigating role of resilience. *Health Affairs*, 33(12), 2106–2115.
- Blitz, L. V., Anderson, E. M., & Saastamoinen, M. (2016). Assessing perceptions of culture and trauma in an elementary school: Informing a model for culturally responsive trauma-informed schools. *The Urban Review*, 48(4), 520–542.
- Blitz, L. V., Yull, D., & Claubs, M. (2020). Bringing sanctuary to school: Assessing school climate as a foundation for culturally responsive trauma-informed approaches for urban schools. *Urban Education*, 55(1), 95–124.
- Blodgett, C., & Dorado, J. (2016). A selected review of trauma-informed school practice and alignment with educational practice. California Endowment.
- Bloom, S. (1995). Creating sanctuary in the school. *Journal for a just and caring education*, 1(4), 403–433.
- Boykin, A. W. (1983). The academic performance of Afro-American children. In J. Spence (Ed.), *Achievement and Achievement Motives* (pp. 323–371). Sage.
- Burke, N. J., Hellman, J. L., Scott, B. G., Weems, C. F., & Carrion, V. G. (2011). The impact of adverse childhood experiences on an urban pediatric population. *Child Abuse & Neglect*, 35(6), 408–413.
- Chatoulias, S. M., Johnson, A. H., Overstreet, S., & Santos, N. M. (2016). Toward a blueprint for trauma-informed service delivery in schools. *School Mental Health*, 8(1), 144–162.
- Chatoulias, S. M., Kortakin, T. A., Roundfield, K. D., & Overstreet, S. (2019). Addressing childhood trauma in school settings: a framework for evidence-based practice. *School Mental Health*, 11, 40–53.
- Cohen, C. L., & Garcia, J. (2008). Identity, belonging, and achievement: A model, interventions, implications. *Current Directions in Psychological Science*, 17(6), 365–369.
- Corcoran, R. P., Cheung, A. C., Kim, E., & Xie, C. (2018). Effective universal school-based social and emotional learning programs for improving academic achievement: A systematic review and meta-analysis of 50 years of research. *Educational Research Review*, 25, 56–72.
- Collaborative of Academic, Social, and Emotional Learning (CASEL). *Core SEL competencies*. Retrieved from: <https://casel.org/core-competencies/>.

## References

in improving outcomes for children, schools, and the communities in which they are embedded.

