Dissertations

Summer 8-3-2021

Teachers Attitudes Regarding Adverse Childhood Experiences, Trauma-Informed Educational Practices, and Student Resiliency

Alyson Reynolds Kohl
Brandman Universtiy, alysonkohl@yahoo.com

Follow this and additional works at: https://digitalcommons.umassglobal.edu/edd_dissertations

Part of the Early Childhood Education Commons, Elementary Education Commons, and the Elementary Education and Teaching Commons

Recommended Citation

Teacher Attitudes Towards Adverse Childhood Experiences,

Trauma-Informed Educational Practices & Student Resiliency

A Dissertation by

Alyson Reynolds Kohl

Brandman University

Irvine, California

School of Education

Submitted in partial fulfillment of the requirements for the degree of

Doctor of Education in Organizational Leadership

August 2021

Committee in charge:

Patrick Ainsworth, Ed.D., Committee Chair

Keith Larick, Ed.D.

Walt Buster, Ed.D.

BRANDMAN UNIVERSITY

Chapman University System

Doctor of Education in Organizational Leadership

The dissertation of Alyson Reynolds Kohl is approved.

_____, Dissertation Chair

Dr. Patrick Ainsworth, EdD

_____, Committee Member

Dr. Keith Larick, EdD

_____, Committee Member

Dr. Walt Buster, EdD

_____, Associate Dean

July 2021

Month and Year

Teachers Attitudes Towards Adverse Childhood Experiences,

Trauma-Informed Educational Practices & Student Resiliency

Copyright © 2021

by Alyson Reynolds Kohl

ACKNOWLEDGEMENTS

ABSTRACT

Teacher Attitudes Towards Adverse Childhood Experiences, Trauma-Informed

Educational Practices & Student Resiliency

by Alyson Reynolds Kohl

Purpose: The purpose of this convergent parallel design mixed methods case study was

to determine how training on Adverse Childhood Experiences and Trauma-Informed

Educational Practice affected the attitudes of teachers, in Shasta County's Enterprise

Elementary School District (EESD), regarding students who had experienced Adverse

Childhood Experiences (ACE). A further purpose of this study was to understand if

teachers in EESD perceived training in ACE and Trauma-Informed Educational Practices

(TIEP) was effective in changing their classroom practices to support the resiliency of

students who had experienced ACEs.

Methodology: The methods for this research included: an online survey, *The Attitudes*

Regarding Trauma-Informed Care (ARTIC) Scale© by The Traumatic Stress Institute,

distributed electronically to 140 teachers EESD Teachers and concurrent interviews of 9

volunteer EESD Teachers. The results were studied to gain an understanding of the

effects of ACE trainings and TIEP on the attitudes and classroom practices of teachers

and student resiliency.

Findings: The teachers reported that ACE & TIEP trainings positively impacted their

relationships with students, changed their classroom practices, improved student

resiliency, and decreased negative behaviors.

Conclusions: Teacher education in ACE and TIEP is beneficial to teachers. Teachers

gain valuable perspectives regarding student behaviors and helped them gain valuable

skills. Whole School approaches to TIEP lead to an increase in positive student

outcomes and develop student resiliency.

Recommendations: It is recommended that a replication of this study be conducted on a

larger scale with multiple rural districts, however, not conducted during a pandemic.

Conduct a mixed methods comparative study of communities, comparing communities

that use a trauma-informed communities' approach. Research school districts which

have developed the 'Whole School' approach including training and supporting

parents/caregivers, teachers, and other staff to include not only TIEP for the students but

includes Trauma-Informed Supervision for staff and teachers and trauma-informed

parenting for the parents.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I: INTRODUCTION

Children throughout the world may encounter Adverse Childhood Experiences (ACE). ACEs are situations which occur during childhood that create chronic stress (Anda et al., 2006). These experiences and the ensuing stress can be traumatic and negatively impact a child's brain development, due to how the brain and body respond biologically to a perceived threat. Because trauma impacts brain development, it can result in behavioral and learning challenges as well as physical ailments and mental and physical disorders and disabilities over time, not only in childhood, but into adulthood as well. Children with a high number of ACEs are more likely to drop out of school, have mental health and/or delinquency problems and often develop lifelong social and health problems (Anda et al., 2006). The ACE Study has been one of the most groundbreaking studies of the 21st century in terms of linking traumatic childhood experiences with brain science and identifying short term and long term negative behavioral, mental, and physical health outcomes.

In the early 1990s, Dr. Robert Anda and Dr. Vincent Felitti, conducted a study of over 17,000 Kaiser adult patients, who were predominately White middle class. In 1998, Felitti and Anda published their research findings in the American Journal of Preventive Medicine in an article called *Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Cause of Death in Adults: The Adverse Childhood Experiences (ACE) Study*. In their study they found there was a direct correlation between the number of ACEs in a person's childhood and later behavioral, as well as physical problems, such as obesity, alcohol and drug addiction, heart disease, diabetes, mental illness and suicide. The higher the number of ACEs, the higher the risk for

adverse mental, physical, and behavioral health outcomes (Anda et al., 2006; Felitti et al., 1998). This is what Anda & Felitti call the Dose Response.

ACEs include abuse (emotional /mental, physical, and sexual), family dysfunction (divorce, parental substance use, incarceration, and domestic violence), and neglect (physical and emotional)(Anda et al., 2016). The ACE questionnaire contains 10 questions addressing those issues. Answering *Yes* to any of the 10 questions results in an ACE score of 1. Individuals can have anywhere between 1 and 10 ACEs as an ACE score. The higher the number of ACEs the greater the risk for poor behavioral and physical outcomes. This is called the dose response (Felitti et al., 1998).

Stephen Porges (2017) explained the biological impact of trauma in his polyvagal theory. In simple terms, when the brain experiences stress, the body goes into fight or flight mode for the purposes of survival. The blood and oxygen leave the brain moving instead into the extremities for fight, flight or freeze. Hormones such as cortisol and adrenalin are released and, when this happens, disease and negative patterns of behavior (in order to cope with agitation and/or anxiety) can begin to set in. The more chronic the stress the more possible damage may be done to the brain and body due to the excessive stress hormones (Porges, 2017).

Much of the research regarding ACEs focuses on adults and adult health outcomes; however, researchers are beginning to focus on children in order to identify potential ways for early intervention to decrease the negative impact on development over the long term. Currently there is a movement (ACE Aware) in California on training teachers on ACEs and its impact on brain development, and many districts are developing trauma-informed schools (California Department of Education, 2020). The purpose of

the training is to educate people about ACEs, chronic stress, and trauma, as well as for teachers to better understand behavioral and learning difficulties which may occur in the classroom because of ACEs, trauma, and chronic stress (Rossen & Hull, 2013). There has yet to be any research on the effectiveness of the trainings on changing teachers' attitudes and approaches to behavioral and learning problems in the classroom. Teachers can have a direct impact on children, and they are well positioned for identification of and early intervention on ACEs (Martin et al., 2010).

Background

The ACE Study came about as a result of Dr. Anda working at the Centers for Disease Control (CDC) in 1990 (R. F. Anda, personal communication, May 16, 2019). Anda was studying smoking and noticed there seemed to be a correlation between child abuse and smoking, in that those who smoked and were unable to quit were often survivors of abusive childhoods. He also observed that these smokers reported their childhoods were fraught with abuse. In 1991, Dr. Anda developed the ACE Survey from the results of his smoking study. In 1994, the CDC provided funding to conduct the first ACE study. Dr. Anda then teamed with Dr. Felitti, who during his study on obesity at the Department of Preventative Medicine in San Diego, found a correlation between obesity and childhood sexual abuse (R. Anda, personal communication, January 15, 2020). In the ACE study, the team gave the ACE questionnaire to 17,000 Kaiser Permanente patients between the ages of 19 and 94. The results were published in 1998 in the American Journal of Preventative Medicine. Most of the study subjects had attended college and only 6% did not have a high school diploma. What Anda and Felitti found was the following: In the category of household dysfunction, 27% grew up with a

substance abuse in their home; 23% had experienced separation/divorce; 17% had a

mentally ill household member; 13% witnessed intimate partner violence and 6% had

experienced criminal behavior and had a household member incarcerated during their

childhood. In the areas of neglect, 15% had experienced emotional neglect and 10% had

suffered physical neglect. And in the areas of abuse, 28% had experienced physical

abuse, 21% sexual abuse, and 11% had experienced emotional abuse (Felitti et al., 1998).

In the study, 33% of the participants had 0 ACE; 26% had 1 ACE; 16% had 2

ACEs; 10% had 3 ACEs and 16% had 4 or more ACEs. Anda and Felitti found there was

a dose response relationship; the higher the number of ACEs, the greater the toxic stress

resulting in a higher percentage of health problems, physically, mentally, and

behaviorally (see Figure 1). They further found that the risk of using injected drugs was

40 times higher for those with an ACE score of 4 compared to those with an ACE score

of 0. Other examples of ACE related health and social problems with a dose response

included alcoholism & alcohol abuse, chronic pulmonary disease, coronary heart disease,

depression, drug and/or alcohol abuse, fetal death; intimate partner violence, mental

health problems, obesity, sexual behavior problems, smoking, unintended pregnancy,

violence, and workplace problems (Felitti et al., 1998).

In a recent study conducted by the Data Resource Center for Child and

Adolescent Health (Crouch Probst et al., 2019; Sacks & Murphy, 2018), 45,287

caregivers of children 0 to 17 were surveyed and 1348 interviews were conducted. This

study had similar findings as Anda and Felitti; however, additional ACEs for youth were

discovered to also include economic hardship (difficulty meeting basic needs of food and

shelter) and difficulties due to discrimination and race related issues. Economic hardship

and divorce were found to be the number one ACEs among children in the study.

Figure 1

ACE Dose Response
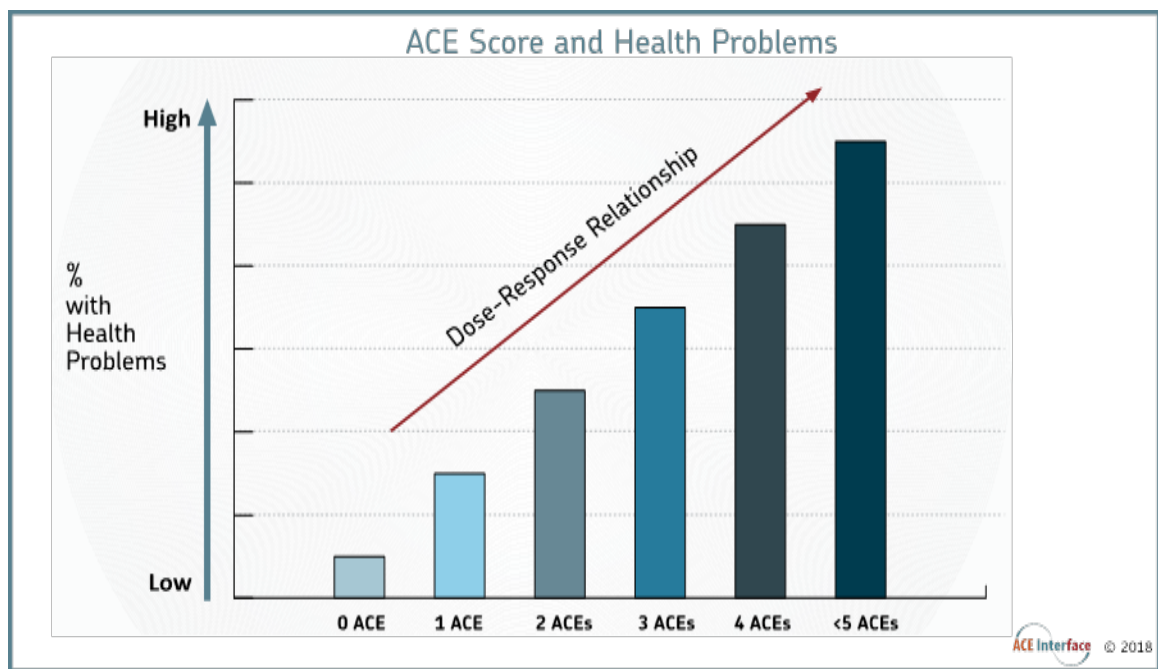
From "ACE Interface, LLC Training Materials," by R. F. Anda & L. Porter, 2018, ACE
Interface (http://www.aceinterface.com/). Reprinted with permission. See Appendix P.

Long Term Effects of ACEs

Anda and Felitti (1998) found that there are long term negative effects from

untreated ACEs. They found that people who suffered ACEs were not only at greater

risk for physical diseases and behavioral disorders, but there is risk for early death

resulting from both the physical and psychological disorders. Studies around the world

have confirmed Anda and Felitti's findings (Bhopal et al., 2019; Luca & Liang-Ching,

2019).

Dr. Anda and Dr. Brown developed the graphic mechanisms that influence ACEs (see Figure 2) to illustrate the long-term effect of untreated ACEs (Anda & Brown, 2007). These mechanisms are displayed as a continuum of effects on child development resulting from ACEs. At the first level or base of the triangle is Generational Embodiment/ Historical Trauma. Through the study of epigenetics, it was found that ACE actually impacts children's genetic code. A 2010 study discovered that processes that affect gene expression can be inheritable and passed from one generation to the next (Szyf & Bick, 2013; National Scientific Council on the Developing Child, 2010). This portion of the triangle was added after ACEs related epigenetics studies were conducted and was not part of the original Kaiser study triangle. The second level of the triangle is Social Conditions/Local Context. It too was added to the triangle, after it was discovered that poverty and homelessness, as well as community violence were also adverse experiences for children. (Anda et al., 2006). The third portion of the triangle contains the original 10 ACEs which include: household dysfunction such as divorce, substance abuse, mental illness, domestic violence, and criminal behavior; neglect both physical and emotional; and abuse- emotional, physical, and sexual.

Next in the triangle comes Disrupted Neurodevelopment within the brain (see Figure 2). This causes the fight, flight, freeze or flop response for survival, which triggers the release of hormones, including cortisol and adrenalin, for the purpose of survival of the species (Porges, 2007; Seng & CAsCAid Group, 2019). The fifth layer of the triangle addresses the Social, Emotional and Cognitive Impairments, which develop as a result of the disrupted neurodevelopment. These impairments include learning disabilities, emotional disorders, and self-regulation difficulties, which result from the brain and body

being under constant stress from the chemical reaction of being in a continual primitive state of fight, flight and/or freeze or survival mode for an extended period with no relief or intervention. The sixth layer, the Adoption of Health Risk Behaviors, reflects that children adopt risky behaviors as a response to the chronic physiological state of stress experienced within their neurological systems. Some of these behaviors include avoidance of stimuli, smoking, drinking, angry behavior, over or under eating (Anda & Felitti, 2006). These adaptive behaviors vary in risk; however, they all have an inevitable outcome of Disease, Disability, and Social Problems shown in the seventh level of the triangle. All of the lower levels can lead to the top section of the triangle of Early Death, whether as a result of suicide or terminal illness resulting from a life of chronic maladaptive behaviors and cellular and genetic changes. Brown et al. (2009) subsequently conducted a follow-up study to the original ACE study. They found people with 6 or more ACEs died nearly 20 years earlier on average than those with no ACEs. Roughly one third of the study died before the age of 75 (Brown et al., 2009).

Figure 2

ACE Triangle
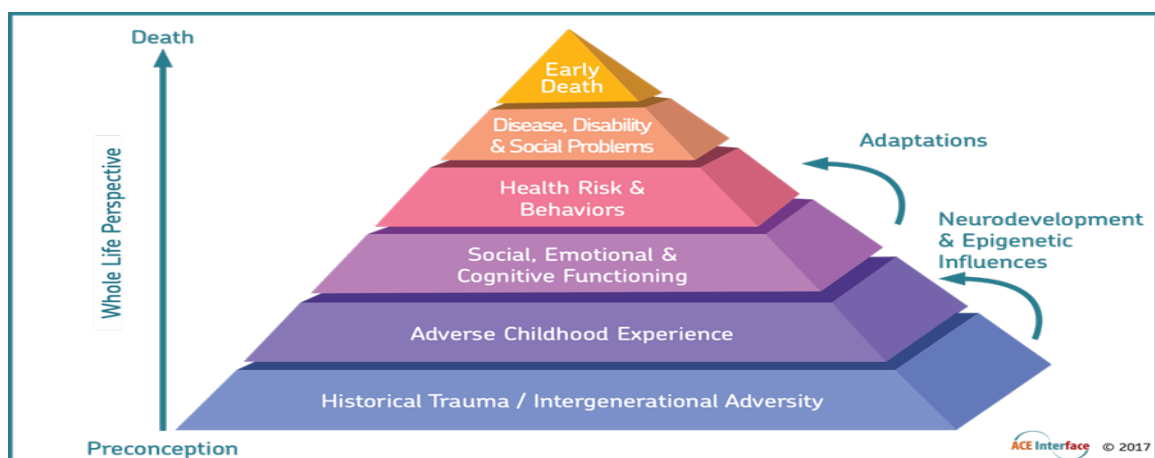
Note. National Center for Injury Prevention and Control, Division of Violence Prevention, 2019.

ACE Issues in Shasta County California

Shasta County is located two hours south of the Oregon border. It spans 3,789 square miles and is home to over 183,000 people, most of whom live in or around Redding, California. The poverty rate in Shasta County sits at 18.1% (with some areas of Shasta County being as high as 33%) and 25% of the Shasta Counties Children live in poverty. Shasta County has the third highest arrest rate in California (Shasta County Health & Human Services, 2019). In Shasta County, 33% of children under the age of 1 are in foster-care and there are more children in foster-care than the rest of the state, with 11.8% per 1000 children in foster-care compared to the state average which is 5.8% per 1000 (Population Reference Bureau, 2019). Other indicators which stand out compared to the state and national averages include significant high school dropout rates, high rates of domestic violence (both spousal abuse and child abuse), suicide, substance abuse, tobacco use and obesity. Eighty-four percent of single mothers in Shasta County fall below the federal poverty limit. In 2019, Shasta County was ranked 48th out of the 58 counties for overall health outcomes (https://datausa.io/profile/geo/shasta-county-ca/).

In a study conducted in 2012, the number of Shasta County residents with four or more ACEs was 39.7% compared to the state of California average of 16.7% (Shasta County Health & Human Services, 2012). Following the Carr Fire in 2018, Shasta County began to explore options for treating trauma in the community. Shasta County hired Dr. Anda to teach his *ACE Interface Training* (2019) to Shasta County personnel. In 2016, to mitigate the poor outcomes in Shasta County, Shasta County Public Health began training teachers in the effects of ACEs on children's developing brains and how behavioral and learning problems can develop because of ACEs (Shasta Collaborative,

shastastrongfamilies.org). The purpose of the training is to educate teachers and other school personnel that learning problems and behavioral problems are not related to children being lazy, unmotivated, willfully oppositional, or trying to be problematic. In the past, these students were often subject to discipline, having the students leave the classroom and often suspending the child from attending school. The training seeks to equip teachers with strategies for understanding and effectively dealing with children who have or are experiencing ACEs; helping children adopt positive behaviors, develop resiliency, and keep them in school. In addition, a California law adopted in 2019 (SB419), required schools to limit the use of suspending or expelling students with behavioral problems as a last resort, to change the trajectory of those students who often end up dropping out (California Legislature Information, 2019). This law increases the urgency for districts, principals, and teachers to adopt effective alternative means for improving student behavior and learning.

Effects of ACE in the Classroom

Untreated ACEs can result in poor learning outcomes to include the development of learning disabilities as a result of the neurobiological effects of ACE on the cognitive process of students (Bick & Nelson, 2015). ACEs can impact cognition because when the student feels stress and the brain goes into fight, flight or freeze it is very difficult for these children to think clearly. The neuropsychological results of ACE affect intellectual functioning; attention and executive functioning; learning and memory; visuospatial functioning; language development and acquisition, and motor functioning. These students are at risk of failure in meeting grade-level standards in math and language arts. They are at risk for poor school attendance, excessive illness and/or truancy. They are

also at risk for behavioral problems such as poor impulse control, aggression, excessive fearfulness, and poor social skills (Malarbi et al., 2017).

Theoretical Foundations

Polyvagal Theory

Stephen Porges (2007) published the *Polyvagal Perspective*. The Polyvagal Theory is a newer construct for understanding how the body and the autonomic nervous system impact humans both in brain and body. The focus of his research is on the Vagal nerve, which is the main nerve that connects to all the functions of the body. His theory focuses on the autonomic nervous system incorporating neurophysiology and vertebrate phylogeny. This theory shows that changes in neural structures can shift adaptive functioning both in the effect of ACE and in the healing of ACEs. It also addresses what an individual has control over, versus what they do not have control over via the parasympathetic and sympathetic nervous system. This theory holds that biology in the body and brain is changed including the idea that the changes can occur at the genetic level due to the primal drive for survival during real or perceived danger. The Polyvagal Theory focuses on neuroscience and the brain body connection. It explains how the body perceives a situation as the mind and the senses assess for danger constantly. When the body feels safe, the nervous system is in a relaxed state and the body reacts differently based on if the brain and body feel safe versus if it perceives danger. The Vagal nerve is not only connected to every organ in the body, but it is also connected to the amygdala which is considered the reptilian or primitive brain for the purposes of survival as it manages fear and strong emotions (Porges, 2007).

Attachment Theory

Attachment Theory provides a framework for understanding and treating trauma. Attachment theory holds that ACEs may be impacted by the lack of attachment and that positive attachment may act to heal ACEs (Marshall & Frazier, 2019). A lack of attachment or disorganized or avoidant attachment may occur because of or contribute to abuse/neglect. Disruptions in attachment can lead to a lifetime of relationship and living difficulties. Attachment theory is about relationally focused interventions to mitigate the impact of ACE on children. When a child feels attached and connected, they feel safe, thus calming their nervous system and building resiliency (Chinitz et al., 2008).

Relational Theory

Similar to the Attachment Theory is the Relational Theory. While Attachment Theory focuses on the attachment bond between the caregiver and the child, Relational Theory looks at the attunement of the relationship and the internalized relational patterns (Rubinstein, 2015). "Relational Theory offers a structure from which to understand and treat the interpersonal and intrapsychic legacy of severe childhood trauma" (Rubinstein, 2015, p.398). Relational Theory projects experiences from childhood into teen/adult relationships often reenacting the abuse, leaving one open to further and additional abuse.

Betrayal Trauma Theory

Freyd (1996), reported in her book *Betrayal Trauma: The Logic of Forgetting Childhood Abuse*, that "the closer and more necessary the relationship, the greater the degree of betrayal" (Freyd, 1996, p.12). The pain of Betrayal Trauma is so significant that the child can compartmentalize or dissociate from their experience and not remember what happened to them (Giesbrecht & Merckelbach, 2009). This amnesia serves to

protect the child from remembering the abuse and is one of the reasons some children can go about their normal school day without thinking about or remembering the abuse. Some children with Betrayal Trauma have lost trust in all adults and develop anger and resentment towards adults.

Schema Theory

Piaget (1954) identified schema theory as the attitudes, thoughts, and perceptions of how one relates to themselves, other people, and other objects in life based on early life experience. Schema Theory is very similar to Relational, and Attachment Theories except Schema Theory is a pattern of projecting childhood experiences into other areas of life. For example, a student may report that a teacher is being mean to him when he expects the teacher to treat him the way his mother treats him if his mother is mean and abusive.

Connecting Theories

Resiliency Theory looks at resilience factors that mitigate negative outcomes from ACEs. Resiliency is essentially the ability to bounce back from and bounce forward in the face of adversity. Resiliency Theory, Attachment Theory, and Polyvagal Theory all relate to children experiencing negative outcomes due to ACEs. These theories offer insights on the interventions related to healing from ACEs. Each of these theories compliments the other. The Polyvagal Theory gives the why of biological trauma and how trauma impacts the brain and body, contributing to lifelong challenges to mental, physical, and behavioral health and wellbeing. Attachment Theory explains how a break in attachment can contribute to the negative outcomes of ACEs, and how connection/attachment contributes to the healing of the effects of ACEs. Lastly the

Polyvagal and Attachment theories lead to the concept of developing resiliency despite adversity. Resiliency Theory will be the central focus of this research.

Theoretical Framework

The Theoretical Framework for this study is the Resiliency Theory developed by Norman Garmezy, a developmental psychologist at the University for Minnesota (OptomistMinds, 2021). Garmzey was the founder of 'Project Competence', a study which looked at positive outcomes of at-risk youth over time which began in early 1980's. The key elements in Garmezy's view of resilience include individual factors such as dispositional attributes, cognition, and temperament; familial factors including caregiver responsiveness or absence, family cohesion and caring or lack of caring; and support factors outside of the family for both the child and the family such as school, church, and community.

Traub and Boynton-Jarrett (2017 p.3 Table 1) identified five modifiable resilience factors also known as protective factors to include:

1. "Cognitive traits of a positive appraisal style and executive functioning skills – A positive appraisal style has been defined as optimism and confidence about one's ability to manage adversity and executive functioning includes cognitive flexibility and inhibitory control."

2. "Parenting/caregiving – Positive parent -child/caretaker-child relationships have a profound effect on resiliency."

3. "Maternal Mental Health – Treating the mothers mental health is very important toward the child's resiliency."

4. "Self-Care skills and household routine – Consistency provides safety for children and learning self-care skills are imperative toward resiliency".

5. "Trauma understanding – As age-appropriate assisting children and their caregivers in understanding the impact of trauma and how it can be overcome."

The stronger the protective or resiliency factors, the more likely a child will have positive life outcomes despite childhood adversity (Gardner & Stephens-Pisecco, 2019). Other protective factors include safe supportive relationships, empowerment and choice, realistic expectations, flexible boundaries, ability to constructively use time, positive values, social competencies, and a positive identity (Gardner & Stephens-Pisecco; Southwick et al., 2014).

Treating ACE in Schools

While prevention of ACEs is the optimal strategy, many students arrive at preschool, pre-kindergarten or kindergarten having experienced or experiencing childhood traumas (Price & Ellis, 2018). When children with ACE display behavioral problems in classrooms, early intervention has been shown to change the trajectory of youth impacted by ACE. Various forms of psychotherapy have been shown to make a difference in mitigating the effects of ACEs. Schools are often the first to notice negative signs and symptoms which can occur because of ACEs such as attention problems, difficulty with abstract reasoning, memory problems, impulse control problems and attendance issues (Sitler, 2008). Teachers have the opportunity to either positively or negatively impact a child struggling with ACEs. Schools are recognizing the neurological impact of ACEs and are implementing various interventions such as

teaching students mindfulness techniques, EFT Tapping, yoga, meditation, and mind/body techniques for managing toxic stress and anxiety (Rossen & Hull, 2013).

Trauma-Informed Educational Practices

Trauma-Informed Educational Practices (TIEP) are specifically designed for teachers and schools to meet the needs of students who have or may be experiencing ACEs or trauma. According to Substance Abuse & Mental Health Services Administration (2014) a trauma-informed approach has the following components,

1) "Realizes the widespread impact of (ACE)/Trauma and understands potential paths for recovery." (p. 9)

The importance of recognizing the widespread impact if ACE/Trauma is to be aware that anyone, any child, can be impacted by ACE and/or trauma thus the importance of utilizing a universal approach of treating all with kindness and care as well as using trauma informed responses with all students universally.

2) "Recognizes signs and symptoms of ACE/Trauma in the child, family, staff and others involved in the system." (p. 9)

Similarly, to recognizing the widespread impact, it is important to recognize these signs and symptoms, because in a trauma-informed response one should be cognizant of what symptoms are recognized and the best non-threatening response to those symptoms.

3) "Responds by fully integrating knowledge about ACE/Trauma into policies, procedures and practices." (p. 10)

It is not only important for each teacher to be trauma-informed, but it is also important the school and school district policies, procedures, and practices be trauma-

informed. This means it is important for school principals and superintendents to also

be trauma-informed trained and trauma responsive toward teachers and staff.

Teachers and school staff must feel supported, just as students must feel supported, in

order to decrease burn-out potential for teachers.

    4) "Seeks to actively resist re-traumatization of self or others." (p. 10)

Most important of all is to not re-traumatize those with histories for trauma. Many

practices such as suspension and expulsion, corporal punishment, shaming, etc.

retraumatize those who have experienced ACE/Trauma. (pp. 9-10)

The Principles of Trauma-Informed Educational Practices include safety, trustworthiness,

support, collaboration and mutuality and empowerment, voice, and choices (SAMHSA,

2014). Trauma Informed Educational Practices (TIEP) should incorporate all those

principles.

Statement of the Research Problem

The problem is, with nearly one in 10 children experiencing 4 or more ACE and

nearly half of children experiencing one or more ACE, these children are considered at

risk when entering elementary school (Bartlett & Steber, 2019). When children enter

school with these problems they often struggle academically, behaviorally and/or socially

(Martin et al., 2010). These children often require multiple resources and can be

challenging for teachers. They can be disruptive to the classroom and often react or act

out in ways which often lead to possible suspension and expulsion. Due to SB419,

suspensions and expulsions will be much more difficult to administer, thus teachers and

administrators need to find alternatives to these exclusion practices (California

Legislature, 2019). Traumatized students need inclusive interventions, not exclusive

interventions (Chafoueas et al., 2016). The student who is experiencing high ACEs often feels out of control and does not know why they can't sit still, anger easily or blank out on a test (McGruder, 2019). Teachers often think these students are misbehaving on purpose or are simply not trying. Other students may see these students as weird and ostracize or bully them. It is important that (a) teachers be aware of ACE as well as the symptoms a child may be displaying, (b) teachers be aware of their own ACE and the triggers that may incur their own trauma response of anger, et cetera, and (c) teachers and administrators know how to help students with a high number of ACEs to self-regulate in order to decrease their fight, flight, freeze responses (Sitler et al., 2010).

Sitler (2008) describes the importance of teachers and school staff being informed in the signs and symptoms of ACEs and the impact of trauma on learning and behavior. Interventions not only include education on ACE, but how to implement the use of social and emotional learning curriculums (Phifer & Hull, 2016). Communities like Shasta County struggle to make use of the ACE research to both decrease the number of ACE's a child may experience and heal the effects of ACEs for the purposes of improving children's learning, behavioral and health outcomes (Boparai et al., 2018). The Shasta County Public Health Department and Shasta County Office of Education have teamed to trained teachers and school personnel on the research and impacts of ACEs on children's learning and behavior. This training was designed by Dr. Anda from the CDC to equip teachers with the knowledge and skills to better serve student with ACEs. The aim of the training is, that by educating teachers on ACE, teachers will have compassion as well as understanding and try alternative strategies besides removing a child from the classroom, suspension, or school expulsion.

There is a need to understand if the trainings make a difference in improving the behavior and resiliency of children. Effectively intervening and changing behaviors in elementary school can help to mitigate the long-term effects of ACE, as students' progress through their years of school and transition into adulthood (Gardner & Stephens-Pisecco, 2019)

Purpose Statement

The purpose of this convergent parallel design mixed methods case study was to determine how training on ACE and TIEP affected the attitudes of teachers in Enterprise Elementary School District towards (with) students who experienced Adverse Childhood Experiences (ACE). A further purpose of this study was to understand if teachers in Enterprise Elementary School District perceived the training was effective in changing their classroom practices to support the resiliency of students who had experienced ACEs.

Research Questions

1. To what extent do teachers in Enterprise Elementary School District indicate the trainings on ACEs & Trauma-Informed Educational Practices (TIEP) affected their attitudes towards students who had experienced ACEs?

2. What were the perceptions of teachers in Enterprise Elementary School District on the effectiveness of ACEs & TIEP trainings in changing their classroom practices to support the resiliency of students who had experienced ACEs?

Significance of the Problem

Given the fact that 47% of all children in the United States have experienced at least one adverse childhood experience, with 35% of those children having had at least one ACE before they enter kindergarten this research could lead to new insights into early interventions for decreasing the negative impacts of ACEs (Price & Ellis, 2018). ACEs contribute to problems such as learning difficulties resulting from problems with cognitive processing for reading, writing and math, as well as behavioral regulation difficulties which can contribute to truancy, dropout rates and lifelong social problems; it is important that teachers be informed on the latest in brain science (Blodgett & Lanigan, 2018). Elementary School teachers are the frontline in terms of having the ability to positively impact and intervene in the lives and the development of children. It is important to know if training in ACEs and TIEP changes a teacher's attitudes and perceptions and thus changes reactions/interventions with students who have learning and/or behavioral problems.

If research is not conducted into the efficacy of providing ACE training and trauma-informed instruction to teachers, then it will not be known if these trainings are making an impact on teachers in the classroom thus impacting student resiliency. It is also important to know how teachers are impacted by this training and if attending the training does it change their perspective when working with students with learning, emotional and behavioral problems. If the training has not changed their attitudes and practices, it is likely teachers are relying on old forms of discipline, which have often proven infective (punishment, exclusion, etc.). If teachers are not informed on ACE and the impact of trauma, and how to assist their students by providing a safe learning

environment, then school could potentially, at worst be another adverse experience for a child, or at best do nothing to assist in providing an optimal learning environment for the student impacted by ACE.

The results of this study can assist principals and superintendents in determining if ACE training and TIEP are beneficial for teachers in modifying negative student behaviors or poor learning outcomes. The study can also assist Shasta County Public Health, Shasta County Children's Mental Health and Shasta County Office of Education in knowing whether to modify the existing training or decide to continue to fund the ACE training of teachers. The results may assist in answering the question: Does training teachers on ACE and the impact of ACEs on children's' neurodevelopment and educational experience, change teaching practices. If ACE training does influence the teaching practices of elementary school teachers, the results could positively impact the learning environment of students who have or are experiencing ACEs. ACE training can help to identify interventions that elementary school teachers can implement to mitigate the negative impact of ACEs on students' lives currently and in the future (R. Anda personal communication @ ACE Interface Training, May 15, 2019).

Research has shown that early intervention can help in mitigating the negative outcomes for students experiencing ACEs (Romero et al., 2018). Shasta County schools are plagued with a dropout rate at 10.9 % (California 10.7%), school suspensions at 6% (state average 3.5%), expulsion rate of 1% (state average .63%) and an absenteeism rate of 12.9% (11.1 state average; http://www.eddata.org/county/) all statistics known to be adverse outcomes impacted by ACEs. By educating schoolteachers and staff on ACE and effective trauma-informed interventions, the trajectory of these students impacted by

ACEs can be changed. The learning experience for all students can be improved by having trauma-informed teachers and staff who can provide a safe educational experience. The long-term outcomes could include an increase in high school graduation rates, less violence, less substance abuse, and less intergenerational transmission of further ACE onto the next generation and improved overall functioning in society.

Definitions

Adverse Childhood Experiences (ACE): Negative experiences which occur during childhood (0 to 17 years) to include but not limited to the following categories: Abuse – to include physical, emotional, and sexual; Neglect often due to parental substance abuse or mental illness; Domestic or community violence; loss of a family member by death, suicide, incarceration, or divorce; economic insecurity and racism (National Center for Injury Prevention & Control, Division of Violence Prevention, 2020).

ACE Interface Training: An evidence-based training developed by Dr. Robert Anda & Laura Porter, LCSW on ACE's and the impact on brain development (Anda & Porter, 2018).

Amygdala: An almond-shaped set of neurons located deep in the brains medial temporal lobe which plays a vital role in in the formation of conditioned fear responses and automatic reactions for the purposes of survival are stored here. It is part of the limbic system which is known as the emotional and primitive part of the brain (Weber & Reynolds, 2004).

Attachment Theory: A theory developed by Bowlby and Ainsworth focuses on the importance of human connection. It views children as socially oriented and the need

to develop trust that their caregivers will take care of them and meet their basic connection and survival needs.

Attitudes Related to Trauma-Informed Care (ARTIC) Scale ©: A 45-item Likert Scale questionnaire developed by Traumatic Stress Institute of Klingberg Family Centers, Tulane University and Pace University to measure teacher attitudes about the underlying causes of problem behavior and symptoms; responses to problem behavior and symptoms; on the job behavior; self-efficacy at work; reactions to the work; personal support of Trauma Informed Practices (TIP); and system-wide support of TIP.

Autonomic Nervous System: The nervous system responsible for control of bodily functions not consciously directed such as heartbeat, breathing and digestion (Bick & Nelson, 2016; Porges, 2006).

Capturing Kids' Hearts ©: A research-based process developed by Flippen Group, which helps teachers strengthen attachment connections with students and help to develop self-managing, high-performing classrooms using team-building skills and a social contract (Flippin Group, 2009).

Cerebellum: The area at the back and bottom of the brain behind the brain stem that has to do with movement and coordination.

Cerebellar Vermis: The part of the brain in the Cerebellum that regulates the release of the feel-good chemicals, norepinephrine, and dopamine. Research shows the Vermis in those who have experienced abuse is reduced in size in those who have experienced abuse (Anda & Porter, ACE Interface, 2018).

Classroom Practices: Are the techniques used by teachers for the purposes of both managing a classroom of children and educating them.

Cognitive Traits: The traits of a positive appraisal style, self-efficacy in managing adversity and executive functioning needed for the purposes of resiliency (Traub & Boynton-Jarrett, 2017).

Cortisol: The primary Glucorticoid hormone that activates the body's stress response system (Weber & Reynolds, 2004).

Dose Response: The higher the number of ACEs (dose) a child has increases the likelihood of ongoing behavioral and physical problems (response) in adulthood (Felitti, et al, 1998).

Epigenetic: Nongenetic influences on gene expression

Executive functioning: Mental constructs which involve cognitive flexibility and inhibitory control for the purposes of resiliency Traub & Boynton-Jarrett, 2017).

Hippocampus: Plays a crucial role in memory, special learning, and behavioral inhibition.

Intergenerational Transmission: The passing of one biological or learned behavior from one generation to the next.

Limbic System: A complex set of nerves and networks in the brain, involving several areas near the edge of the cortex concerned with instinct and mood, which controls basic emotions such as fear, pleasure, anger, as well as drives such as hunger, sex, dominance, and care of offspring. The limbic system is known as the survival brain. It is the part of the brain that humans had before the more intellectual parts of the brain (prefrontal cortex and frontal lobes) developed (Weber & Reynolds, 2004).

Maternal Mental Health: Ensuring that mothers have mental health support is very important for childhood resiliency (Traub & Boynton-Jarrett, 2017).

Neuroplasticity: Ability for the brain to change continuously throughout life (Bick & Nelson, 2016)

Parasympathetic Nervous System: Nerves arising in the brain and the lower end of the spinal cord to help calm and relax the body and counterbalances the sympathetic nervous system (Porges, 2017).

Prefrontal Cortex: Controls the thinking brain or what is called executive functioning. The functions include impulse control and attention. This area of the brain is susceptible to stress especially during development until the age of 30 (Weber & Reynolds, 2004).

Polyvagal Theory: The Theory of the neuropsychological foundations of emotions, attachment, and communications controlled by the sympathetic nervous system (SNS) and the parasympathetic nervous system (PNS) of the autonomic nervous system (ANS). Theory proports that humans have retained the primitive Vagal system for survival, even though we are no longer living in the wild; in that when threatening events (or perceived life-threatening events) occur this triggers a biobehavioral response that puts humans in a state where it may be difficult to become "normal" again, thus impacting the physiology of the brain and the body (Porges, 2017).

Positive Appraisal Style: One's level of optimism as related to resiliency (Traub & Jarrett, 2017).

Positive Parent: A positive parent-child or caretaker-child relationship which contributes to resiliency (Traub & Boynton-Jarrett, 2017).

Resiliency: The ability to bouncy back or repair; the ability to recover from difficulties or adjust easily to adversity ("Resiliency," 2020). The American

Psychological Association (2020) defines resilience as "the process of adapting well in the face of adversity, trauma, tragedy, threats or even significant stress".

***Resiliency Theory*:** Theory developed by multiple theorists (Garmezy, Rutter, Werner, Luthar, Matson, and Unger) that looks at resilience factors (internal and external) that mitigate negative outcomes from ACEs/Trauma or stress.

Second Step©: Second Step developed by the Committee for Children is a program rooted in social-emotional learning theory that helps transform schools into supportive, successful learning environments by teaching and creating empathy.

Secondary or Vicarious Trauma: The trauma response that occurs when someone hears stories of others trauma and/or triggered from working with traumatized high needs individuals.

Self-Care Skills and Household Routine: Skills that provide consistency and safety needed for resiliency (Traub & Boynton-Jarrett, 2017)

Social-Emotional Learning: A therapeutic educational model developed by the Collaborative for academic, social, and emotional learning that teaches students self-awareness, self-management, relationship skills and responsible decision making.

Somatic: Physical complaints which are a result of psychological problems.

Sympathetic Nervous System (SNS): The SNS is a major axis of the stress response. It is responsible for unconscious emergency response. The SNS increases blood pressure and accelerates the heart rate in response to perceived dangerous or stressful situation. Allows for the body and its extremities to prepare for fight or flight (Weber & Reynolds, 2004).

Synaptogenesis: The formation of synapses between neurons in the nervous system.

Trauma-Informed Practices / Trauma-Informed Care/ Trauma-Informed Educational Practices (TIP/TIC/TIEP): Evidenced based practices which have been shown to improve outcomes for students impacted by trauma.

Trauma Understanding: Age-appropriate knowledge and understanding of the impact of trauma and how it can be overcome (Traub & Boynton-Jarrett, 2017).

Vagus Nerve: The tenth cranial nerve that interfaces with the parasympathetic control of heart, lungs, and digestive tract (Porges, S.W., 2017).

Delimitations

This study was delimited to elementary teachers in eight Shasta County elementary schools in one school district where teachers have received ACE training and TIEP have been implemented.

Organization of the Study

In addition to Chapter I, the introduction, Chapter II will follow with a review of the literature. This will be followed by Chapter III which includes the methodology outlining the methods that were used in the study. Chapter IV addresses data collection and findings followed by Chapter V which includes analysis of the findings, conclusions, and recommendations for future research.

CHAPTER II: REVIEW OF THE LITERATURE

This chapter contains information about ACEs and the ACE Study conducted by Dr. Anda and Dr Felitti in the late 1980s. It covers how ACEs impact the development of a child and the long-term effects that continue into adulthood if ACEs are not mitigated. The chapter covers the Polyvagal Theory as it relates to ACEs and the Attachment and Resiliency Theories as they relate to the healing of the negative impacts of ACEs. Other theories covered include the Betrayal Trauma Theory and the Relational Theory. A discussion of the prevalence of ACEs both globally and in Shasta County is included. Next will follow typical classroom management practices of the past as well as how teachers have historically interpreted poor behavior or lack of learning in the past as the impact of ACE in the schools. Trauma-informed Educational Practices are covered, as well as an introduction to the Shasta County ACE Teacher Training. Lastly the gaps in literature will be identified.

Adverse Childhood Experiences

ACEs are negative experiences a child may have while growing up, which significantly impact a developing person. ACEs are experiences that much of the population has experienced (Anda & Porter, ACE Interface 2018). There are three primary types of ACEs Household dysfunction including divorce, substance abuse and/or domestic violence; neglect both emotional and physical; and abuse - emotional, physical, and sexual. Adverse Childhood Experiences have long-term consequences including adult disease and early death (Anda & Porter, ACE Interface 2018).

According to the CDC (2021), the ACE study is one of the most important studies of this era and it has been replicated worldwide. The ACE study was one of the largest

investigations of its kind ever completed (Hughes et al., 2017). ACEs were originally

identified by Dr. Robert Anda and Dr. Vincent Felitti in the early 1980s. Both doctors

were conducting research separately on opposite ends of the United States on different

issues but were obtaining similar results. In 1984, Dr. Robert Anda joined the Epidemic

Intelligence Service at the CDC in Atlanta. He conducted research in disease

surveillance, behavioral health, mental health, heart disease, psychosocial origins of

health-risk behavior, and childhood determinants of health (Anda & Porter, ACE

Interface, 2018). It was during this time that he began to suspect that adult health

outcomes correlated with problems during childhood. During that time, he also began

developing the ACE questionnaire – a series of 10 questions about possible adverse

childhood experiences (Anda, personal communication, May 15, 2019). Dr. Anda, who

was an internist and epidemiologist, was studying depression and smoking. He identified

that smoking was a way for people to self-medicate depression. He was also identifying

that many of those in the research study had started smoking at young ages and seemed to

have histories of abuse. In 1991, shortly after publishing his studies on depression and

nicotine, Dr. Anda met Dr. Felitti. Dr. Felitti was the director of the department of

preventative medicine at Kiser Permanente in San Diego. In the early 90s, Dr. Felitti

presented to the CDC his findings related to childhood sexual abuse and morbid obesity

in women. Dr. Felitti found a high correlation between childhood sexual abuse and

morbid obesity in women. His hypostasis was that the women may be obese as a

protection from unwanted advances from men. From 1991 to 1994, Dr. Anda and Felitti

began conducting literature reviews and pilot studies on the ACE study design at the

CDC. Also, during this time, they were raising funds for the ACE study. Data collection

began in 1994 and the first ACE study was published in 1998. Since 1998, Anda and

Felitti have published 70 studies from the original ACE study (Anda, personal

communication, January 23, 2020).

The Adverse Childhood Experience (ACE) Study

As stated, in 1994, Dr. Anda and Dr Felitti teamed together and began conducting

the ACE Study to investigate the idea that child abuse may be an underlying cause for

public health problems. They published their results in 1998. Anda and Felitti used the

10-statement ACE questionnaire to investigate ACES more extensively. During the

initial ACE study, they collected data from over 17,000 middle class San Diego Kaiser

Permanente clients. They found that there was a correlation between adverse childhood

experience and negative behavioral, physical, and social health outcomes. The ACE

questionnaire included the following 10 statements, to which 1 point was given for an

answer of yes.