- of educational equity and excellence. *Educational Psychologist*, 54(3), 162–184.
- Jones, S., & Doolittle, E. (2017). Social and Emotional Learning: Introducing the Issue. *The Future of Children*, 27(1), 3–11. Retrieved June 28, 2020, from [www.jstor.org/stable/44219018](http://www.jstor.org/stable/44219018)
- Lane, K. L., Menzies, H. M., Oakes, W. R., & Kalberg, J. R. (2020). *Developing a schoolwide framework to prevent and manage learning and behavior problems*. Guilford Press.
- Lewallen, T. C., Hunt, H., Potts-Datema, W., Zaza, S., & Giles, W. (2015). The whole school, whole community, whole child model: A new approach for improving educational attainment and healthy development for students. *Journal of School Health*, 85(1), 729–739.
- Mayfield, V. M., & Garrison-Wade, D. (2015). Culturally responsive practices as whole school reform. *Journal of Instructional Pedagogies*, 16, 1–17.
- Maynard, B. R., Farina, A., Dell, N. A., & Kelly, M. S. (2019). Effects of trauma-informed approaches in schools: A systematic review. *Campbell Systematic Reviews*, 15(1–2), e1018.
- McEwan, C. A., & Geggerson, S. F. (2019). A critical assessment of the adverse childhood experiences study at 20 years. *American Journal of Preventive Medicine*, 56(6), 790–794.
- McIntyre, E. M., Baker, C. N., & Overstreet, S. (2019). Evaluating foundational professional development training for trauma-informed approaches in schools. *Psychological Services*, 16(1), 95–102.
- McLennan, J. D., MacMillan, H. L., Affle, T. O. (2020). Questioning the use of adverse childhood experiences (ACEs) questionnaires. *Child Abuse & Neglect*, 101, <https://doi.org/10.1016/j.chabu.2019.104331>
- Menschner, C., & Mau, A. (2016). *Key ingredients for successful trauma-informed care* Hamilton, NJ: Center for Health Care Strategies. Available from [https://www.samhsa.gov/sites/default/files/programs\\_campaigns/childrens\\_mental\\_health/atl-white-paper-040616.pdf](https://www.samhsa.gov/sites/default/files/programs_campaigns/childrens_mental_health/atl-white-paper-040616.pdf)
- Nadler, D., & Tushman, M. (1980). A model for diagnosing organizational behavior. *Organizational Dynamics*, 9, 35–51.
- National Child Traumatic Stress Network. (n.d.). *Who we are*. Retrieved September 12, 2020 from <https://www.nctsn.org/about-us/who-we-are>.
- National Child Traumatic Stress Network (NCTSN). (2017). *Creating, supporting, and sustaining trauma-informed schools: A systems framework*. UCLA-Duke National Center for Child Traumatic Stress, Los Angeles, CA. Retrieved from: <https://www.nctsn.org/resources/creating-supporting-and-sustaining-trauma-informed-schools-system-framework>
- O'Neill, L., Guenette, F., & Kitchenhams, A. (2010). 'Am I safe here and do you like me?' Understanding complex trauma and attachment disruption in the classroom. *British Journal of Special Education*, 37(4), 190–197.
- Overstreet, S., & Chafoules, S. M. (2016). Trauma-informed schools: Introduction to the special issue. *School Mental Health*, 8, 1–6.
- Oyserman, D. (2013). Not just any path: Implications of identity-based motivation for disparities in school outcomes. *Economics of Education Review*, 33, 179–190.
- Oyserman, D., Bybee, D., & Terry, K. (2006). Possible selves and academic outcomes: How and when possible selves impel action. *Journal of Personality and Social Psychology*, 91(1), 188.
- Oyserman, D., Lewis, N. A., Jr., Yan, V. X., Fisher, O., O'Donnell, S. C., & Horowitz, E. (2017). An identity-based motivation framework for self-regulation. *Psychological Inquiry*, 28(2–3), 139–147.
- Phifer, L. W., & Hull, R. (2016). Helping students heal: Observations of trauma-informed practices in the schools. *School Mental Health*, 8(1), 201–205.
- Powell, B. J., Patel, S. V., Haley, A. D., Haines, E. R., Knoke, K. E., Chandler, S., Katz, C. C., Seibert, H. P., Ake, G., Amaya-Jackson, L., & Aaron, G. A. (2019). Determinants of implementing evidence-based trauma-focused interventions for children and youth: A systematic review. *Administration and Policy in Mental Health and Mental Health Services Research*.
- Piomb, J. L., Bush, K. A., & Kersevic, S. E. (2016). Trauma-sensitive schools: An evidence-based approach. *School Social Work Journal*, 40(2), 37–60.
- Purte, J., & Lewis, M. (2017). Mapping "trauma-informed" legislative proposals in US Congress Advance online publication. *Administration and Policy in Mental Health and Mental Health Services Research*, 44(6), 867–876. <https://doi.org/10.1007/s10488-017-0799-9>
- Ridgard, T. J., Laracy, S. D., DuPaul, G. J., Shapiro, E. S., & Power, T. J. (2015). Trauma-informed care in schools: A social justice imperative. *Communitas*, 44(2), 1–12.
- Sacks, V., & Murphy, D. (2018). The prevalence of adverse childhood experiences, nationally, by state, and by race or ethnicity. *Child trends*. Retrieved from: <https://www.childtrends.org/publications/prevalence-adverse-childhood-experiences-nationally-state-race-ethnicity>
- Shonkoff, J. P., Garner, A. S., Siegel, B. S., Dobbins, M. I., Earls, M. F., McGuinty, L., & Committee on Early Childhood, Adoption, and Dependent Care. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*, 129(1), e232–e246.
- Stewart, K. O. (2007). Preservice teachers' culturally responsive teaching self-efficacy and outcome expectancy beliefs. *Teaching and Teacher Education*, 23(7), 1086–1101.
- Skiba, R. J., Horner, R. H., Chung, C.-G., Rausch, M. K., May, S. L., & Tobin, T. (2011). Race is not neutral: A national investigation of African American and Latino disproportionality in school discipline. *School Psychology Review*, 40(1), 85–107.
- Skiba, R. J., Chung, C. G., Trachok, M., Baker, T. L., Sheya, A., & Hughes, R. L. (2014). Parsing disciplinary disproportionality: Contributions of infraction, student, and school characteristics to out-of-school suspension and expulsion. *American Educational Research Journal*, 51(4), 640–670.
- Slade, E. P., & Wissow, L. S. (2007). The influence of childhood maltreatment on adolescents' academic performance. *Economics of Education Review*, 26(5), 604–614.
- Slopen, N., Shonkoff, J. P., Albert, M. A., Yoshikawa, H., Jacobs, A., Stoltz, R., & Williams, D. R. (2016). Racial disparities in child adversity in the U.S.: Interactions with family immigration history and income. *American Journal of Preventive Medicine*, 50(1), 47–56.
- Stempel, H., Cox-Martin, M., Bronsart, M., Dickinson, L. M., & Allison, M. A. (2017). Chronic school absenteeism and the role of adverse childhood experiences. *Academic Pediatrics*, 17(8), 837–843.
- Substance Abuse and Mental Health Services Administration. (2014). *SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach*. HHS Publication No. (SMA) 14-4884. Rockville, MD: Substance Abuse and Mental Health Services Administration. Retrieved from <https://store.samhsa.gov/product/a-trauma-informed-approach/SMA14-4884.html>.
- Thomas, M. S., Crosby, S., & Vandeheer, J. (2019). Trauma-informed practices in schools across two decades: An interdisciplinary review of research. *Review of Research in Education*, 43(1), 422–452.
- Trauma and Learning Policy Initiative. (n.d.). *Frequently asked questions*. Retrieved September 12, 2020 from <https://traumainformedschools.org/frequently-asked-questions/>
- Turner, H. A., Shattuck, A., Finkelhor, D., & Hamby, S. (2017). Effects of poly-victimization on adolescent social support, self-concept,

- and psychological distress. *Journal of Interpersonal Violence*, 32(5), 755–780.
- Vertical Rocha, A. M., & Ruitenberg, C. W. (2019). Trauma-informed practices in early childhood education: Contributions, limitations and ethical considerations. *Global Studies of Childhood*, 9(2), 132–144. <https://doi.org/10.1177/2043610619846319>
- Wade, R., Shea, J. A., Rubin, D., & Wood, J. (2014). Adverse childhood experiences of low-income urban youth. *Pediatrics*, 134(1), e13–e20.
- White, S., Edwards, R., Gillies, V., & Wastell, D. (2019). All the ACEs: A chaotic concept for family policy and decision-making? *Social Policy and Society*, 18(3), 457–466.
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- Zakreski, B. N., Ventresco, N. E., & Jaffe, A. R. (2017). Promoting resilience through trauma-focused practices: a critical review of school-based implementation. *School Mental Health*, 9(4), 310–321.