1) Did a parent or other adult in the household often….

    Swear at you, insult you, put you down or humiliate you?
                        or
    Act in a way that made you afraid you might be physically hurt?
2) Did a parent or other adult in the household often….

    Push, grab, slap or throw something at you?
                        or
    Ever hit you so hard that you had marks or were injured?

3) Did an adult or person at least 5 years older than you ever….

    Touch or fondle you or have you touch their body in a sexual way?
                        or
    Try to or actually have oral, anal or vaginal sex with you?

4) Did you often feel that.

No one in your family loved you or thought you were important or special?

<p style="text-align:center">or</p>

Your family didn't look out for each other, feel close to each other or support each other?

5) Did you often feel that…
You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you?

<p style="text-align:center">or</p>

Your parents were too high or drunk to take care of you or take you to a doctor if needed?

6) Were your parents ever separated or divorced?

7) Was your mother or stepmother:

Often pushed, grabbed, slapped, or had something thrown at her?

<p style="text-align:center">or</p>

Sometimes or often kicked, bitten, hit with a fist, or hit with something hard?

<p style="text-align:center">or</p>

Ever repeatedly hit over at least a few minutes or threatened with a knife or a gun?

8) Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?

9) Was a household member depressed or mentally ill or did a household member attempt suicide?

10) Did a household member go to prison?

At the end of the questionnaire, the number of *Yeses* were totaled, and the total used as the 'ACE score'.

While times have changed since the early 1990s, the questionnaire has not changed to maintain data quality over the years (R. F. Anda, personal communication, May 15, 2019). The study, commonly referred to as the Kaiser study or ACE study, has been replicated numerous times worldwide. Consistently, the data from the replicated

<p style="text-align:center">30</p>

studies have correlated with the data from the original study (Anda, 2019). Below are some of the findings from the original study.

According to Anda, ACEs are highly interrelated. Often when one ACE is reported, there are additional ACEs experienced during a person's childhood. Anda and Felitti found that ACEs are more common than once thought. During their study of 17,000 middle class, primarily white, Kaiser Permanente members, they found that only 33% of the population studied had identified no ACEs, 26% had one ACE, 16% had 2 ACEs, 10% had 3 ACEs and 16% had 4 or more ACEs (Dong et al., 2004).

The 10 questions correlate with 10 categories, organized by three different types. The types of household dysfunction include the categories of substance abuse, parental divorce or separation, mental illness, battered mothers (domestic violence) and criminal behavior. Another type is neglect, which involves both emotional and physical neglect. The last type which is abuse; includes emotional, physical, and sexual abuse (Anda & Porter, ACE Interface, 2018). Since Anda and Felitti's study additional adverse childhood experiences have been added to include homelessness, poverty, discrimination, community violence, and poor housing quality (Dietz, 2017).

Long-Term Effects of ACEs

The ACE score is considered a measure of childhood "biologic stress dose" otherwise known as the "Dose Response' (Anda & Porter, ACE Interface, 2019; see Figure 1). There is a dose response relationship between the number of ACEs and health problems. Figure 3 shows how where there is a higher dose of ACE's, the higher the % of health problems. Those with zero ACEs have few health problems. Those with 5 or more ACEs tend to have a high number of health problems as adults.

Figure 3 shows the correlation between smoking and ACEs. The higher the number of ACEs the increased likelihood of smoking during childhood or adolescence. Also increased is the use of tobacco as an adult which for many has resulted in Chronic Pulmonary Disorder (COPD) (ACE Interface, 2018).

Figure 3

ACE Smoking and Lung Disease
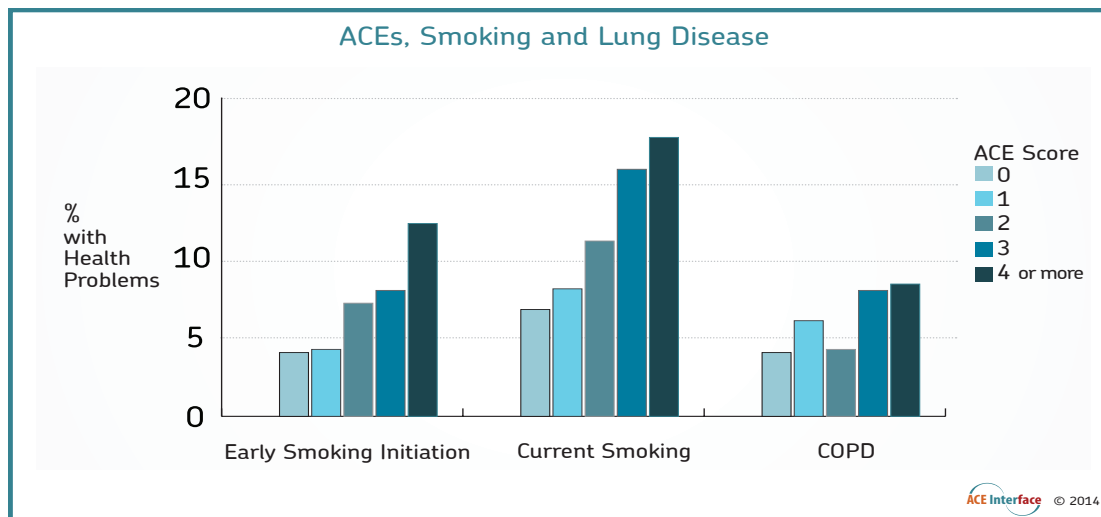
From "ACE Interface, LLC Training Materials," by R. F. Anda & L. Porter, 2018, ACE Interface (http://www.aceinterface.com/). Reprinted with permission. See Appendix P.

Figure 4 shows the relationship between ACE and alcoholism or marrying and alcoholic. The higher the number of ACE the more likely one is to develop alcoholism or marry an alcoholic. In these graphs, it is evident that poor health outcomes increase with the number of ACEs experienced. Insight into the correlation between ACEs and poor health outcomes can be gained through an understanding of neurobiology and the Polyvagal Theory.

Figure 4

ACE and Alcoholism
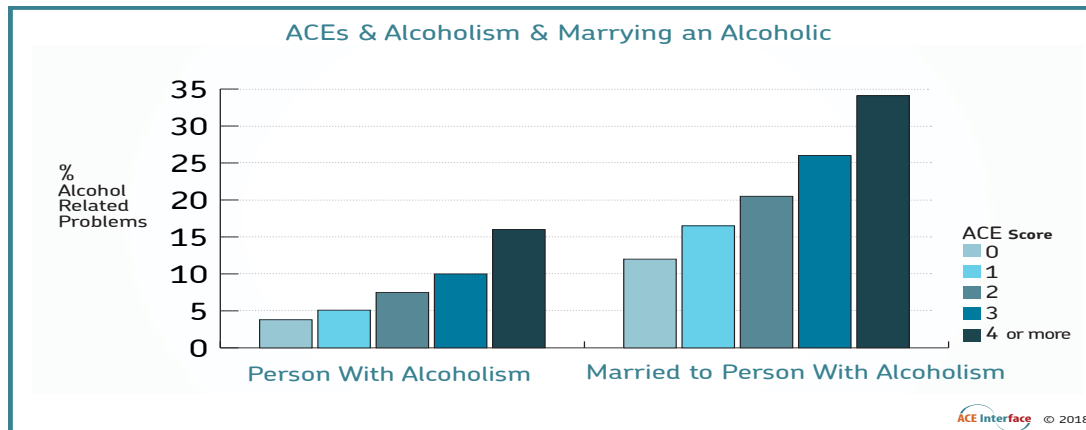
ACEs & Alcoholism & Marrying an Alcoholic

From "ACE Interface, LLC Training Materials," by R. F. Anda & L. Porter, 2018, ACE Interface (http://www.aceinterface.com/). Reprinted with permission. See Appendix P.

Neurodevelopment

The human brain continually develops from two weeks from conception to approximately the mid-thirties (Bick & Nelson, 2016). The early years are especially critical to brain development. According to developmental brain biology researchers, brain development is shaped by genetics and experience (Bick & Nelson, 2016; Malarbi et al., 2017). Genes lay the groundwork (however, scientists have also found ACEs also impact epigenetics; this will be covered in more detail later) for brain development and experiences, including prenatal influences such as the mother's level of stress hormones, illnesses, or nutritional deficiencies, which further impact brain development (Bick & Nelson, 2016; Wilson et al., 2 004). In addition to genetics and experiences impacting the brain, there are also critically sensitive developmental periods. Sensitive periods are times during development when certain types of abuse can significantly impact the brains development and the brain is most dependent on optimal conditions (Berger, 2018).

When experience is less than optimal during critical periods of development, parts of the brain maladaptively adapt, which can cause life-long problems.

Prenatal development is one of the most sensitive and critical periods, as is infancy and early childhood (Bick & Nelson, 2016; Malarbi et al., 2017; Wilson et al., 2011). During these times the brain and body are developing important connections which impact future development. For example, on a social level, Piaget coined infancy as the time when the child develops trust or mistrust. On a biological level, synaptogenesis occurs from 27 weeks post-gestation until approximately 2 years of age (Ismail et al., 2017). During synaptogenesis the brain is forming and pruning the functional synapses needed for establishing neural circuits for complex behaviors (Tierney & Nelson, 2009). If ACEs occur during these sensitive periods of growth, various parts of the brain either do not develop or develop adaptations (see Figure 5).

Figure 5

The Inner Brain
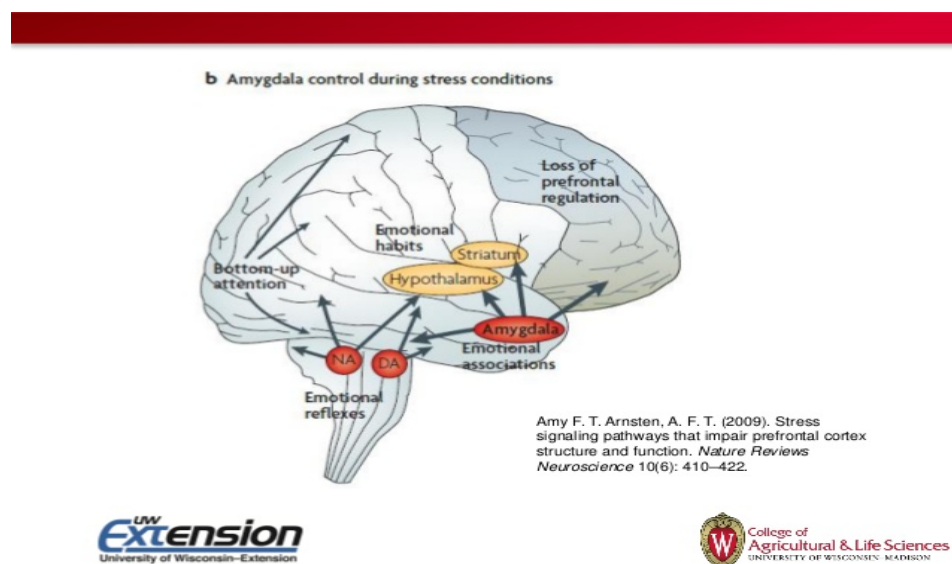
From "ACE Interface, LLC Training Materials," by R. F. Anda & L. Porter, 2018, ACE Interface (http://www.aceinterface.com/). Reprinted with permission. See Appendix P.

Research has shown the consequences of ACEs and toxic stress on many aspects of brain development. Children with ACEs often have reduced brain volumes and alterations can be found in the temporal, frontal, parietal, and occipital regions of the brain (Bick & Nelson, 2016). ACEs impact the brain's limbic system with the amygdala and the hippocampus all of which controls instinct and mood. The amygdala and the hippocampus control emotional processes, stress regulation, learning and memory and when these are smaller and less developed, due to the impact of stress during their development, multiple problems can occur (Bick & Nelson, 2016; Busso & Sheridan, 2015). The frontal regions of the brain are likewise highly susceptible to stress. The development of that part of the brain controls emotional and cognitive functions, including attention, executive function, and self-regulating abilities. Studies show reductions in the orbitofrontal cortex and the dorsolateral prefrontal cortex of the frontal regions of the brain as a result of ACEs (Weber & Reynolds 2004).

The cerebellum controls higher level learning and cognition. Children who experienced ACEs were found to have decreases in the vermis, a subregion of the cerebellum, as well as overall reduced cerebral volumes (Bick & Nelson, 2016; Careaga et al., 2016). This area of the brain appears highly impacted by stress. Other structures of the brain impacted by ACEs includes the structural connectivity of the neural pathways which can cause a number of cognitive and emotional problems as parts of the brain may have difficulty communicating with each other (Anda et al., 2006; Bick & Nelson, 2016).

There are key sensitive development periods during childhood that if ACEs occur, can significantly affect the brain structures and functions. Early childhood, especially

between the ages 0 to 5, is an especially sensitive time, as a child develops the ability to regulate emotion, participate in social interaction, and develop neurocognitions. Another critical period is between the ages of 7 and 13 when abuse, neglect or family dysfunction can impact cognitive processing, cross-brain communication, and perception of social cues (Anda & Porter, ACE Interface, 2018).

In addition to actual changes in the neurodevelopment of the brain, there are consequences to the functions of the brain as well. This is particularly true in the areas of cognitive regulation resulting in deficits in executive functioning such as inhibitory control, working memory, planning, cognitive flexibility, and sustained attention (Bick & Nelson, 2016; Weber & Reynolds, 2003). Social and emotional functions are also impacted in that the brain has an attentional bias toward threatening cues (Bick & Nelson, 2016). This means that brains impacted by ACEs tend to scan for threats more often than a brain not impacted by ACEs. "Infants exposed to higher levels of interpersonal conflict have shown relatively greater activation in brain regions critical for emotion processing and stress regulation. School age children have shown increased insula and amygdala response to threatening faces" (Bick & Nelson, 2016, p.179).

Another function impacted by ACEs is the brain gets stuck in *high gear*. This means that the *resting state* of a person who has experienced ACEs is higher than a normal resting state of those not impacted by ACEs. The result is an increase in right frontal cortex activation, leaving a human open to high emotional reactivity (Bick, & Nelson, 2016). This amplification of the stress response is described in the Polyvagal Theory. Porges wrote, *Orienting in a Defensive World: Mammalian Modifications of Out Evolutionary Heritage. The Polyvagal Theory* in 1995 around the same time Anda and

Felitti were uncovering the concept of ACEs (Dana, 2018). Porges reports that the article, "intended to emphasize that mammals had evolved in a hostile environment in which survival was dependent on their ability to down regulate states of defense with states of safety and trust; states that supported cooperative behavior and health" (Dana, 2018, p. x).

<div align="center">**Polyvagal Theory**</div>

The Polyvagal Theory addresses the neurobiological process which occurs in the brain when the brain perceives a threat. In the Polyvagal Theory, Porges addresses the biology of what occurs in the survival response of fight, flight, freeze. The Polyvagal Theory originated from questions about how the Vagus nerve can "be both a marker of resilience and a risk factor" (Dana, D., 2018, p. 4). The Vagus nerve is part of the autonomic nervous system (ANS). The sympathetic branch of the ANS, prepares humans for danger and releases cortisol and adrenalin for the flight, fight, freeze response. The parasympathetic branch has to do with the Vagus nerve which travels up and down the body. Vagus means "wanderer", because it travels through the lungs, heart, diaphragm, and stomach and connects the neck, thought, eyes and ears (Dana, 2018; Porges, 2007).

The Vagus nerve is divided into the Ventral Vagal pathway and the Dorsal Vagal pathway (Dana, 2018). The Ventral Vagal is related to a feeling of safety and connection and the Dorsal Vagal is related to survival and fear responses (seeing the world as a dangerous place) and results in feeling immobilized, leaving the brain and body in collapsed and immobilized state. During the Dorsal Vagal process state, the heart rate increases, and breathing is short and shallow. In addition to the Dorsal and Ventral Vagal system, the sympathetic nervous system is included in Polyvagal Theory. The

sympathetic nervous system is the danger mobilization system in which, the system releases adrenalin and cortisol, and prepares the body for fight, fight, or freeze. This is the primal response mechanism for survival that developed before civilization. Health consequences for being chronically stuck in the sympathetic adrenal system and the Dorsal Vagal pathway include heart disease, high blood pressure, memory impairment, headache, neck, back and shoulder tension, stomach problems, depression, chronic fatigue, type 2 diabetes, and dissociation (Dana, 2018; Porges, 2007; see Figure 6).

Figure 6

Phylogenetic Stages of the Polyvagal Theory

	ANS Component	Behavioral Function	Lower Motor Neurons
III	Ventral Vagal Complex Parasympathetic	Social communication, self-soothing and calming, inhibit "arousal"	Nucleus Ambiguus
II	Sympathetic Adrenal System	Mobilization (Active avoidance – fight/flight)	Spinal Cord
I	Dorsal Vagal Complex Parasympathetic	Immobilization (death feigning, passive avoidance, shut down)	Dorsal motor Nucleus of the Vagus

From "The Polyvagal Perspective," by S. W. Porges, 2007, *Biological Psychology*, *74*, p. 116 (https://doi.org/10.1016/j.biopsycho.206.06.009). Reprinted with permission. See Appendix P.

The Polyvagal Theory provides an explanation for why ACEs impact brain development and often result in life-long problems. For the developing child's brain, when the nervous system remains in sustained high alert due to adverse or traumatic events especially when chronic, normal brain development is derailed and can result in fear conditioning. Fear conditioning impacts the amygdala and the hypothalamus which can result in the child being chronically anxious, angry, or hopeless (Busso & Sheridan,

2015). The result can be problems with attention, learning, memory, executive function, and visuospatial skills. In addition, behavioral disorders such as depression, dissociation, anxiety, conduct disorder and attention deficit hyperactivity disorder may develop.

Prevalence of Childhood ACEs

The journal Child Abuse and Neglect published a study in April 2019, which focused on the prevalence of ACEs among children in the USA. The study sample included 45,287 children using the 2016 National Survey of Children's Health. Parents reported ACEs for their children. The ACE questionnaire was completed by parents and teens. The most common reported ACE exposure was economic hardship at 22.5% and parental divorce or separation 21.9%. Other ACEs included exposure to violence in the home or neighborhood and living in a disrupted household. While these occurred at a high rate across the nation, a higher prevalence was found in rural America (Crouch Probst et al., 2019). In addition, children in poverty also tended to have highly stressful and conflictual homes, thus often being exposed to more ACEs. Another nationwide study found that one in ten children has experienced three or more ACEs and just under half (45%) have experienced at least one ACE (Sacks & Murphey, 2018).

Parents with their own ACEs during childhood are more likely than those without ACEs to have children with behavioral and mental health problems (Schickedanz et al., 2018). Of the more than 2500 children studied, one-fifth had a parent who reported experiencing 4 or more ACEs, compared to peers who had no ACEs. They found that the mother's ACE score had a stronger influence on child outcomes than fathers (Schickedazet al., 2018). The fact that parents with ACEs also propagate ACEs onto their own children, without intervention occurs because most parents will repeat patterns

of their own parents because of their own adaptations and lack of awareness or

knowledge of healthy child rearing, or they will try to do the opposite of their parents

without considering the child's needs. Lange et al. (2018) conducted a study to

understand parenting practices impacted by ACEs. Lange et al. (2018) found that parents

with high ACE scores also reported higher parental stress than parents without ACEs, this

was especially true for mothers. Parents with a history of ACEs were more likely to

resort to either authoritarian or permissive parenting styles – both styles which tend to

have more negative child outcomes when compared to authoritative parenting. This

study shows the intergenerational transmission of trauma from one generation to the next.

<p style="text-align:center">Shasta County ACE Study</p>

The Shasta County ACE Study was a replica of the original ACE study. In Shasta

County an ACE survey was conducted in 2012 (Shasta Strong Families,

http://www.shastastrongfamilies.org/data-statistics/). The survey was taken by 271

persons randomly selected by robocalls. Nearly 40% of the respondents reported 4 or

more ACEs. Figure 7 and Figure 8 give the statistics from that 2012 community survey.

Shasta County in the orange is significantly higher than the rest of California especially

in all categories with the highest being family substance abuse (58%) and verbal abuse

(55%).

Figure 7

Prevalence of ACE in Shasta County

Prevalence of Adverse Childhood Experiences Before Age 18
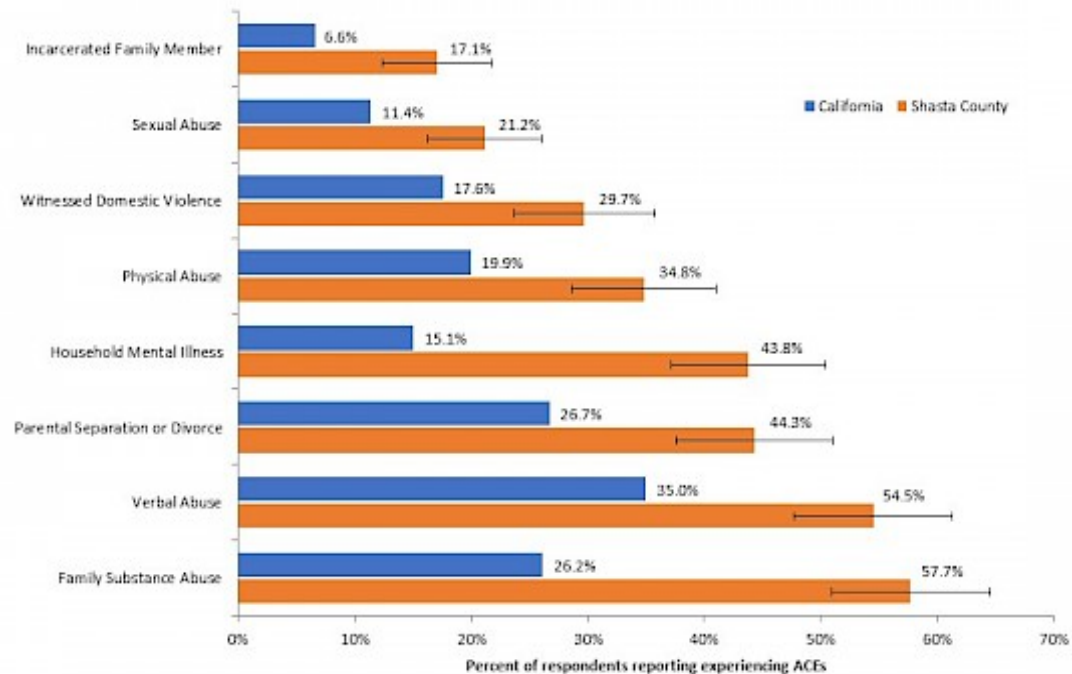
Category	California	Shasta County
Incarcerated Family Member	6.6%	17.1%
Sexual Abuse	11.4%	21.2%
Witnessed Domestic Violence	17.6%	29.7%
Physical Abuse	19.9%	34.8%
Household Mental Illness	15.1%	43.8%
Parental Separation or Divorce	26.7%	44.3%
Verbal Abuse	35.0%	54.5%
Family Substance Abuse	26.2%	57.7%

Percent of respondents reporting experiencing ACEs

Sources: Shasta County HHSA 2012 ACE Survey; 2008-13 Center for Youth Wellness CA ACE Study

From Shasta County Health & Human Services Agency 2012. (https://shastastrongfamilies.org/data-statistics/)

Figure 8

Number of ACE in Shasta County

Number of Adverse Childhood Experiences Before Age 18
(Max Score = 8)
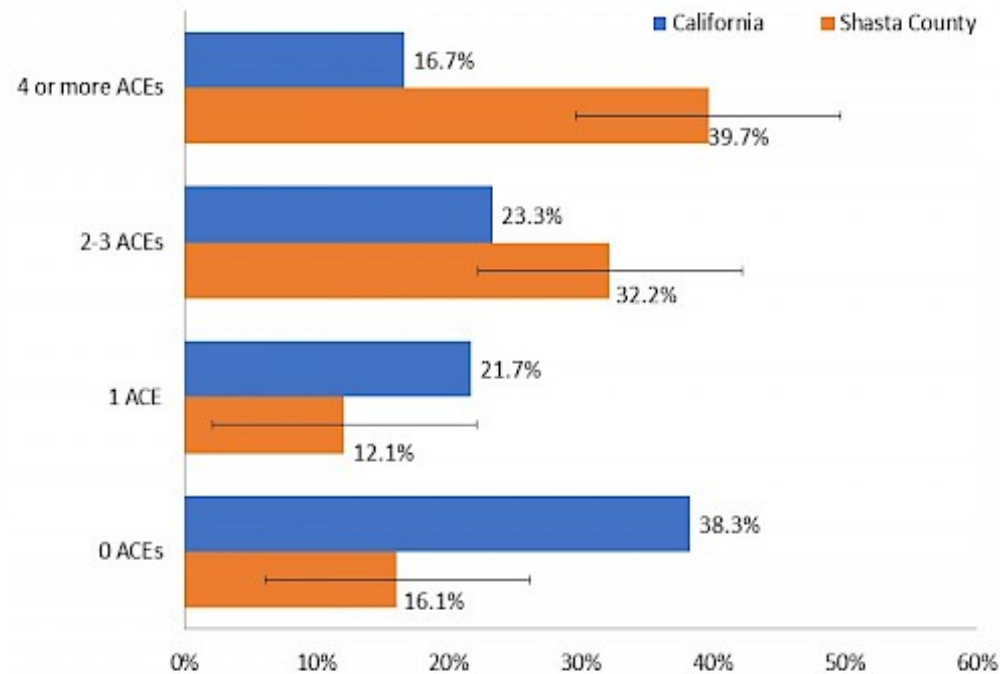
Sources: Shasta County HHSA 2012 ACE Survey; 2008-13 Center for Youth Wellness CA ACE Study

From Shasta County Health & Human Services Agency 2012. (https://shastastrongfamilies.org/data-statistics/)

Nearly 40% of Shasta County residents who took the survey had 4 or more ACEs. Shasta County has a high prevalence of poverty, children removed from the home due to abuse or neglect, as well as high substance abuse and homelessness (Shasta County Health & Human Services, 2019). Figure 9 shows a depiction of how adverse community environments contribute to ACEs. Shasta County is an extremely fragmented community with little cohesiveness, reflecting all the aspects shown in the diagram. Poverty is high in Shasta County at 23%, and 43.2% of single mother households live in poverty (Shasta County Health & Human Services, 2019). Since the fires of 2018, what little affordable housing there was, is even more limited. In Shasta Counties 2014-2019 Housing & Urban Development (HUD) Housing Element report, it was identified that in the unincorporated areas there are only 95 vacant units for the extremely poor (less than 30% median income) and that Shasta County needs at least 395 more very low-income units and another 295 low-income units (Shasta Website, (https://www.co.shasta.ca.us/ index/drm/planning/general-plan/2014-2019-housingelement). In addition, many of Shasta County Housing Unit Vouchers go unused due to a lack of landlords who will accept HUD vouchers (Shasta County Housing Department, 2019)

Figure 9

Pair of ACEs
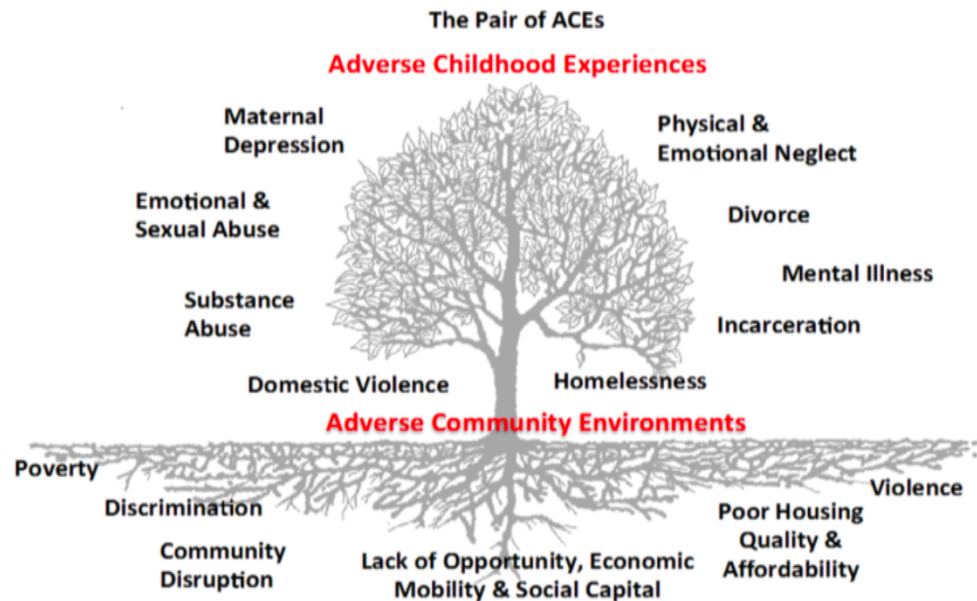
The Pair of ACEs

Adverse Childhood Experiences

Maternal Depression

Physical & Emotional Neglect

Emotional & Sexual Abuse

Divorce

Mental Illness

Substance Abuse

Incarceration

Domestic Violence

Homelessness

Adverse Community Environments

Poverty

Violence

Discrimination

Poor Housing Quality & Affordability

Community Disruption

Lack of Opportunity, Economic Mobility & Social Capital

From "A New Framework for Addressing Childhood and Community Experiences: The Building Community Resilience (BCR) Model," by W. Ellis & W. Dietz, 2017, *Academic Pediatrics*, 17, p. S87 (https://doi.org/10.1016/j.acap.2016.12.011). Reprinted with permission. See Appendix P.

Theoretical Foundations

Attachment Theory

The impact of ACEs can be explained partially by the attachment theory. In addition, attachment theory can also be used for intervention for children who have experienced or are experiencing ACEs. James Bowlby developed the attachment theory in the late 1950s and is based on the infant feeling safe and secure with its caregiver usually the mother (Prather & Golden, 2009). Primal human instinct is to care for the infant and the infant primally depends on the mother for survival. "In attachment theory it is believed that the mother-child bond is the essential and primary force in infant development, and thus forms the basis of coping, negotiation of relationships and

personality development" (Porter, 2003, p. 62). Attachment is defined as both a

behavioral and emotional connection with the primary caretaker. It is instinctive to both

the mother and the baby to bond and attach through physical behaviors such as clinging,

sucking, closeness and emotionally this creates a feeling of safety and security for the

infant (Porter, 2003). This is secure attachment. Most infants, approximately 65%, are

securely attached (Colin & Low, 1991).

A lack of the physical and emotional connection according to attachment theory

results in less-than-optimal adaptive attachment styles to include:

- Anxious/preoccupied/resistant/ambivalent, which comes from a lack of or
  inconsistent and unpredictable nurturing leaving the infant with an
  emotional hunger and emptiness.

- Anxious/Avoidant, results from the infants needs not being met, such as
  refusal to sooth the infant when the infant is crying, leaving the infant
  unsure about their safety, thus they avoid contact and ignore their mothers;
  and lastly,

- disorganized/disoriented/anxious attachment, which is a result of abusive
  parenting. These infants may appear disorganized and display fear seeing
  the caregiver as both a source of danger and inconsistent security.
  (Conners, 2011)

Children with damaged attachment experiences also exhibit symptoms similar to children

with ACEs. Children with anxious/avoidant attachments often have detached and

restricted emotional awareness and have difficulty in expressing negative emotions.

They often have a defensive posture and do not request practical assistance or emotional

support. They lack trust and are unable to admit normal imperfections (Colin & Low, 1991). Anxious/avoidant attachments account for about 20% of the population. Anxious attachments are common, approximately 35% in most US samples. Most children with anxious attachment will not develop psychopathology, but they do appear to be at greater risk than securely attached children.

About 10 to 15% of infants have anxious/ambivalent attachments (Colin & Low, 1991). These children are less persistent, less enthusiastic, and less compliant and they express more anger, are easily frustrated and can often be victims of exploitation and they develop ambivalent relationships with others (Colin & Low, 1991). Approximately 10 to 15% of infants have disorganized attachment and these children are at risk for behavioral problems, aggressive/hostile behavior, and severe psychopathology (Colin & Low, 1991). Children need to feel safe for positive social engagement to occur (Schuengel et al., 2009). Children with disorders of attachment often have pervasive problems with relational skills. These are the children that need positive adult relationships to begin to heal the wounds of disrupted attachment (Schuengel et al., 2009). A child who is securely attached to a positive caregiver can "explore the environment, develop creative independence, self-sooth, and regulate emotion, due to the availability of rapprochement with a secure base in the form of a predictable nurturing relationship with a caregiver" (Dadds & Tully, 2019, p. 798).

Schema Theory

Piaget (1954) identified schema theory as the attitudes, thoughts, and perceptions of how one relates to themselves, other people and other objects in life based on early life experience. Maladaptive schema includes dysfunctional attitudes, cognitions, and

attitudes (Zeynel & Uzer, 2020). Maladaptive schema is a result of adverse experiences with attachment and a lack of getting emotional needs met. Caregiver maladaptive schema can significantly result in the child developing maladaptive schema. Early Maladaptive Schema (EMS) are "self-defeating emotional and cognitive patterns that begin early in our development and repeat throughout life" (Young et al., 2003).

As shown in Figure 10, the EMS that develop from disconnection and rejection domains are likely to come from detached, withholding, cold, rejecting, violent, explosive, unpredictable and abusive family environments. All the maladaptive schemas can result in psychopathology. There is also a belief that the EMS can be passed from one generation to the next if there is no intervention according to the schema theory - schemas drive behavior (Scott & Crino, 2014). Young et al. (2003) believed the maladaptive schema's to be present in all populations, however they are severe in those with psychological and behavioral problems (Scott & Crino, 2014).

Figure 10

Schema Domains

Schema Domains	Early Maladaptive Schemas (*Item example*)
Disconnection and Rejection	Abandonment/Instability (*e.g., I worry that people I feel close to will leave me or abandon me*)
	Mistrust/Abuse (*e.g., I am quite suspicious of other people's motive*)
	The Emotional Deprivation (*e.g., I don't feel as if I am a special person to anyone*)
	Defectiveness/Shame (*e.g., No one would like to be with me after knowing me as I am*)
	Social Isolation/Alienation (*e.g., I feel isolated and alone*)
Impaired Autonomy and Performance	Dependence / Incompetence (*e.g., I don't feel I can cope well by myself; I do not feel capable of getting by on my own*)
	Vulnerability to Harm or Illness (*e.g., I can't stop feeling that something bad is going to happen*)
	Enmeshment / Undeveloped Self (*e.g., I often feel that I don't have a separate identity from my parents or from my partner*)
	Failure (*e.g., Regarding work or school, I am not as bright as other people*)
Impaired Limits	Entitlement/ Grandiosity (*e.g., I hate to be constrained or kept from doing what I want*)
	Insufficient Self Control / Self Discipline (*e.g., I easily feel frustrated and give up if I don't accomplish a goal*)
Other-directedness	Subjugation (*e.g., In my relationships, I let the other person dominate me*)
	Self-Sacrifice (*e.g., I am a good person because I think more about others than on me*)
	Approval-Seeking / Recognition-Seeking (*e.g., If I make remarks at a meeting or am introduced at a gathering, I look forward to recognition and admiration*)
Overvigilance and Inhibition	Negativity / Pessimism (*e.g., You can't be too careful; something will almost always go wrong*)
	Emotional Inhibition (*e.g., I think it is embarrassing to express my feeling to other people*)
	Unrelenting standards / Hypocriticalness (*e.g., I try to do best; I can't settle for good enough*)
	Punitiveness (*e.g., If I make a mistake, I deserve to be punished*)

From *Schema therapy: A practitioner's guide* (p.14), by J. E. Young, J. S. Klosko, & M. E. Weishaar (2003). Guildford Press. Reprinted with permission. See Appendix P.

Betrayal Trauma Theory

Trauma Theory was first investigated by Jean Martin Charcot a neurologist from France during the 19th century (Kumar et al., 2011). Charcot studied hysteria. During this time, hysteria was thought to originate from the uterus, thus a hysterectomy was the treatment. Charcot found that it was a psychological problem related to trauma rather than a physical disorder. He determined that hysteria was a hypnotic or dissociative response to "having endured unbearable experiences". Freyd (2019) reported that betrayal trauma theory is a result of severe abuse at the hands of their primary caretaker for whom the child relies on for his/her basic needs (food, clothing, and shelter). Freyd believed this wounding to be more traumatic than other traumatic events, such as natural disaster, due to the betrayal. She reported the core issue is not necessarily the physical trauma, but instead the betrayal of trust which results in conflict between reality that the person the child must rely on is unsafe yet necessary for survival (Freyd, 2019). Freyd also believed, since the betrayal is so painful because the child depends on that adult, they may develop betrayal blindness. "Betrayal blindness is the unawareness, not-knowing, and forgetting exhibited by people towards betrayal" (https://www.jjfreyd.com/about-research, 2021). This betrayal blindness can lead to amnesia or a tendency to dissociate and not remember the abuse (Freyd, 2019). The damage to the child's ability to trust is the crux of betrayal trauma and this lack of trust if not treated, caries into all other relationships.

Relational Theory

Relational Theory holds that human development is impacted more by relationships than drives (Rubinstein, 2015). In addition, the theory also consists of the

personal relationship one has with their various *self-states*. It is when there are

conflicting self-states a person will dissociate from the most painful self-state.

According to relational theory, abuse stress is composed not only of the actual abuse, but

also the disclosure of such events to others, if disclosed. Children are naturally self-

centered; thus, they blame themselves for abuse. When they do this, they feel their

badness caused the abuse in order to defend against feeling powerless and to protect their

attachment to the abusive caregiver upon whom the child relies (Levendosky &

Buttenheim, 2000). In relational theory healing occurs by helping the child develop a

sense of safety with caring safe adults.

Theoretical Framework

Resiliency Theory

Resilience is defined in the Oxford Dictionary (2020) as "the ability … to spring

back into shape" or "capacity to recovery quickly from difficulties. However, there are

several different views regarding what resiliency is in terms of trauma and healing. The

definition of resiliency has changed over the years in terms of human development.

Some examples of the definition of resiliency include:

- 1974, Garmezy: "[Resilient children are] … invulnerable children … those

  children who, despite genetic, psychological, and environmental disadvantage,

  continue to adapt and perform competently." (Garmezy, 1974. p. 65)

- 1989, Werner and Smith:

  Resilience of children, that is, their capacity to cope effectively with the internal

  stresses of their vulnerabilities (such as labile patterns of autonomic reactivity,

  developmental imbalances, unusual sensitivities) and external stresses (such as

illness, major losses, and dissolution of the family). Even through the most stressful experiences in the most terrible homes, some individuals appear to emerge unscathed and to develop a stable, healthy personality. (Werner & Smith, 1989, p. 4)

- 2010, Cicchetti:

The attainment of positive adaptation in the face of significant adversity involves a developmental progression; new vulnerabilities and challenges and/or strengths and opportunities often emerge with changing circumstances over the life course. Resilience is not something an individual 'has', it is a multiply determined developmental process that is not fixed or immutable. (Cicchetti, 2010, p. 146)

- 2018, Carnevali et al: Brain morphological measures show that certain regions of the brain impact resiliency (Carnevali et al., 2018).

Existing studies suggest that the structural morphology of the anterior cingulated cortex (ACC), particularly its cortical thickness, is implicated in the expressive differences in heart rate variability. The characteristics of the ACC are linked to the psychological traits ascribed to a high-resilient profile and abnormal structural integrity of the ACC to the psychophysiological expression of stress-related mental health consequences. (Carnevali et al., 2018, p. 1)

- 2019, Feder et al, Biopsychosocial model (see Figure 11):

Genes interact with environmental influences to shape the function of neural circuitry and stress response systems, especially during development. Environmental influences additionally exert a lasting impact on neural and stress response system function through epigenetic modifications affecting gene

expression. At the core of resilience are stress responses that are sufficient but not excessive, as well as rapid and efficient psychobiological recovery following stress exposure. At the neural level, appropriate activation of brain regions mediating threat appraisal, efficient emotion regulation circuitry function, and neural adaptability to changing environmental contingencies support accurate appraisal of stressful contexts and adaptive coping. Additionally, brain circuitry function sub-serving reward responses and cognitive control underlie key psychological factors associated with resilience including optimism and the capacity for cognitive reappraisal. Accumulating evidence suggests that preventative and therapeutic interventions at different phenotypic levels have the potential to enhance resilience. (Feder et al., 2019, p. 444)

In terms of the stress response system identified above, Li et al. (2019) identified the importance of a balance of oxytocin and cortisol in controlling the neuroendocrine stress responses. Cortisol and adrenaline are the stress hormones that can hijack the brain and lead to maladaptive responses, which can lead to mental and behavioral disorders. Oxytocin is a neurotransmitter and a hormone involved in childbirth; however, it is also associated with attachment and social connection, trust, and empathy (Li et al., 2019). Even though each of these views of resiliency are different and evolving, they all address the idea of positive change or adaptation in the face of adversity with the most recent definition or model of resiliency described by Feder et al. in 2019.

Figure 11

Resiliency
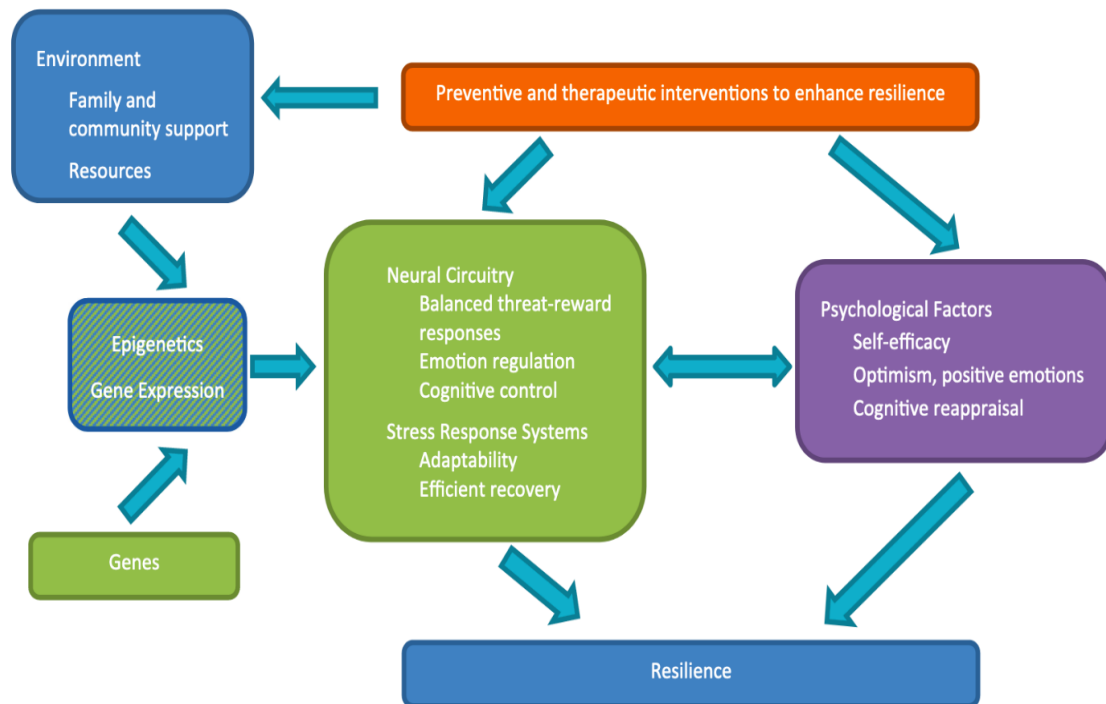
From "The Biology of Human Resilience: Opportunities for Enhancing Resilience Across the Life Span," by A. Feder, S. Fred-Torres, S. M. Southwick, & D. S. Charney, 2019, *Biological Psychiatry*, *86*(6), 443 (https://doi.org/10.1016/j.biopsych.2019.07.012). Reprinted with permission. See Appendix P.

Theoretical Framework Explained

The Theoretical Framework for this study is the Resilience Theory developed by Traub and Boynton-Jarrett (2016). Resilience is defined as the ability to withstand, adapt to, and recovery from adverse experiences. Resilience is "a complex interplay between the child's genetics, natural temperament, knowledge and skills, past experiences, social supports, and cultural and societal resources" (Traub & Boynton-Jarrett, 2016, p. 2). The brain especially in early years has plasticity. Neuroplasticity allows for the brain, when possible, to repair itself. Thus, if early interventions including strong positive adult connections are provided to children who have experienced trauma, recovery from ACEs

is possible.   Traits found in persons with high resiliency include "high self-esteem, internal locus of control, external attributions of blame, optimism, determination in the face of adversity, cognitive flexibility, reappraisal ability, social competence and the ability to face our fears" (Traub & Boynton-Jarrett, 2017, p. 2).   These are not traits generally found in children who have experienced ACEs. Increasing the traits that aid in resiliency is important for a child to overcome adversity. The authors identified building resiliency as being accomplished through cultivating protective factors and developmental internal and external assets.

Protective Factors

Protective factors are both internal (biological cognitive traits, genetic traits, temperament, and personal qualities) and external resources (a caring adult who makes the child feel safe or an adult who makes sure basic needs of the child are met) that assist in overcoming adversity (Crouch, Radcliff et al., 2019). Protective factors are also called developmental assets (The Search Institute, 2009). The Search Institute (2009) identified 40 developmental assets which assist in resiliency. Some of these assets are in categories that include safe support, empowerment, boundaries and expectations, constructive use of time, commitment to learning, positive values, social competencies, and positive identity (Search Institute, 2009). It is through these protective factors or developmental assets that children (and adults) can overcome ACEs with fewer maladaptive adaptations (Sciaraffa et al., 2018; The Search Institute, 2009; Traub & Boynton-Jarrett, 2017).

Resiliency was selected as the primary lens from which this paper is written, because resiliency is the primary mitigating factor which determines the trajectory of a child's life following ACEs. As previously indicated all facets of a child's life both

internally and environmentally either contribute to positive outcomes or negative outcomes, it is all dependent on the presence of and type of resiliency factors in that child and/or that child's environment. There was a time when society assumed all children were resilient, as often the saying could be heard that 'children were resilient and could easily overcome the struggles of childhood'. We now know that resiliency does not just happen. Resiliency must be cultivated through relationships, education, instruction, guidance, and skill building techniques (Romero, V.E., Robertson, R. & Warner, A., 2018).

ACE Impact on Schools

Trauma-Informed Educational Practices (TIEP) can be used universally with all students since teachers may not know which of the children in their classrooms are being impacted by ACEs. Much of the problematic behaviors and learning difficulties in schools can point to a student being impacted by ACEs. Some common symptoms that may indicate a child is or has been impacted by ACEs can include difficulty regulating emotions and difficulty with certain cognitive tasks including deficits in executive functioning (involving inhibitory control, working memory, planning, cognitive flexibility, and sustained attention; Bick & Nelson, 2016). Children who have experienced ACEs may have difficulty trusting, may respond with anger/aggression and suspicion and have difficulty making and sustaining relationships with others (Cummings & Swindell, 2019).   Other symptoms include hypervigilance and an exaggerated startle response, excessive fear and anxiety, withdrawal and avoidance of interactions or conflict. Children who have experienced ACEs can appear checked out or spacy, or hyperactive and impulsive (Cummings & Swindell, 2019). These children may have

multiple somatic complaints as well. All the previously listed symptoms can cause significant academic and behavioral problems as well as classroom management problems.   Teachers often interpret resistant student behavior as a 'choice' the student is making to assert themselves in the classroom. Often acting out classroom behavior is meeting a need for the student, but the behavior is a maladaptive and compensatory response to adversity which tends to be problematic in most settings. (Stokes & Brunzell, 2019). Thus, teachers benefit from being aware of the possible signs and symptoms of ACEs to know what the behavior might be telling about a student's inability to cope. Some of the ways ACEs can impact school performance is lower student GPAs, high truancy rates, high drop-out rates, low reading, writing and math skills and (National Child Traumatic Stress Network, 2008).

Elementary School

Some students in elementary school who have experienced ACEs may exhibit behavioral and/or academic problems, or their suffering may not be apparent outwardly at all (Gerrity & Folcarelli, 2008). Some common potential behaviors seen in children include but are not limited to:

- Anxiety, fear, and worry about safety of self and others (clingy with teacher or parent)
- Worry about recurrence of violence
- Increased distress (unusually whiny, irritable, moody)
- Changes in behavior:
  - Increase in activity level
  - Decreased attention and/or concentration

- o Withdrawal from others or activities

- o Angry outbursts and/or aggression

- o Absenteeism

- Distrust of others, affecting how children interact with both adults and peers

- A change in ability to interpret and respond appropriately to social cues

- Increased somatic complaints (e.g., headaches, stomachaches, overreaction to minor bumps and bruises)

- Changes in school performance

- Recreating the event (e.g., repeatedly talking about, "playing" out, or drawing the event)

- Over- or under-reacting to bells, physical contact, doors slamming, sirens, lighting, sudden movements

- Statements and questions about death and dying

- Difficulty with authority, redirection, or criticism

- Re-experiencing the trauma (e.g., nightmares or disturbing memories during the day) Hyperarousal (e.g., sleep disturbance, tendency to be easily startled)

- Avoidance behaviors (e.g., resisting going to places that remind them of the event)

- Emotional numbing (e.g., seeming to have no feeling about the event). (Gerrity & Folcarelli, 2008)

- Disconnection, dissociation or spacing out

- Easily distracted or lack of motivation

If teachers learn to recognize these signs and symptoms, then they can positively intervene in the student's life utilizing Trauma-Informed Educational Practices to mitigate negative outcomes for the student.

Teachers and Trauma

Martin et al. (2010) found that out of 112 teachers (who had not had ACE training) surveyed 47% believed that abuse resulted in disruptive behaviors in the classroom and 52% believed that neglect resulted in disruptive classroom behaviors. They also found that 35% of teachers believed that abuse could impact learning and 41% believed that neglect could result in learning difficulties. However, 21% of the 112 teachers reported not knowing how physical and sexual abuse might impact students. Thus, from these studies it seems that nearly half the teachers are aware that trauma can impact learning and behavior.

Since Anda and Felitti's original ACE study it has been determined that approximately 45% of children in the United States have experienced at least one ACE (Sacks & Murphey, 2018). Since those children grow up and some become teachers, it can be assumed that a significant number of teachers may have also survived their own share of ACEs. To date no studies have been conducted to see what the percentage is of teachers who have experienced ACEs themselves. A biological response found with ACEs occurs with those who work with persons who have experienced trauma/ACEs, and this is called Compassion Fatigue. Compassion Fatigue or Secondary Traumatic Stress occurs because of working in an environment with troubling events and traumatic content on sometimes a daily basis (National Child Stress Network, 2008). It is important that teachers be knowledgeable of the following: their own possible trauma

response and emotional triggers; student behaviors as possible signs or symptoms of ACEs and trauma; intervention skills for student learning and class classroom management that are trauma sensitive and effective; as well as self-care to decrease burn-out potential, as unmitigated secondary trauma generally leads to a physical and mental breakdown of the stress response system (Fowler, 2015). Teacher turnover tends to be high because of burn-out and the average new teacher lasts about 5 years (Fowler, 2015; Schepers, 2017).

Trauma-Informed Educational Practices (TIEP)

Educators have an opportunity to intervene in students' lives and assist in building resiliency by being informed. Many authors agree that the more teachers know about ACEs, the resulting impacts on child development, the symptoms of ACEs, and interventions for helping to heal the impact of ACEs and build resilience, the better the student outcomes (Arincorayan et al., 2017; Bellis et al., 2017; Gardner et al., 2019). Teachers have the opportunity to be a secure trustworthy attachment that is often key to overcoming adversity as noted by numerous authors (Arincorayan et al., 2017; Gardner & Stephens-Pisecco, 2019). Research has shown that one positive caring adult can make a difference in a child's life (Arincorayan et al., 2017). Teachers can promote protective factors in the classroom in several ways, such as assisting relationship building, teaching affect regulation skills, providing esteem building activities, exhibiting fortitude (optimism, not yielding to stress, tolerant of negative affect, setting healthy expectations and goals) and creating a safe environment Gardner & Stephens-Pisecco, 2019).

According to Substance Abuse & Mental Health Services Administration (SAMHSA; 2014), a Trauma-Informed approach:

1) Realizes the widespread impact of ACE/Trauma and understands potential paths for recovery.

2) Recognizes signs and symptoms of ACE/Trauma in the child, families, staff, and others involved in the system.

3) Responds by fully integrating knowledge about ACE/Trauma into policies, procedures, and practices.

4) Seeks to actively resist re-traumatization (of self or others)

These are important concepts applicable in the school settings. Educational practices in a trauma informed school include safety and consistency, positive engagement, and supportive relationships with students, teachers, and staff (Cavanaugh, 2016). Trauma-informed schools require a culture shift from the view that poor learning outcomes and problematic behavior are choices the student makes because they want to be difficult or disruptive, to the view that children may not be intentionally refusing to learn or behaving poorly out of choice (González et al., 2019). Being trauma-informed is recognizing that all behavior has meaning. Punitive practices of the past which were highly exclusionary through expulsions, suspensions and even the use of physical force are now recognized by many to not only be ineffective but often causing re-traumatization at worst and contributes to social and economic disparities at best (González et al., 2019). It is now recognized that trauma-informed practices such as teaching emotional regulation skills, emotional literacy and problem solving have long-term benefits that far outweigh the punitive practices of the past.

As society has learned more about ACEs and how they impact child development as well as, the long-term negative effects of trauma into adulthood, there have been

several developed practices which are considered Trauma-Informed. SAMHSA (2014) identified key principles, which should be evident in Trauma-Informed interventions. The first principle is that of safety. *Safety* is the foundation of a Trauma-Informed practice. One of the impacts of ACEs and trauma is a fear-based personal perspective, thus the main ingredients for healing ACEs is safety. Safety must be a priority because without safety healing cannot occur. Safety and security must be felt by the student both physically and psychologically (SAMHSA, 2014). For safety to occur, the second most important principle is *trustworthiness*. The student must be able to trust the teacher has his/her best interest in the forefront. In addition, teachers must be able to trust administration to have theirs and the student's best interests in mind in policies and supports. The third principle is *support*. "Peer support and mutual self-help are keys for establishing safety and hope, building trust, enhancing collaboration" (SAMHSA, 2014, p.10). Thus, the school must also address bullying. Trauma-Informed Practices include teaching students positive peer relational skills. Teachers must also feel supported and safe. The fourth principle is *collaboration and mutuality.* "The organization recognizes that everyone has a role to play in Trauma-Informed Practices, from the student to the superintendent" (SAMHSA, 2014, p. 10). *Empowerment, voice, and choice* are all part of the fifth principle. For healing to occur all (students and teachers) must have a voice as well as, feel safe and supported. Students need to feel they have choices and that they have a voice.

These underlying principles are behind all evidence-based Trauma-Informed Practices found in schools today. Some examples of observable behaviors which take these principles into mind include: communicating boundaries and respecting others

boundaries; having the ability to control emotions and stay calm; exhibiting consistent

behavior so students know what to expect; providing attention and care to all students;

practicing unconditional, positive regard for all students; allowing students to "take

space" as needed to self-regulate; holding all students to high reasonable standards and

expecting them to work to their ability (Dombo &Sabatino, 2019). There are a number of

Trauma-Informed educational practices available for schools this research will focus on

models such as Positive Behavior Interventions & Supports ©, Capturing Kid's Hearts ©,

Second Step ©, and Social Emotional Learning ©.

Shasta County ACE Teacher Training

Shasta County has a long history of poor child outcomes to include high

substance use, child neglect and abuse, high child protective services involvement; high

numbers of children in foster care, high poverty, high homelessness, high rates of public

assistance use and low high school completion (Shasta County, Health & Human

Services Agency, 2019). From 2012 to 2014, three times as many infants were removed

from their mothers than the rest of California 38.8 per 1,000 infants were removed from

their mother's care compared to 12.3 per 1,000 throughout California (Shasta County

Health & Human Services (SCHHSA, 2016). In 2008, Shasta County recognized the

need for change. The Public Health department learned of the ACE study and the

associated implications for Shasta County residents. Shasta County Public Health

conducted its own study of ACEs (Shasta County Health & Human Services Agency,

2012). Shasta County Public Health began a push to get information about ACEs into the

hands of the public for the purposes of community change. ACE Interface training was

brought to Shasta County and several trainers were taught how to conduct the ACE

training. Schools have been one of the primary targets, educating teachers, staff and parents in ACEs and Trauma Informed Care.

ACE Interface Training ©

The ACE Interface © Organization which disseminates educational products and empowerment strategies to help improve community health, was developed by Dr. Robert Anda the co-co-principal investigator of the ACE Study and Laura Porter, LCSW. Laura Porter teaches and coaches communities to effectively use Neuroscience, Epigenetics, ACE and Resilient (NEAR) communities to improve lives. ACE Interface© was developed to "put the science into the hands of the people" to develop self-healing communities. The ACE Interface Master Training Education Program is an educational framework and strategy for rapidly disseminating information about the ACE Study, neurobiology which explains why ACE's impact people's lives and what we can all do to improve health and resilience for this and future generations (Anda & Porter, ACE Interface, 2019).

Trauma-Informed Care /Trauma-Informed Educational Practices

Trauma-Informed educational practices available for schools such as Positive Behavior Interventions & Supports ©, Capturing Kid's Hearts ©, Second Step ©, and Social Emotional Learning © have been designed to improve teacher student relationships and to instill and develop resiliency in students. The programs seek to first develop connection (attachment) between the students and the teacher. The programs teach skills for self-awareness, emotional-regulation, social connections, and relaxation (to decrease the fight, flight & freeze reactions to stress and ACE).

Summary

The literature review discussed the Adverse Childhood Experiences Study, the short and long-term effects of ACEs, the ACE training, symptoms of ACEs which can be seen in the classroom and Trauma-Informed classrooms. A review of the literature on resiliency was conducted as well. A number of Trauma-Informed classroom practices and school programs have been developed over the years and these programs have been adopted by many schools. Minimal research exists on teachers' attitudes and attitudes about ACEs, Trauma-Informed practices, and student resiliency.

Synthesis Matrix

A synthesis matrix is often utilized by researchers to organize variables which are identified in the literature (see Appendix A). It is a conceptual framework in a table format enabling the researcher to have an overview of information related to the variables. In this study the synthesis matrix was used to identify themes on the topic and to determine focus of the study. Further, the Synthesis Matrix was used to inform the development of the interview questions used in the qualitative portion of the study. The matrix cites information in related studies and contributes to the validity of the study.

CHAPTER III: METHODOLOGY

Overview

Chapter III outlines the methodology used in this study to understand if training teachers in ACE and related Trauma-Informed Educational Practices (TIEP) affected their attitudes and instructional practices to increase the resiliency of students. The chapter begins with the purpose statement and research questions for the study, as well as the research design used to accomplish the purpose of the study. In addition, the chapter describes the population, target population and process used to determine the research sample. The chapter outlines the instrumentation used to collect the data from the research sample, and validity and reliability of the instruments. Included in the chapter is a description of how the data were collected, organized, and analyzed. The limitations of the study are addressed. The chapter concludes with a summary of the methodology.

Purpose Statement

The purpose of this convergent parallel design mixed-methods case study was to determine how training in Adverse Child Experiences (ACE), and Trauma-Informed Educational Practices (TIEP) affected the attitudes of teachers in Enterprise Elementary School District (EESD) regarding students who had experienced ACEs. A further purpose of this study was to understand if teachers in EESD perceived the training was effective in changing their classroom practices to support the resiliency of students who had experienced ACEs.

Research Questions

1. To what extent do teachers in Enterprise Elementary School District indicate the trainings on ACEs & Trauma-Informed Educational Practices (TIEP) affected their attitudes towards students who had experienced ACEs?

2. What were the perceptions of teachers in Enterprise Elementary School District on the effectiveness of the ACE & TIEP trainings in changing their classroom practices to support the resiliency of students who had experienced ACEs?

Research Design

This research study was a mixed method case study utilizing qualitative and quantitative research methods. The purpose of a case study is to investigate a phenomenon in more depth than a typical quantitative or qualitative study (Baxter & Jack, 2008). Case studies, according to Tetnowski (2015), are used to investigate a contemporary phenomenon within its real-life context. Baxter and Jack (2008) state that case studies can be used to inform professional practice or decision/policy making. This study focused on a single significant case (Enterprise Elementary School District) as an example of the phenomena of interest (ACE and Trauma Informed Educational Practices trainings). According to McMillan and Schumacher (2010), a case study is the in-depth exploration of a unique system to gain insight into a specific theme. "Case studies provide a more complete understanding of complex situations, identify unintended consequences, and examine the process of policy implementation" (McMillan & Schumacher, 2010, p. 440).

The mixed methods portion of the study, the Convergent Parallel Design formerly known as the Triangulation Design, was used to collect both qualitative data through a survey offered to all district teachers and concurrently to qualitatively interview participants to gain a more in-depth understanding of their attitudes and perceptions on ACEs, TIEP, and resiliency. According to Creswell and Clark (2017), the convergent Parallel design is the most well-known of the mixed method approaches and was originally known as the "triangulation design where two different methods were used to obtain triangulated results about a single topic" (p. 77). This method utilizes the strengths of both qualitative and qualitative methods. This method offers the opportunity to compare the data from both methods for the purposes of validation. There are many benefits for utilizing the convergent design such as being an efficient way of collecting data as both sets of data are collected at the same time independently (Creswell & Clark, 2017; McMillan & Schumacher, 2010). Another benefit is data analysis of the two data sets can be used to compare, connect, and contrast data for further clarity and accuracy. The researcher analyses the data both separately and together and seeks convergence, corroboration, collaboration, and comparisons (see Figure 12)

Figure 12

Convergent Parallel Design
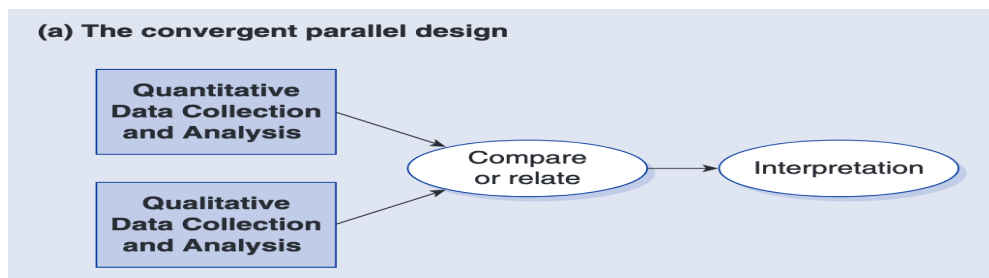
From *Designing and Conducting Mixed Methods Research* (p. 69), by J. W. Creswell & V. L. Clark, 2017, Sage.

In this study, the quantitative data were collected in numeric form using a survey (see Appendix B). This survey was sent out to all 180 elementary teachers in Enterprise Elementary School District. While waiting for the results of the survey, 9 volunteer teachers were selected and interviewed to gain their perceptions as to whether these practices improved the resiliency of the students who had experienced ACEs. Conducting both the qualitative and the quantitative research at the same time, was time efficient and allowed the researcher to compare and contrast the data results to determine patterns and meaning.

Quantitative research designs assist with decreasing researcher bias and increasing objectivity of the research (McMillan & Schumacher, 2010). This was a nonexperimental quantitative design utilizing a survey (see Appendix B). According to McMillan and Schumacher (2010), "Nonexperimental designs describe phenomena and examine relationships between different phenomena without any manipulation of conditions that are experienced" (p. 22). Surveys are a form of qualitative nonexperiential design. Surveys are utilized to identify attitudes and attitudes of the sample. The survey used in this study is the Attitudes Related to Trauma-Informed Care Scale (ARTIC) developed by The Trauma Stress Institute of Klingberg Family Centers (see Appendix B).

The purpose of the qualitative research component is to gain an understanding of the personal views of those surveyed, as qualitative research is an interactive method focused on the lived experience of those surveyed (McMillan & Schumacher, 2010). Qualitative research according to Patton (2015) is used to gain meaning and understand the perceptions and experience of those interviewed. The purpose of the qualitative

method is to gain an understanding of the results of the quantitative results from the survey. In qualitative research, data is collected via interviews and then the researcher identifies themes, and these themes then assist in finding meaning and narrative behind the data collected in the survey and quantitative portion of the research (Patton, 2015). In this study, interviews were used to identify the perceptions of the teachers regarding the effectiveness of trainings in ACE and TIEP in improving the resiliency of the students and thus improving the classroom environment. One of the benefits of the convergent design is the method generally can decrease the effects of researcher bias that can sometimes be found in qualitative research and added qualitative interviews can increase the reliability of the quantitative research (Creswell & Clark, 2017). In the convergent design, the data is collected through the survey for the quantitative portion of the study and then this data is analyzed through descriptive and inferential statistics (Creswell & Clark, 2017).

Population

A population is a group of individual participants that meet a certain criterion. The population of a study is a group of persons who have characteristics in common which separate them from other groups (McMillan & Schumacher, 2010). The general population for this study was elementary teachers in California who have been trained in ACEs and TIEP. According to the National Center of Education Statistics (NCES), there were an estimated 3.6 million full time equivalent elementary and secondary teachers in 2017 (NCES, 2019). During the 2018-19 school year there were 148,288 elementary teachers in California, serving in 5887 elementary schools, with a total enrollment of 3,010,015 students (NCES, 2019). Elementary school teachers are likely to encounter

students with ACEs and subsequently have the opportunity to intervene with students during critical brain developmental periods (Post et al., 2020). In recent years, school districts in California have offered training in TIEP with elementary teachers, in identifying and implementing instructional practices that help students develop skills to improve their behaviors and academic performance (NCES, 2019). While it is known that some schools have offered ACEs & TIEP training for teachers in California, no data exists on the extent of the training offered. Further, there was no information found on whether the ACEs trainings were required or voluntary for teachers to attend. Therefore, the population selected for this study was elementary school teachers in California who have participated in ACE related TIEP training.

Target Population

The target population of this study was elementary teachers in Enterprise Elementary School District, located in Redding California. The Enterprise School District is the only known school district to require training in ACEs and training in TIEP for all their elementary teachers. The Shasta County Public Health Department began training teachers on trauma informed care beginning in 2010. The Enterprise School District has been training educational personnel in ACE and TIEP since about 2015. This school district implemented the training district-wide, resulting in all instructors being prepared to implement TIEP in their classrooms.

The Enterprise Elementary School District is made up of nine schools, with a total enrolment of 3,781 students and approximately 188 full time equivalent credentialed teachers. The district operates four K through 5 schools, two K through 8 schools, one 6 through 8 school, one community day school K through 8 and one K through 12

academy. In 2017/2018, the average teaching experience was 10 to 11 years and 24 teachers with 2 years or less experience. The teacher student ratio was 20:1 in 2017/2018. The district covers a large portion of Redding's east side where there are pockets of significant poverty, with over 71.4% of the students on free or reduced lunch (California Department of Education, 2020). According to California Department of Education in 2017 the statistics were reported for the school district:

- Suspensions were 6.6% compared to the state at 3.4% and those most likely to be suspended were African American (14.8%), Hispanic (7.9%), homeless (7.8%), of two or more races (7.7%) and the socioeconomically disadvantaged (7.5%).

- Chronic absenteeism was at 8.3% with 13.3% African American children, 11.7% Native American, 9.1% Hispanic and 30.5% homeless.

According to the superintendent the district is committed to providing emotionally safe environments for student learning. The mission at Enterprise Elementary School District is "*Empowering every child, every day, to create a better world*". To support the implementation of trauma-informed practices, the district provided social and emotional education utilizing a team of school counselors who collaborated with the teachers to provide techniques and skills to assist students and teachers in managing emotions and building prosocial skills. In addition, each school has a mental health professional assigned to the school to assist the students and the teachers. Teachers and support staff all received trained in multiple -based and innovative TIEP that included ACE training, Capturing Kids Hearts, Love and Logic, and Second Step curriculums.

The researcher e-mailed the superintendent of Enterprise Elementary School District to inquire about their interest in having the district participate in the research study (see Appendix C). The researcher subsequently met with the superintendent to talk about the study. The superintendent agreed to have the district participate in the study. The superintendent arranged for the researcher to present the study to the principals of the elementary schools in the district to gain their buy-in and interest in the outcomes of the study (see Appendix D). The principals agreed to encourage their teachers to participate in the study. Therefore, the target population for this study was 188 teachers employed by the Enterprise Elementary School District.

Sample

The sample includes exactly who was studied. This case study utilized the approach of sampling an exemplar of phenomenon of interest (Patton, 2015). Patton (2015) described this method as providing, insights that stand alone as important. The Enterprise Elementary School Teachers were selected as the exemplars, given the additional investment and trainings given to the teachers to support children struggling with the impacts of trauma or adverse childhood experiences. This study also utilized a combination of convenience, purposeful and random sampling. Convenience and purposeful sampling occur when subjects are selected based on being easily accessible and to best meet the needs of the study (McMillan & Schumacher, 2010). The researcher sent an e-mail to the superintendent of Enterprise Elementary School District. The e-mail outlined the basics of the study and a request to use the elementary school teachers in the district (see Appendix C).

The sample for the quantitative survey was drawn from the target population of 188 elementary school teachers at Enterprise Elementary School District in Redding, California. All 188 teachers received an e-mail with information about the study (see Appendix E), the informed consent (see Appendix F), the Brandman Participant Bill of Rights (see Appendix G) and an introduction to the survey (see Appendix H), which included a link to an online survey with a yes/no statement "I have read and understand my rights as a research participant and agree to participate in the study (see Appendix F). A second e-mail was then sent to those who gave their consent to participate which included the link to the demographics survey (see Appendix I), and the online Attitudes Regarding Trauma Informed Care Survey © (see Appendix B). It was estimated that out of the 188 teachers asked to take the survey, an acceptable return rate was 144 or 80%. Patton (2015) explained that a respondent return rate of 80% of the pool of participants would yield a 95% confidence level. For quantitative studies the larger the sample size the greater the statistical validity (McMillan & Schumacher, 2010).

The sample for the qualitative portion of the study consisted of those teachers who voluntarily responded to the e-mail request for participants, indicating their interest to participate in an interview. An e-mail message from the researcher describing the study was sent to the 180 district elementary school teachers, which included a request for volunteers to participate in the interview portion of the study. This email was sent at the same time as the electronic survey. The e-mail also included the researchers e-mail address and phone number for further contact for questions and/or to volunteer for the interview portion of the study.

The sample size for the interview portion of the study was 12 teachers from the Enterprise Elementary School District. Patton (2015) stated there are no rules for sample size in qualitative studies, however, the size needs to be representative of the population being studied. However, in qualitative studies, more interviews do not necessarily mean better data, due to the fact the data can reach a saturation point where the data becomes repetitive (Vasileiou et al., 2018). If more than 12 teachers had responded to the initial e-mail, then a random number list was planned to be used to select the 12 participants for the interviews (Random Number Generator from random.org, 2020). According to Patton (2015), a purposeful random sampling adds credibility to the study and can reduce bias. The 12 participants who volunteered were contacted via e-mail and an appointment was set for a virtual interview. The volunteers not selected for the interviews were contacted via e-mail and were informed of such.

Instrumentation

Quantitative Instrument - Survey

In quantitative studies there are many forms of instrumentation. For the qualitative portion of this study the *Attitudes Related to Trauma Informed Care ©* (ARTIC) scale from the Traumatic Stress Institute was selected (see Appendix B). The participants were e-mailed the informed consent and Bill of Rights forms and a link to an informed consent survey (see Appendix F) to indicate that they had received and understood the informed consent provisions prior to being sent the link to the secure ARTIC assessment website. The ARTIC for Educators measures attitudes and attitudes of teachers about Trauma Informed Care/ Trauma Informed Practices. The ARTIC assessment was originally developed to meet the program evaluation needs of a program

called Risking Connection a staff trauma training model for Trauma Informed Care

(Baker et al., 2016). The scale was developed by a team of experts in trauma, stress,

school-based mental health, study design and research methodology. When the scale was

first developed in the early 2000s it contained 19 items and by the time the scale was

ready to be tested there were 133 items on the scale. The original study took 2 years and

the final result led to three ARTIC Scales, one with 10 questions for individuals who

have not yet implemented trauma informed care (TIC), 35 questions with 5 subscales for

those in the beginning stages of implementing TIC practices, and finally a 45-item scale

with five core subscales and two supplementary subscales addressing how teachers

believed administration supported them in TIP. For the purposes of the study the 45-

question survey was administered. The subscales include attitudes about:

1. Underlying causes of problem behavior and symptoms

2. Responses to problem behavior and symptoms

3. On the Job Behavior

4. Self-Efficacy at work

5. Reactions to the work

Supplemental subscales:

6. Personal support of TIP

7. System-wide support of TIP

The researcher purchased a subscription to use the online edition of the ARTIC Scale

which is housed on a confidential site which utilizes 256-bit SSL encryption for all

communications with the survey. According to the Traumatic Stress Institutes website

the 256-bit SSL encryption is the current internet standard for securing transmissions of

data between a user and a website and is used for both banks and medical facilitates with strict confidentiality laws.

The ARTIC was selected because it is one of the first psychometric measures of TIP developed for educational institutions published in peer-reviewed literature. It has been used by both the Chicago and Baltimore city school systems and by 2017 (one year after it was released) had been completed by more than 25,000 professionals in the fields of education, health care and human services (Baker et al., 2016).   The reason the ARTIC was selected was because it has been widely tested in the school setting and specifically looks at teachers' attitudes and attitudes (Baker et al., 2016). ACE and Trauma Informed Educational Practice trainings are meant to create change which can be measured by the ARTIC Scale results, especially if given in a pre-test post-test. Prior to being given the login information for the ARTIC each teacher was sent the informed consent and the Brandman Participant Bill of Rights (see Appendix G) with a link to a Survey Monkey survey. Once the survey was complete a link to the ARTIC and the confidential login were sent to the participant. The data were collected by the confidential ARTIC survey platform. A comprehensive aggregated data report from the Traumatic Stress Institute was then sent to the researcher (see Appendix N).

Qualitative Instrument – Interview

Methods for collecting qualitative data include "interviews, observations, questionnaires, document reviews, and audiovisual reviews" (McMillan & Schumacher, 2010, p. 343). For the purposes of the qualitative portion of this study, individual interviews were conducted. According to Patton (2015), a phenomenological interview measures the life experience of participants regarding the phenomena being studied. The

researcher conducted virtual Zoom © interviews using semi-structured questions which provided or open-ended responses for the purpose of obtaining the teachers narratives for a phenomenological interview. The interview questions were developed by the researcher and emanated from the literature review of this study. All interview participants were given the demographic questions (see Appendix I) in written form with the participant assigned number prior to starting the interviews. The interviewer used a script to ensure the same approach was used throughout the interviews and all participants were asked the same interview questions (see Appendix J). Interviews were recorded for the purposes of coding and analysis. Nvivo © and frequency tables were used to identify the themes. The benefit of doing the interviews is that it allows for further exploration of attitudes, attitudes, and experience. The data from the interviews was compared to quantitative data collected from the ARTIC surveys. The emails with the survey and the request for interview volunteers were sent simultaneously.

Validity and Reliability

In research it is important that instruments are tested for both validity and reliability. According to McMillan and Schumacher (2010), researchers need to show validity exists. Validity is determined by the purpose, population, and environment in which the study takes place. An instrument may be valid in one setting but not in another. Reliability, according to McMillan and Shumaker (2010), indicates the consistency with which the instrument has little error between the obtained score and the true score. Reliability is rated from .00 to .99. The higher the reliability the better it is.

Quantitative Instrument

The Attitudes Related to Trauma Informed Care Survey tool was originally developed by the Traumatic Stress Institute in 2001 as a 19-item measure developed as a program evaluation of a trauma-informed training called *Risking Connection*. The original instrument was very limited thus the researchers decided to address the limitations by conducting extensive mixed methods studies to revise the tool (Brown & Baker, 2016). The tool was evaluated by using a sample of 760 staff employed in education, human services, and healthcare. 165 of the participants worked specifically in education. Validity indicators were analyzed using Pearson's product moment correlations (Baker et al., 2016). Confirmatory factor analysis revealed that the seven-factor model fit the data well. The tool was then tested on 888 education professionals. The tool has now been used widely since 2016 and by 2017 had been administered to over 25,000 professionals.

Using Cronbach's alpha, the ARTIC demonstrated excellent internal consistency and reliability (a=.93) for the ARTIC 45 and the subscale alphas ranged from respectable to very good (Baker et al., 2016). "The test-retest reliabilities were determined using Pearson's product moment correlations. Test-Retest correlations were strong, with correlations of 8.4 at .84 at less than 120 days, .80 at 121 – 150 days, and .76 at 151-180 days" (Baker et al., 2016, p. 68). The scale was tested on a total of 888 education professionals. Additionally, the scale has been used worldwide in places such as the United Kingdom, Australia, Japan, Sweden, Philippines, and Iran, and it has shown the same reliability (J. Engle of Traumatic Stress Institute, personal communication, January 23, 2020).

Qualitative Instrument Validity

In qualitative instruments validity is determined by degree to which the instrument measures what is supposed to be measured (Roberts, 2010). The content of the interview questions was determined from the literature review. The synthesis matrix (see Appendix A) provided the basis for the content related to trauma-informed practices and resiliency. In order to ensure validity of the interview questions used for the qualitative portion of the interview, the questions were first tested by interviewing one teacher under the observation of a person with a doctorate degree who had experience in research. For the field test the observer and the interviewee gave verbal and written feedback on the research questions and the delivery of those questions. They both received the Interview Review form (see Appendix K). The teaching expert and the research expert each gave independent feedback to improve the questions and the interview experience. Adjustments were made to the interview script and questions (see Appendix K) according to the feedback received. The Alignment of Research Questions, Interview Questions, and Supporting Literature table (see Appendix L) indicates the research utilized to develop the interview questions and how they relate to the study's Research Questions. The alignment between the Research Questions, interview questions, and the literature supports the validity of the interview instrument.

Qualitative Instrument Reliability

To ensure reliability, the same questions were asked of every participant. NVivo was utilized to improve the accuracy of the coding and assisted with identifying themes. Further, 10% of the surveys were coded by another researcher for intercoder reliability.

Lastly, interviews were recorded and professionally transcribed to ensure the accuracy of the analysis.

Data Collection

Data for this mixed methods study were collected from a quantitative survey and a qualitative interview. Prior to data collection the researcher e-mailed the superintendent of Enterprise Elementary School District informing him of the study and requesting to meet further to obtain permission to use the district for the study (see Appendix C). Following meeting the superintendent, the researcher was invited to a leadership meeting with the principals of the district. A letter was given to the principals outlining the study and requesting permission to survey and interview the elementary school teachers at their schools (see Appendix D). Prior to collecting data, Brandman University Institutional Review Board (BUIRB) approval was then obtained by the researcher to ensure protection of all participants (see Appendix M).

Quantitative Data

For the quantitative component of the study the ARTIC measurement scale Internet link and letter of explanation, invitation for participation, Informed Consent and Bill of Rights were e-mailed from the researcher to administrative secretary. The administrative secretary forwarded these documents) and an informed consent survey e-mail link to all district elementary school teachers May 30, 2020. The e-mail outlined the details such as the purpose of the study, as well as that participation was voluntary, anonymous and could be discontinued at any time. The e-mail explained that only aggregate data would be gathered from the survey. Also, in the e-mail was the offer to e-mail the researcher to volunteer to be interviewed further for the qualitative portion of the

study. Following the receipt of the Informed Consent survey the link to the ARTIC was sent to those teachers via e-mail. The surveys were made available to the teachers for two weeks. After the first week the administrative assistant resent the first e-mail in an attempt to capture additional participants.

Qualitative Data

The e-mail sent to the teachers asked for volunteers willing to participate in the interviews. Interested teachers e-mailed or called the researcher indicating their interest. If more than 12 participants responded, the participants would have been selected using a random number process. Each participant would have been assigned a number to protect their identities. Those numbers would have been placed in a Random Number Generator (Random Number Generator from Random.org, 2020). The first 12 numbers selected would have been the participants and those participants were contacted via e-mail or phone to set up the interviews.   The researcher conducted the interviews in confidentially via Zoom virtual video conferencing. Prior to the interview all participants were sent the informed consent, Bill of Rights, and a link to a Monkey Survey demographic questionnaire. The researcher interviewed the participants utilizing the script to remain consistent with all interviewees. The interviewer also asked follow-up questions when necessary to gain clarity and better understand the participants' answers.

Interviews were recorded with participant permission for the purposes of coding and analysis. To ensure confidentiality numbers were used instead of names for the interviews. Interviews were conducted via Zoom software, which also transcribed the transcription and summarization. The coding and analysis were conducted using NVivo a well-known software program used for coding and analyzing qualitative data.

Data Storage

The ARTIC is an electronic survey collected and stored on the Traumatic Stress Institute's secure server. The ARTIC is housed on a highly confidential password protected server with strong firewalls and privacy protections. The data were securely maintained and stored on the secure ARTIC platform with the Traumatic Stress Institute and the researcher had access to confidential reports protected with a password known only to the researcher. The data collected from the interviews were also kept in a secure location maintained by the researcher. For all data collected each teacher was given a unique number to protect the participant's identity. All data were stored securely and safely, and password or lock protected. The data were stored for 3 years before being destroyed by the researcher.

<center>**Data Analysis**</center>

This study used the convergent parallel mixed method approach, which includes both quantitative and qualitative analysis. The quantitative data were collected via the ARTIC Survey online. The qualitative data were collected through recorded Zoom interviews. The data collection occurred simultaneously. The data were analyzed both separately and together. The data gathered was from Enterprise Elementary School District teachers. Artifacts from the schools and classrooms including newsletters, lesson plans and pictures of bulletin boards and classroom layout were collected to further analyze the Educational Practices occurring in the classroom and around the school.

Quantitative Data Analysis

Following the completion of the survey the quantitative data were analyzed. In this study Enterprise Elementary school teachers were surveyed regarding their attitudes

and attitudes regarding ACE Trainings and TIC practices implemented at the district. The data were analyzed via The Traumatic Stress Institute of Klingberg Family Centers ARTIC Scale secure online platform data analysis system which utilized Qualtrics © Software for analyses. The ARTIC provided a comprehensive report to the researcher (see Appendix N). The report included narrative explanations and graphs showing the overall aggregate results of the district, and schools using the subscales and overall scores. The minimum number to provide an aggregate value was 10. It also compared the aggregate data with schools of similar educational profiles. In addition to demographic questions contained in the ARTIC survey, the scale consisted of 45 Likert contrasting questions. The seven-point Likert scale questions asked for teachers' attitudes and attitudes regarding adverse childhood experiences of students, trauma-informed practices and self-efficacy in trauma-informed response, student resiliency and institutional support. The researcher accessed and downloaded the report. The aggregate data were organized and compared and contrasted to gain perspectives and insights. The aggregate data were reported using graphs and tables in Chapter 4, and findings identified. Themes were analyzed and then compared with the qualitative survey results and artifact analysis.

Qualitative Data Analysis

The qualitative data were gathered through recorded Zoom interviews with the 10 elementary school teachers. Analysis for qualitative data begins when conducting the interviews by noting emergent patterns and possible themes (Patton, 2015). Following the interviews all raw data were inventoried and organized and safely secured. Recorded Interviews were uploaded and transcribed utilizing transcription software. Then the

transcripts were read by the researcher and themes were identified. Content analysis after the data were coded using NVivo an electronic coding software dividing the data into themes, categories, and patterns (Patton, 2015). NVivo© (QSR International Pty Ltd, 2019) software provides a way for researchers to organize content, store, code, retrieve, compare, and link data. Frequency tables were used to find consistent themes and repeated phrases. A second researcher also coded 10% of the interviews to ensure consistency and interrater reliability. According to Patton (2015) interrater reliability is appropriate with semi-structured interviews, where the same questions are asked in the same order. Once the coding analysis was complete, the researcher identified the findings that emerged from the interviews. The researcher then compared and contrasted the quantitative data analysis with the qualitative data analysis utilizing deductive analysis in order to answer the research questions

Limitations

One of the primary limitations of this study is it was conducted with only one small school district of 188 teachers. According to McMillan and Schumacher (2010), the larger the number for a sample size the more the results can be considered credible for a quantitative study. Only 59 of 188 people is a very small sample size for a quantitative study. Also, only 9 of those 188 were interviewed thus the results may not generalize to the larger population of all elementary school teachers. A limitation with the small number of responses it that it is possible that only those most enthused about TIEPs may have responded, thus not possible showing the full picture of the 180 teachers at EESD. A limitation of the ARTIC © Scale usage was that the research was unable to obtain the demographics or the raw data for further analysis. Another limitation is that of potential

bias of the researcher. The researcher was a Shasta County Department of Health trainer in Adverse Childhood Experiences (see Appendix O) with extensive knowledge of child development and how ACEs and Trauma impact on brain development and the long-term effects of ACEs. Another limitation was that during this study, the COVID-19 pandemic restrictions and distance learning occurred.

Summary

This study was a convergent parallel mixed methods case study which combined qualitative and quantitative data as well as artifacts to answer the study's research questions. The population selected was elementary school teachers and the sample was survey respondents from Enterprise Elementary School District in Redding, California. The quantitative data were collected via an electronic survey called the ARTIC. The data from the ARTIC were analyzed utilizing descriptive and inferential statistics. Numerical data were collected to identify the attitudes of teachers regarding learning and behavioral problems and ACEs and TIC classroom practices. The qualitative method used to collect data was structured interviews with elementary school teachers through open ended questions designed to assist in answering the research questions.

The purpose of this study was to determine teachers' attitudes regarding ACEs as an explanation for student behavioral and learning problems. Also, this study was designed to learn the perceptions of the teachers regarding the TIC practices taught and implemented in the district in terms of effectiveness for classroom management. Chapter IV contains the results of the data collection, the findings, and the combined analysis of both the qualitative and quantitative results. Chapter V discusses the findings, conclusions, and makes recommendations for further research.

CHAPTER IV: RESEARCH, DATA COLLECTION, AND FINDINGS

Overview

Chapter IV provides a summary of the purpose, research questions, methodology, data collection procedures, and population sample. The demographic data of the teachers at Enterprise Elementary School District who responded to the survey or participated in the interviews are also summarized. In addition, this chapter presents a synthesis and report of the findings of the data collected as related to the research questions. The chapter concludes with a brief summary of the findings.

Purpose Statement

The purpose of this convergent parallel design mixed methods case study was to determine how training on the ACEs and TIEP affected the attitudes of teachers in Enterprise Elementary School District towards (with) students who had experienced ACE and/or trauma. A further purpose of this study was to understand if teachers in Enterprise Elementary School District perceived the training was effective in changing their classroom practices to support the resiliency of students who had experienced ACEs.

Research Questions

1. To what extent do teachers in Enterprise Elementary School District indicate the trainings on ACEs & TIEP affected their attitudes towards students who had experienced ACEs?

2. What were the perceptions of teachers in Enterprise Elementary School District on the effectiveness of ACEs & TIEP trainings in changing their classroom practices to support the resiliency of students who had experienced ACEs?

Research Methods and Data Collection Procedures

This research study was a mixed method case study utilizing qualitative and quantitative research methods. The purpose of a case study was to investigate a phenomenon in more depth than a typical quantitative or qualitative study (Baxter & Jack, 2008). Case studies according to Tetnowski (2015), are used to investigate a contemporary phenomenon within its real-life context. Baxter and Jack (2008) state that case studies can be used to inform professional practice or decision/policy making. This study focused on a single significant case (Enterprise Elementary School District) as an example of the phenomena of interest (ACE and TIEP) trainings. According to McMillan and Schumacher (2010), a case study is the in-depth exploration of a unique system to gain insight into a specific theme. "Case studies provide a more complete understanding of complex situations, identify unintended consequences, and examine the process of policy implementation (McMillan & Schumacher, 2010, p. 440)."

The mixed methods portion of the study, the Convergent Parallel Design formerly known as the Triangulation Design, was used to collect both qualitative data through a survey offered to all district teachers and concurrently to qualitatively interview participants to gain a more in-depth understanding of their attitudes and perceptions on ACEs, TIEC, and resiliency. According to Creswell and Clark (2017), the convergent Parallel design is the most well-known of the mixed method approaches and was originally known as the "triangulation design where two different methods were used to obtain triangulated results about a single topic" (p. 77). This method utilizes the strengths of both qualitative and qualitative methods. This method offers the opportunity to compare the data from both methods for the purposes of validation. There are many

benefits for utilizing the convergent design such as being an efficient way of collecting data as both sets of data are collected at the same time independently (Creswell& Clark 2017; McMillan & Schumacher, 2010). Another benefit is data analysis of the two data sets can be used to compare, connect, and contrast data for further clarity and accuracy. The researcher analyses the data both separately and together and seeks convergence, corroboration, collaboration, and comparisons (Schoonenboom & Johnson, 2017; see Figure 12).

In this study, the quantitative data were collected in numeric form using a survey (see Appendix B). This survey was sent out to all 180 elementary teachers in Enterprise Elementary School District. While teachers were taking the survey, 9 volunteer teachers were selected and interviewed to gain their perceptions as to whether these practices improved the resiliency of the students who had experienced ACEs. Conducting both the qualitative and the quantitative research at the same time, was time efficient and allowed the researcher to compare and contrast the data results to determine patterns and meaning.

Quantitative research designs assist with decreasing researcher bias and increasing objectivity of the research (McMillan & Schumacher, 2010). This was a nonexperimental quantitative design utilizing a survey (see Appendix B). According to McMillan and Schumacher (2010), "Nonexperimental designs describe phenomena and examine relationships between different phenomena without any manipulation of conditions that are experienced" (p. 22). Surveys are a form of qualitative nonexperiential design. Surveys are utilized to identify attitudes of the sample. The survey used in this study is the Attitudes Related to Trauma-Informed Care Scale

(ARTIC©) developed by The Trauma Stress Institute of Klingberg Family Centers (see Appendix B).

The purpose of the qualitative research component is to gain an understanding of the personal views of those surveyed, as qualitative research is an interactive method focused on the lived experience of those surveyed (McMillan & Schumacher, 2010). Qualitative research according to Patton (2015) is used to gain meaning and understand the perceptions and experience of those interviewed. The purpose of the qualitative method is to gain an understanding of the results of the quantitative results from the survey. In qualitative research, data is collected via interviews and then the researcher identifies themes, and these themes then assist in finding meaning and narrative behind the data collected in the survey and quantitative portion of the research (Patton, 2015). In this study, interviews were used to identify the perceptions of the teachers regarding the effectiveness of trainings in ACE and Trauma Informed Educational Practices in improving the resiliency of the students and thus improving the classroom environment. One of the benefits of the convergent design is the method generally can decrease the effects of researcher bias that can sometimes be found in qualitative research and added qualitative interviews can increase the reliability of the quantitative research (Creswell & Clark, 2017). In the convergent design, the data are collected through the survey for the quantitative portion of the study and then this data are analyzed through descriptive and inferential statistics (Creswell & Clark, 2017).

Population

A population is a group of individual participants that meet a certain criterion. The population of a study is a group of persons who have characteristics in common

which separate them from other groups (McMillan & Schumacher, 2010). The general population for this study was elementary teachers in California who have been trained in ACEs and Trauma Informed Educational Practices. According to the NCES (2019), there were an estimated 3.6 million full time equivalent elementary and secondary teachers in 2017. During the 2018-19 school year there were 148,288 elementary teachers in California, serving in 5887 elementary schools, with a total enrollment of 3,010,015 students (NCES, 2019). Elementary school teachers are likely to encounter students with ACEs and subsequently have the opportunity to intervene with students during critical brain developmental periods (Post et al., 2020). In recent years, school districts in California have offered training in TIEP with elementary teachers, in identifying and implementing instructional practices that help students develop skills to improve their behaviors and academic performance (NCES, 2019). While it is known that some schools have offered ACEs & TIEP training for teachers in California, at the time this study was started there was no significant data on the extent of the training offered. Further, there was no information found on whether the ACEs trainings were required or voluntary for teachers to attend. Therefore, the population selected for this study was elementary school teachers in California who have participated in ACE related TIEP training.

Target Population

The target population of this study was elementary teachers in Enterprise Elementary School District, located in Redding California. The Enterprise School District is the only known school district in Shasta County to require training in ACEs and training in TIEP for all their elementary teachers. The Shasta County Public Health

Department began training teachers on trauma informed care beginning in 2010. The Enterprise School District began training in ACE and TIEP around 2015.

The Enterprise Elementary School District is made up of nine schools, with a total enrolment of 3,781 students and approximately 188 full time equivalent credentialed teachers. The district operates four K through 5 schools, two K through 8 schools, one 6 through 8 school, one community day school K through 8 and one K through 12 school.

According to the superintendent the district is committed to providing emotionally safe environments for student learning. The mission at Enterprise Elementary School District is "Empowering every child, every day, to create a better world". To support the implementation of TIEPs, the district provided social and emotional education utilizing a team of school counselors who collaborated with the teachers to provide techniques and skills to assist students and teachers in managing emotions and building prosocial skills. In addition, each school has a mental health professional assigned to the school to assist the students and the teachers. Therefore, the target population for this study was 188 teachers in the Enterprise Elementary School District.

Sample

The sample includes exactly who was studied. This case study utilized the approach of "sampling an exemplar of phenomenon of interest" (Patton, 2015). Patton (2015) described this method as providing, insights that stand alone as important. The Enterprise Elementary School Teachers were selected as the exemplars, given the additional investment and trainings given to the teachers to support children struggling with the impacts of trauma or adverse childhood experiences. This study also utilized a combination of convenience, purposeful and random sampling. Convenience and

purposeful sampling occur when subjects are selected based on being easily accessible and to best meet the needs of the study (McMillan & Schumacher, 2010).

The sample size for the quantitative portion of this study was 59 participants, who represented 31% of the target population. While there is no agreement in the literature regarding sufficient sample size for convergent mixed methods studies, it is appropriate to select a sample that will allow for a sufficient number to answer the research questions and gain insights from the participants (Creswell, 2006). Creswell (2006) indicated that, "The sample needs to be large enough for statistical procedures to be used that will make it possible for the researcher to draw inferences with some confidence that the sample reflects the characteristics of the entire population" (p. 113.). Triangulation of the results of the convergent mixed methods design with 59 participants who completed the quantitative portion of the study combined with 9 (1 recorded interview of the 10 interviews was damaged and could not be used) individuals who completed interviews was determined by the researcher to be of sufficient size to gain insights into the case study population of 188, especially given the constraints of the COVID-19 pandemic. The email containing the survey link and the request for interview volunteers was sent in early 2020 just as COVID-19 was beginning to spread and COVID-19 pandemic restrictions were put into place. The school was in the process of setting up distance learning and both teachers and administrators were stretched thin due to the stress induced both by the pandemic and with the pandemic restrictions and distance learning.

The sample size for the interview portion of the study consisted of nine teachers from the Enterprise Elementary School District who volunteered to be interviewed. Only 10 teachers volunteered, thus the desired 12 interviews did not occur. As stated above, 1

interview recording was damaged, thus only 9 interviews were transcribed and coded. Patton (2015) stated there are no rules for sample size in qualitative studies, however, the size needs to be representative of the population being studied. However, in qualitative studies, more interviews do not necessarily mean better data, due to the fact the data can reach a saturation point where the data becomes repetitive (Vasileiou et al., 2018).

<div align="center">**Sample Demographic Data**</div>

For the Quantitative portion of the study, the survey was sent to 188 teachers in Enterprise Elementary School District. Of the 188, 59 completed the survey for a response rate of 31.4%. Demographic data for the ARTIC Survey were unavailable, as the Traumatic Stress Institute (TSI) does not release the demographic information for the purposes of maintaining strict confidentiality. The lack of data from the ARTIC made in-depth data analysis challenging.

For the qualitative portion of the study there were nine participants. Of the participants participating in the interviews there were one male and eight females. Two of the interview participants had master's degrees and seven had bachelor's degrees. Table 1 represents the demographics of the nine interviewees. Eight of the interviewees had more than 6 years of teaching experience with eight of them also having 6 or more years teaching experience in EESD. Seven of the teachers were older than 35 years.

Table 1

Qualitative Demographics

Years Teaching	Years with Organization	Age
3 = < 20	2 = < 20	1 = < 65
1 =16-20	1 = 16-20	3= 45-54
1 =11-15	2 = 11-15	3 = 35-44
3 =6-10	3 = 6-10	2 = 25-34
1 = 1-5	1 = 1-5	1 None

Presentation and Analysis of Data

This research study used a convergent parallel mixed methods case study design. This allowed the researcher to use both numerical analysis and narrative understanding, to answer the research questions. Interviews were conducted at the same time in that a link to an electronic online survey, the Attitudes Regarding Trauma Informed Care (ARTIC), was sent to teachers via e-mail and volunteers were requested, selected, and interviewed. The data presented begins with the quantitative analysis of the ARTIC survey provided to the study participants by the TSI. TSI is the organization that designed the survey as well as collected, aggregated, and disseminated the data for the ARTIC. While the Traumatic Stress Institute administered the ARTIC, the researcher began the qualitative research using semi-structured interviews. The researcher analyzed the interview data using NVivo, a qualitative data analysis software application. Both the quantitative data and the qualitative data were collected to identify the attitudes of the teachers at Enterprise Elementary School District (EESD) regarding adverse childhood experiences and trauma informed educational practices. The quantitative and qualitative results of the analysis are presented for each of the research questions. Artifact data was not collected due to the pandemic and visitors were not allowed on school grounds. Teachers who had indicated they would send artifacts via email did not send those artifacts. Thus, no artifacts were analyzed.

Quantitative Data Analysis

To collect quantitative data for this research study, the Attitudes Regarding Trauma Informed Care Survey (ARTIC) (see Appendix B) was administered by the Traumatic Stress Institute. The researcher provided the Institute with the

e-mails of the 188 teachers in Enterprise Elementary School District. Fifty-nine teachers

voluntarily participated in the survey portion of the study. The survey consists of 45

questions with questions addressing the possible beliefs of teachers using a 7-point scale.

A sample question is provided in Figure 13.

Figure 13

Sample ARTIC Question

The ARTIC instructions to the participants state, "For each item, select the square

along the dimension between the two options that best represents your personal belief

during the past two months of your job." The data were aggregated by TSI to identify the

overall attitudes of the teachers regarding adverse childhood experiences/ trauma and the

trauma informed practices put into place within the district.

The ARTIC scores range from 0 to 7. Scores are reported as means and percentile

ranks. A mean score is the average of a group of individual respondent scores (Patton,

2015). Percentile ranks show how the mean score compares to large representative

samples in the education sector. The percentile rank of the score is the percentage of

scores in the sample that are equal to or lower than it. For example, a score at the 55th

percentile means that the score is greater than 55% of the people in the sample. The

sample for the percentages consisted of number of teachers who had taken this education

version of the ARTIC, which TSI reported was 888.

In addition to the data from the 45 items were further organized into 7 subscale scores. These subscale scores provided indicators for understanding the teacher's beliefs and attitudes regarding TIC/TIP as outlined below:

1. **Underlying Causes of Problem Behavior and Symptoms.** This subscale measured whether teacher attitudes endorse the view that student behavior and symptoms are adaptive and malleable versus intentional and fixed.

2. **Staff Responses to Problem Behavior and Symptoms.** This subscale measured teachers' attitudes about whether teacher responses to problem behavior should focus on the importance of the relationship, flexibility, kindness, and safety as the agents of change versus focus on accountability, consequences, and rules as the agent of change.

3. **Empathy and Control.** This subscale measured teachers attitudes about whether teachers' behaviors tend to be empathy-focused versus control-focused.

4. **Self-Efficacy at Work.** This subscale measured teachers attitudes about whether teachers feel able and confident to meet the demands of working with traumatized students versus feeling unable to meet the demands.

5. **Reactions to the Work.** This subscale measured teachers attitudes about whether teachers recognize the effects of secondary trauma/vicarious trauma and cope by seeking support versus minimizing the effects of secondary/vicarious trauma and cope by ignoring or hiding the impact.

6. **Personal Support for Trauma-Informed Care/Practices.** This subscale measured teachers' attitudes about whether teachers feel supportive of and

confident about, implementation of Trauma Informed Practices (TIP) versus concerns regarding the implementation of TIP.

7. **System-Wide Support for Trauma-Informed Care/Practices.** This subscale measured teacher attitudes about whether the wider system (i.e., administration, the school, the district, etc...) supports TIP versus does not support TIP.

Figure 14 shows that the mean score of 5.05 for subscale 7. What this indicates is that most of the EESD survey respondents reported that they felt the wider system was supportive of trauma-informed educational practices. Scores on each scale range from 1 to 7, with a 1 not being a favorable view of the support the teachers felt they received and a 7 being completely viewing the overall system as supportive of TIP. A mean score of 5.05 means that most of the teachers who responded to the survey felt there was supportive of TIEP.

Figure 14

System Support for Teachers in Using Trauma Informed Practices
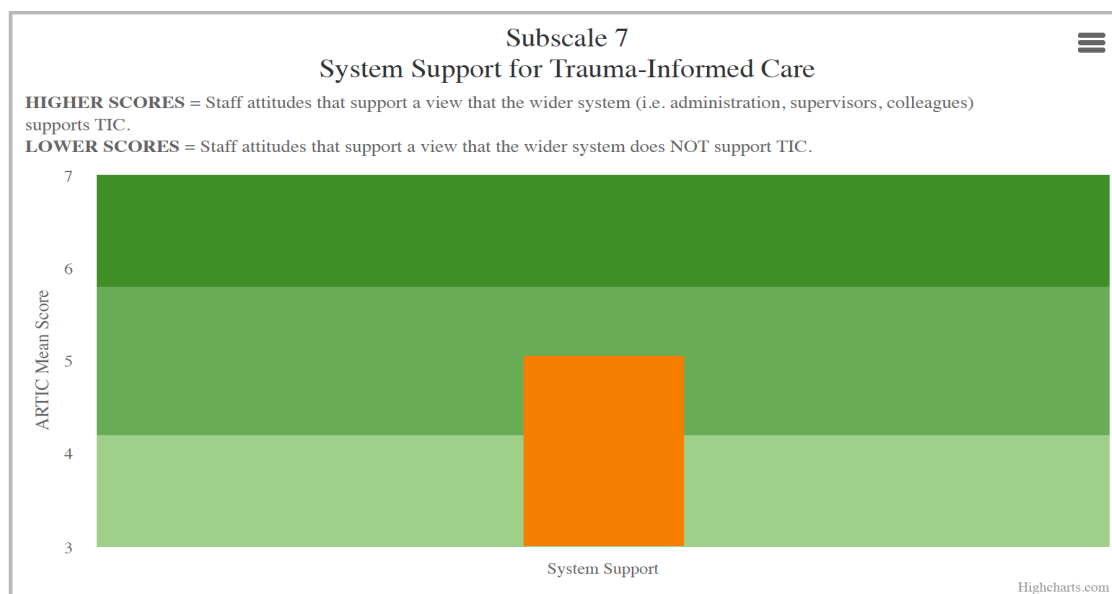
Qualitative Data Analysis

Qualitative interviews were conducted in this convergent mixed methods case study, to provide context and gain insight into the lived experience of the teachers and to build further on the results of the data received regarding the survey. The researcher developed an interview script with the two research questions broken into 10 questions with probing prompts (see Appendix J). Questions addressed the teachers attitudes regarding ACEs and TIEP trainings, student behavior, signs of resiliency and the impact of COVID-19 on these issues. The same script was used for all interviews. Each interview was completed utilizing Zoom © video-conferencing software. Each interview was recorded and transcribed. Nine teachers form the EESD participated in the interviews. The interviews began with an introduction and an overview of the research study to build trust and rapport between the researcher and the interviewee. The interview transcripts were analyzed by the researcher using NVivo software to determine the frequency of the themes found in the interview transcripts. Themes were established when the participants gave a similar comment four or more times across all nine interviews. The data were used to establish the themes to answer the two main research questions.

<div align="center">

**Research Question Results**

</div>

Research Question 1

To what extent do teachers in Enterprise Elementary School District in Shasta County indicate the trainings on ACEs and TIEP affected their attitudes towards students who have experienced ACEs?

Quantitative Data

Figure 15 is a summary of the seven ARTIC Survey subscales. Each subscale is reviewed below.

Figure 15

Summary of the ARTIC-45, Seven Subscales
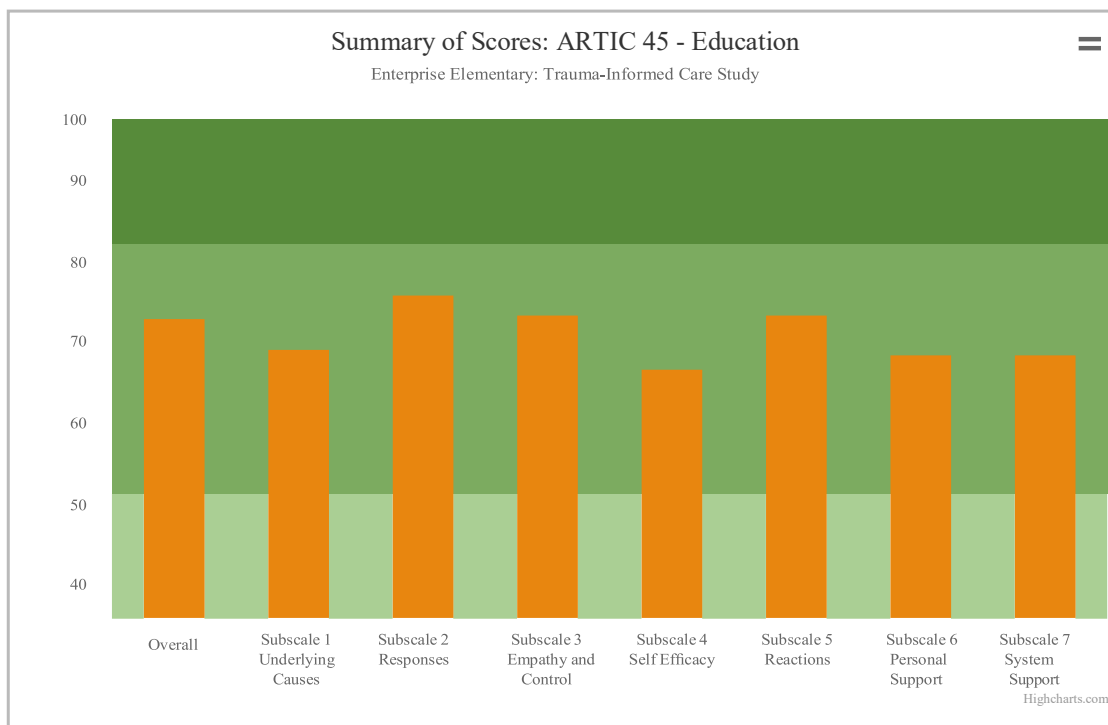
The *Underlying Causes Subscale* or Subscale 1 in Figure 15, focuses on teachers attitudes regarding what the underlying causes are of problem behavior, meaning is problem behavior willful, intentional, and fixed or are problem behaviors simply symptoms of trauma that are adaptive, and malleable (TSI, 2020). The mean score for the answers was 5.20, meaning that on the scale of 1 to 7, the majority of the 59 teachers attitudes supported the concept that student behavior/symptoms were considered adaptive and malleable rather than intentional and fixed.   EESD scored in at the 54th percentile

range, indicating that the 59 teachers responded as more trauma-informed than 54% of the 888 teachers who had taken this version of the ARTIC.

The *Responses Subscale* or Subscale 2 in Figure 15 focuses on teacher attitudes that support positive responses to problem behavior based on relationship building, flexibility, and kindness (TSI, 2020). The mean score for the Responses Subscale was 5.59 meaning that on the scale of 1 to 7, the 59 teachers' average indicated that their attitudes support responding to problem behavior based on relationship building, flexibility, and kindness rather than accountability, consequences, and rules. This score place EESD at the 65th percentile, which indicates that compared to other teachers/districts, EESD is on its way to become a Trauma-Informed Educational Organization. This is also the highest rated among the seven subscales.

The *Empathy and Control Subscale*, Subscale 3 in Figure 3, indicates the teachers attitudes support empathy-focused professional behavior rather than control-focused teacher behavior when working with students exposed to trauma (TSI, 2020). The mean score was 5.60 out of 7. This score placed EESD in the 61st percentile. Wink et al. (2020) found that teachers higher in empathy reported more positive mindsets about student behavior, had greater competence in handling problem behavior, had increased use of effective problem-solving strategies, had greater relationship closeness with students and lower levels of job burnout.

In the *Self-Efficacy Subscale*, the 4th subscale in Figure 15, the teachers' attitudes support feeling confident meeting the demands of the students suffering from trauma (TSI, 2020). The mean score was 5.65 out of 7 indicating that the majority of the teachers who answered the survey felt somewhat confident in their abilities to respond to

students in a trauma-informed manner. This score places EESD in the 50th percentile in this subcategory. This was the lowest subcategory (see Figure 15) indicating teachers had a possible a lack of confidence in their ability to implement trauma informed skills and practices in the classroom that they had learned in the trainings. According to Larsen and Samdal (2011), the greater a teacher's self-efficacy in applying and using the trauma informed skills, the more likely they are to utilize those skills. They also noted that the opposite is also true. The less competent the teachers felt in using the skills, the less likely they were to utilize those skills.   Bandura, coined the term "Self-Efficacy" and defined it as "Self-efficacy is a person's beliefs about their capabilities" (Bandura, A., 1994). Kim et al., (2020), reported that positive perceptions and positive experiences with a concept can reinforce one's belief in self efficacy and this results in adjusting behavior accordingly.

For the *Reactions Subscale*, in Figure 15 (Subscale 5), teachers reported attitudes that support recognizing the effects of secondary or vicarious trauma and cope by seeking assistance rather than minimizing the effects by ignoring or hiding the impact of student trauma/behavior (TSI, 2020).   The mean for this subscale was 5.63, placing EESD in the 61st percentile when compared to other teachers who had taken this version of the ARTIC. The Personal Support Subscale in Figure 15 with a mean of 5.34 out of 7, indicates the teachers endorsed feeling personally supportive of TIC/TIP and they believe it will be effective (TSI, 2020). This score placed EESD in the 53rd percentile when compared to other teachers.

Subscale 6 in Figure 15, *Personal Support Subscale* is the subscale that addresses the teachers support or "buy-in" regarding the implementation of the trauma informed

educational practices (TSI, 2020).   The mean for this subscale was 5.34 out of 7

indicating that the majority felt personally supportive of TIEP and believe it is or will be

effective with students. This placed EESD at 53% compared to other teachers who had

taken the ARTIC. This indicates that most of the teachers believe in the trauma-informed

practices implemented by the district.

Subscale 7 in Figure 15, the *System Support Subscale* had a mean of 5.05 out of 7

which placed EESD in the 53rd percentile. This indicates that staff felt supported by the

wider system such as colleagues, administration, and principals. Overall, the results of

the ARTIC Survey indicate that the 59 teachers who participated in the survey believed

the trainings have been effective and most of these teachers have positive attitudes

towards the trauma-informed educational practices implemented in the district.

Figure 16 shows the overall mean score with all seven subscales which was 5.64

out of 7 and this score placed EESD in the 60th percentile when compared to other

teachers at other districts. This means that the 59 teachers who completed the ARTIC

Survey responded with answers indicating positive attitudes toward trauma-informed

practices more than 60% of the other 888 teachers who have completed this version of

the ARTIC. This indicates that, most of the 59 teachers at EESD had a positive attitude

about the trauma-informed practices which have been implemented

Figure 16

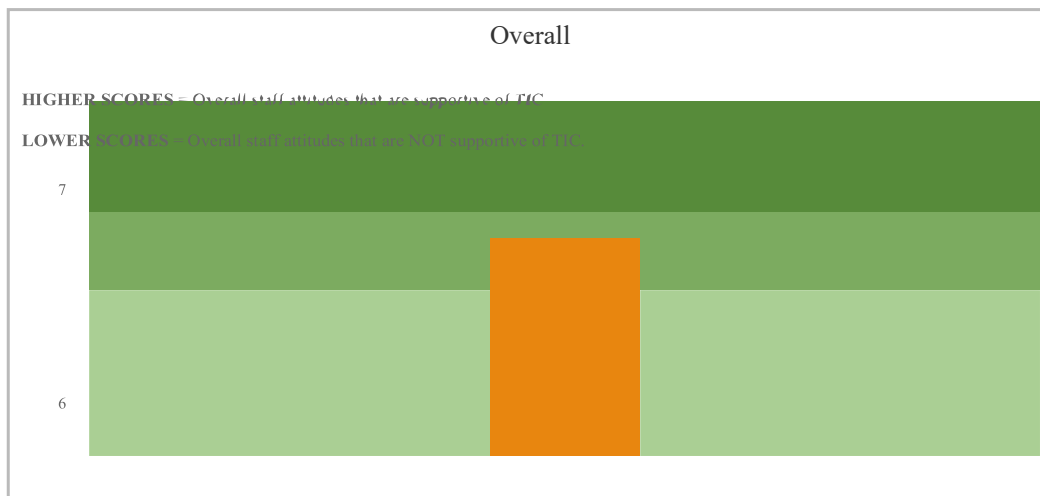*Overall Teacher Attitudes Towards Trauma Informed Care/Practices*

Table 2 shows the ranking of the strength in each subscale for EESD compared to teachers from other districts who have taken the ARTIC. Three subscales fell between the percentile scores from 61-65, which were the highest rated areas from the sample: Responses, Empathy and Control, and Reactions. These items reflect subscales which represent skills the teachers generally control. Four items scored the lowest: Underlying Causes, System Support, Personal Support, and Self-Efficacy. These areas generally not under their control reflecting the idea that outside conditions impact teacher's attitudes towards TIEP.

Table 2

Rank Order of the Seven Artic Subscales

| Subscale	Percentile	Mean Score
1. Responses (2)	65	5.59
2. Empathy and Control (3)	61	5.60
3. Reactions (5)	61	5.34
4. Underlying Causes (1)	54	5.20
5. System Support (7)	53	5.05
6. Personal Support (6)	53	5.34
7. Self-Efficacy (4)	50	5.65

In Table 2, the 7 subscales (with the number of the subscale in parentheses) are ranked from the highest percentile to the lowest. The percentage is based on the responses of the 59 teachers compared to the 888 other teachers who have taken this version of the ARTIC. The mean score shows the mean teachers attitudes on the 1 to 7 scale in each subscale. The mean score and the percentile are not a one-to-one correlation. For example: Subscale 2, "Responses", was EESD's strongest subscale. What this means is that compared to the other 888 teachers who have taken this version of the ARTIC, the 59 EESD teachers fall in the 65th percentile. The mean score was 5.59 which indicates that out of the 1 to 7 scale teachers' attitudes were mostly supportive of the concept that responses to problem behavior need to be based in relationship-building, flexibility, and kindness. While this subcategory was EESD's strongest in terms of the percentage, this was not the subscale that teachers supported the most. The subscale with the highest mean was subscale 4 self-efficacy. While the teachers reportedly, according to their answers on the survey, felt they had high confidence in meeting the demands of students suffering from trauma, when their answers are compared to other 888 teachers who have taken this version of the ARTIC, EESD was only in the 50th percentile.

Figure 17 shows the self-reported confidence level of the 59 teachers regarding their practice of trauma informed educational practices. The figure shows that 52% were moderately confident and 15% were very confident, indicating that 67% feel confident in the use of trauma informed educational practices. Thirty three percent of the instructors reported little or no confidence in their use of trauma informed educational practices. Two-thirds of the elementary teachers in the district reported confidence while one-third reported a lack of confidence. Both Ciganek (2020) and Hinton-Pollard (2020) found

that self-confidence and feelings of self-efficacy with trauma informed educational

practices improved with increased exposure and experience with the model.

Figure 17

Confidence in Practicing Trauma Informed Care
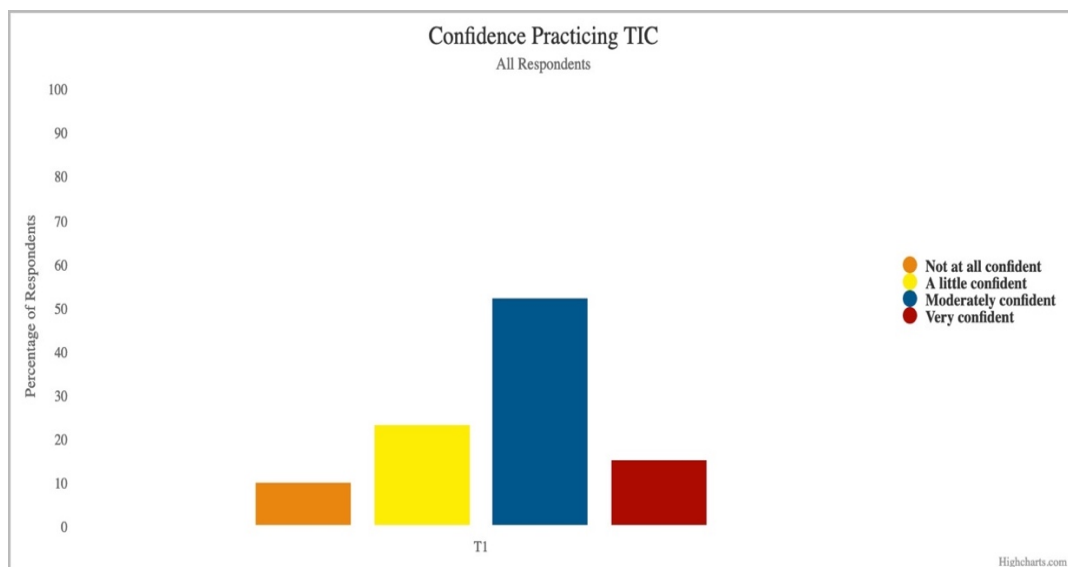
Qualitative Data

Types of Training

All nine participants indicated they had taken ACEs and TIEP trainings included

in Table 1 below. When trying to describe the trainings, all nine of the respondents could

not remember the names for some of the trainings but instead remembered them as

trainings on trauma-informed teaching practices which were mentioned the most by the

most respondents. The most frequently mentioned training was Capturing Kids Hearts ©

which is a program utilized by the district focusing on building the teacher student

relationship and strengthening student's connectedness to others through enhancing

healthy bonds with teachers where agreements are established regarding acceptable

classroom behavior. Both Capturing Kids Hearts © and Second Step © are social

emotional learning curriculums for schools. EESD has had extensive trainings in the last

5 years on these models. The theme of trauma-informed teaching practices and trauma-

based classroom management trainings were frequently mentioned even though the

teachers could not remember the exact names of the training.   The total for Table 3

indicates that these nine teachers attended a total 57 (59 minus 2 personal research)

trainings pertaining to ACEs, trauma and trauma informed educational practices.

Table 3

Training Received

Theme	Respondents	Frequency
Capturing Kids' Hearts (all grade levels)	4	7
Second Step (K-8)	3	9
Dr. Bruce Perry trainings	2	2
Neuroscience of the brain	2	2
Ruby Payne's Poverty Training	2	2
ACEs from Shasta County trainer K.R.	2	2
Other -- cannot remember names	9	9
a) Trauma informed teaching practices	5	11
b) Trauma-based classroom management	3	8
c) College Courses	2	2
d) Personal Research	2	2
e) School Assemblies	2	2
Total	59	

Teacher Attitudes Prior to Training

Made Assumptions About Behavior. All nine teachers discussed their attitudes

prior to receiving the trainings (see Table 4). Six teachers mentioned 15 times that they

had made assumptions about student behaviors. One of the most common reported

practices (six participants) was that they felt they had unknowingly made assumptions about student behavior and hadn't thought to ask questions about why students might be behaving the way they were. One teacher reported,

> In the past I made assumptions that the child was intentionally making a choice, that they were acting out on purpose to get my attention. And that may or may not be true, but now I look at it more now when a child's acting out is telling me there is something going on with them.

Another teacher reported,

> I think sometimes before the training, I would think a child was being defiant on purpose. And then afterwards you realized that there could be many reasons, a sense of not having any power or no choice, a sense of putting them in a situation where they've been yelled and screamed at forever. And so, the minute I start getting that tone of voice that reminds them of this, they either freak out and overtly get angry or they shut down completely based on their prior experiences. And I think those kinds of things are things that I noticed. Before I was judging more harshly. Now, I dig deeper now to learn what might be going on or what is the child trying to tell me through their behavior.

Teacher-Directed Classroom. Four participants reported 9 times, that prior to the trainings their classrooms were teacher directed and teacher controlled utilizing behavior management models and behavior charts. One teacher reported, "I felt I was in-charge, I was the boss and the kids just needed to behave right and meet expectations, I was a no-nonsense teacher." Another reported, "prior to coming here to this district, I was very behaviorally focused and felt acting out behavior was just for attention to be

punished, extinguished or ignored. I thought poor student behavior was due to my poor

teaching skills and an inability to control the classroom".

Table 4

Attitudes Regarding Student Learning and Behavior Problems Prior to Trainings

Themes	Respondents	Frequency
Made assumptions about behavior	6	15
Teacher-directed classroom/Behavior Focus	4	9
Personalized student behaviors	4	6
Rigid expectations	2	5
High teacher frustrations	2	4

Teacher Attitudes After Training

All nine teachers reported their attitudes were changed by the trainings. The

changes in attitude are included in Table 5. Five themes emerged from the analysis. One

of the most common responses was that after training the teachers were able to recognize

behavioral symptoms of trauma. Another common response was the teachers had or were

learning how not to take student behavior personally.

Recognize Behaviors as Symptoms. In Table 5, eight out of the nine teachers

reported they were now able to recognize behavior as a symptom of possible trauma or

issues at home. Behaviors as symptoms were repeated 19 times during the interviews.

One teacher reported, "I no longer use a behavior chart, because now I recognize

behaviors as symptoms that something is going on, so I work on building the relationship

so they will trust me and teach them to regulate their emotions, rather than focusing on

modifying their behavior."

Stop Personalizing Student Behavior. Seven of the nine reported with a

frequency of 21 statements during all interviews, that they had stopped taking student

behaviors personally and stopped seeing student behavior as a problem with their teaching or a reflection of them or intentional toward them.

> I used to see acting out as defiance against me as a teacher, that if they behaved poorly, I would be seen as a bad teacher unable to control my students and now I know their behavior usually has nothing to do with me.

And another stated,

> I think I take the kid's behavior a little less personally. I'm not as worried that if a child is acting out that it's a reflection on my not being able to control them. I guess I would have thought if the principal came in and somebody was having a hysterical fit, the principal would think, obviously, I'm a bad teacher.

A third teacher reported, "I'm a little less likely to take it (behavior) personal. And I don't see it quite as willful. And like, they're not purposefully trying to be jerks to me in the classroom."

Increase in Tolerant Responses. This was reported by five participants stated eight times an increase in personal tolerance. These teachers reported feeling they were more tolerant of many behavioral problems than they were before the trainings.

> Rather than seeing behavior as willful behavior against me, I now recognize their behavior is telling me something. If the classroom is falling apart rather than nagging the kids about their behavior, I recognize the students are telling me they need a break, and we do a brain break. I am much more tolerant, and the students also have become more tolerant, we have all learned to ignore the behavior. I allow that student to cry or kick their feet (if it is not at someone) until they are

ready to do something different. The students have learned to ignore the behavior. I have learned not to engage with a student who has flipped their lid until they are calm, and I avoid getting into a power struggle.

Feeling Compassion & Affection. Four of the respondents stated 11 times they feel more compassion and affection for the students rather than feeling angry at them. "Now when a student acts out, I wonder and often ask them, 'why don't you tell me how you are feeling, did something happen either at home or at school that is bothering you?'. I feel less angry at the behavior and more compassion for the student." "I'm more compassionate and actually feel affection for students rather than dread." "I can see where the acting out student is coming from, and I feel compassion for them. It must be hard to have fighting at home all night and not be able to sleep and have to come to school and preform the next day."

Table 5

Teacher Attitudes After Training

Themes	Respondents	Frequency
Recognize "behaviors as symptoms"	8	19
Stop personalizing student behavior	8	21
Increase in tolerant responses	5	8
Feel compassion & affection	4	11
Awareness of classroom environment	3	7
Flexible expectations	3	7
More optimistic - receptive	2	4
Use of Labeled praise	1	1
Modeling calming behavior for students	1	2
Understanding brain-body connection	1	1

Additional Themes

Seven participants out of the nine (or 78%) teachers reported there has been follow-up support for trauma informed educational practices at their school. The most common type of follow-up reported is that five of those seven reported their schools had mental health counselors who provided guidance and assistance with children with behavioral issues.

When asked about each teacher's own confidence level in trauma informed educational practices four reported feeling very confident, two felt moderately confident and three felt a little confident. The teachers who reported feeling more confident had either come to the district already believing that student behavior was connected to other issues students might have or had been with the district some time. The teachers who struggled the most with efficacy tended to be newer teachers to the district who were unfamiliar with many of the concepts of trauma-informed educational practices. One teacher stated, "I just don't feel like I am very good at the skills yet." Another teacher reported that because of the number of students in her classroom she has been unable to focus on building relationships with the students that was needed for the practices to be successful.

Summary of Research Question 1

Both the qualitative and quantitative data from the 59 teachers who took the ARTIC survey and the nine teachers who were interviewed, all reported the trainings they have had on ACEs and the Trauma Informed Educational Practices had positively affected their attitudes towards students who had likely experienced ACE's or trauma. This is evidenced by the fact that all the data in the seven categories the 59 teachers

ranked above 50% when compared to the other elementary school teachers who have completed this version of the ARTIC survey with the EESDs' highest average at 65th percentile. All nine of the interviewees also reported positive attitudes and a greater awareness of and ability to positively respond to students who exhibited problematic behaviors and learning difficulties because of trauma or ACEs (see Table 6).

Table 6

Summary of Quantitative Findings for Research Question 1

Quantitative Findings		
Findings	Percentile	Mean Score
1. Three ARTIC Subscales were above 61%		
• Responses (2)	65	5.59
• Empathy and Control (3)	61	5.60
• Reactions (5)	61	5.34
Four ARTIC Subscales scored below 54%		
• Underlying Causes (1)	54	5,20
• System Support (7)	53	5.50
• Personal Support (6)	53	5.34
• Self-Efficacy (4)	50	5.56
2. All teachers surveyed in the EESD indicated an overall positive attitude towards Trauma Informed Care		
3. The elementary teachers in the EESD scored within the growth range for all Artic Subscales.		
4. Two-thirds of elementary teachers (67%) were confident in their practice of trauma informed care.		
5. One-third of elementary teachers (33%) were not confident in their practice of trauma informed care.		

Table 6 is a summary of the qualitative findings. Subscales 2, 3 and 5 were the highest percentages placing EESD 61 to 65 percent higher than other teachers/schools/districts who have taken the survey. Thus, EESD teachers attitudes in this area show EESD was well on their way to being a trauma-informed school district. The highest mean score was in self-efficacy and the teacher's confidence in their trauma informed skills, however when compared to other teachers in other districts who have taken the survey, EESD fell in the 50th percentile. While 50% is still a strong sign of EESD becoming a trauma-informed school, other districts reported higher attitudes of self-efficacy in TIEP than the 59 EESD teachers did.

Table 7

Summary of Qualitative Findings for Research Question 1

Qualitative Findings		
Training Received in the Last 5 years		
1. The 9 elementary teachers in the EESD reported participating in a total of 59 Trauma Informed Educational Practices trainings.		
2. Social & Emotional Learning curriculums which are trauma informed were highly impactful		
Teacher Attitudes Prior to Training	Number	Frequency
3. Made assumptions about behavior	6	15
4. Teacher-directed classroom/Behavior Focus	4	9
Teacher Attitudes After Training		
5. Recognize Behaviors as Symptoms	8	19
6. Stopped Personalizing Student Behaviors	8	21
7. Increase in Tolerant Responses	5	8

Qualitative Findings		
8. Feel Compassion & Affection	4	11
Additional Themes		
7 out of 9 teachers reported follow-up at the school following the trainings and 5 reported there were mental health counselors at the school whom they could reach out to		
4 reported feeling very confident, 2 felt moderately confident and 3 felt a little confident.		

Table 7 is a summary of the qualitative data. Which shows that the 9 teachers have attended a total of 59 trainings in ACE and TIEP. Teachers also reported that the social and emotional learning curriculums were very helpful in changing classroom practices and student behavior. Both the qualitative and quantitative data suggest that the teachers in EESD do report the trainings affected their attitudes regarding students with ACEs. Not only did it affect their attitude, but it reportedly positively affected the teachers, the students, and the classroom.

Research Question 2

What were the perceptions of teachers in EESD on the effectiveness of ACE's and Trauma Informed Educational Practice trainings in changing their classroom practices to support the resiliency of students who had experienced trauma?

The data for Research Question 2 came from the analysis of the teacher interviews and therefore is qualitative. The analysis of the qualitative date identified 18 themes grouped into 5 areas:

1. Changes in classroom practices

2. Changes in classroom management and instructional practices

3. Student behaviors indicating resiliency

4. Effectiveness of training

5. Need for additional training

The themes are discussed individually within each of these 5 categories

Changes in Classroom Practices

All nine respondents reported making changes in classroom practices following the trainings. Classroom practices are the ways the teacher sets up and utilizes the classroom and tools in the classroom to both manage and educate the students. For example, a social and emotional learning program such as 2nd Step, using a behavior chart, or learning cubicles. Table 8 shows the themes that emerged from the analysis.

Table 8

Changes to General Classroom Practices

Theme	Respondents	Frequencies
Utilizing Relationship Building Communication techniques	9	13
Instituting social and emotional curriculums in the classroom	8	28
Physical movement techniques	4	11
Adjusting expectations/goals based on student and/or circumstances	4	12
Individualize education to student needs	4	10
Increase Positive Connection	4	6

Relationship Building Communication. All nine respondents reported they were now using relationship building communication skills and the concept was mentioned 13 times during the interviews. In trauma-informed educational practices, the student and teacher relationships are the number one most important concept (Wink et al., 2020). Without the human connection of the relationship trauma informed educational

114

practices and tools are essentially minimally effective. (Post et al. (2020) found that the success of trauma informed programs was based on how well developed the relationships are at every level. One teacher stated, "I see my class as my tribe, and it is important that. I build a solid relationship with everyone in my tribe, and they build positive relationships with each other." Another stated, "*Capturing Kids Hearts,* is all based on building relationships and understanding where the students are coming from." A third reported, "The main thing I focus on when school starts is to build the relationship with the students and make sure they know I care about them."

Instituting Social and Emotional Learning Curriculums in the Classroom. Eight participants had implemented *Capturing Kids Hearts* and/or *Second Step* concepts into their classrooms and the two programs were mentioned 28 times during the interviews. These two programs are the primary social/emotional learning programs taught district wide. EESD's website states, "EESD believes in the powerful role of safe, supportive relationships as a catalyst for student growth and development." One teacher reported, "with *Second Step* and *Capturing Kids Hearts*, we set goals to work toward positive experiences and to help students feel good inside, rather than teaching the students to behave in order to avoid punishment". "I enjoy using *Capturing Kids Hearts* and *Second Step*, the strategies and concepts have really improved the overall classroom experience. I don't feel so tired and beat up at the end of the day. It seems there is less acting out behavior overall."

Physical Movement Techniques. Five of the respondents reported they now utilize various movement techniques such as desk yoga/ stretching, providing fidget type items, standing up and shaking and dancing, walking, jumping jacks, etc., as well as

relaxation techniques and mind and body calming skills. Stress as reported in Chapter II is a physical autonomic response in the body that impacts the mind (Andaet al., 2016; Bick & Nelson, 2016). Physical movement can help to release stress hormones from the body and calm the autonomic nervous system (Porges, 2006).

> When I notice a lot of fidgeting or spacing out, I now rather than becoming angry, institute what are called 'Brain Breaks'. Whether it is getting everyone to stand up and shake and dance or giving a student a handheld 'fidget' device, or we take a break from the lesson.

"Sometimes just taking a break and having everyone stretch can make all the difference in the world", were some of the statements the respondents made.

Adjusting Expectations and Individualizing Educational Plans. Another change reported by eight of the teachers was that they adjusted their expectations and individualized educational plans based on each student's needs and circumstances. These concepts were mentioned with a combined frequency of 22 times. Typical individualized responses included, giving students choices, allowing students to take time to cool down or take space, adding movement for some students, a lower-level assignment at times. Respondent 5 stated, "Somethings I have to remind students we are all different and this student is working on something different than you. I expect all of you to do your best. Your best is different than someone else's best." Teacher 3 indicated she, "used a scaffolding approach, make sure everyone gets the right amount of time".

Increased Positive Connectedness. A theme that occurred among four of the respondents was that positive reinforcement was paired with connection – whether connection with the teacher or with other students or both. "Rather than giving stars or

points and earned treats or trinkets, the positive reinforcement is related to time spent

with others" stated one respondent. Respondent 8 reported,

> I am fortunate to work in a district where relationships are so important. The
> relationship between the student and I, the other students and the families have to
> come first. Without the relationship, many of these children could care less about
> academics, they are too busy just trying to survive.

Changes in Classroom Management & Instructional Practices

All nine teachers reported they have changed their classroom management

practices as seen in Table 9. Trauma-informed schools and TIEP are much different than

schools without these training and concepts. A typical classroom is focused on the

teacher and the subject the teacher is teaching. A trauma informed school sees the child

as a whole person with a history and recognizing that due to the Polyvagal nerve and the

autonomic response system, learning cannot occur if a child's basic needs are not met or

if they are emotionally dysregulated (Cavanaugh, 2016; Stateman-Weil, 2015; Stokes &

Brunzell, 2019). Table 9 shows some of the primary changes teachers have made in their

classrooms and instructional practices.

Table 9

Changes in Classroom Management & Instructional Practices

Theme	Respondents	Frequency
Flexibility (in routines, expectations, etc.)	8	28
Student (**self-regulation**) spaces & Activities	6	17
Physical environment	5	11
Building a team/Building relationships/tribe	5	14
Differentiation - support modifications	5	11

Flexibility. The concept flexibility was stated 28 times. One respondent reported, "I allow for a lot more flexibility with students. I still have limits, but I am less ridged and if a lesson is not going well, I will change course and say OK, let's take a movement break." Another stated, "If a student is struggling with an assignment or shutting down, rather than continue to push, I am flexible and will say ok let's take a 'brain break' or do a relaxation exercise." Respondent 9 reported,

> The district is more flexible as well, if a student is struggling at one school and for whatever reason interventions to assist that child are not working, the teachers, parents and administration will discuss if shifting the student to a different classroom or different school to better meet that child's needs.

Physical Environment, Self-Regulation Spaces & Activities. Six of the teachers reported having a space in the room that is calming and soothing where students could go to calm-down and regulate their emotions if needed. The teachers reported that these areas included sensory type items to help regulate emotions, such as "fidgets", stuffed animals, comfy blankets or beanbags, headphones with quiet music, coloring items, books on emotions, et cetera. These areas are not used as punishments but instead students can choose to use the area to help regulate their overwhelming emotions.

> In order to make sure we are meeting the students' basic needs for optimal learning; I encourage the students to drink lots of water while in class and even allow the eating of some healthy non-processed foods. I try to provide space for them to learn what their needs are, what's coming up for them and what will help them moderate those needs or meet those needs within reason.

stated respondent 1. Another respondent stated, "I encourage the students to self-regulate and if they need to, we have a quiet area in the room where they can go and sit or draw or read to calm down." And another, "I give the students choices, sometimes I put up stations around the room and they can select which activity is best for them in the moment given their emotional state." A trauma informed classroom according to experts in trauma informed educational practices focuses on safety, consistency, and teaching students to self-regulate their emotions in healthy productive ways. This involves setting up the classroom in a manner that is both inviting and soothing (Cavanaugh, 2016; Frey et al., 2020; Jennings, 2019; Stateman-Weil, 2015; Stokes & Brunzell, 2019). Five of the teachers reported the importance of making sure the physical environment was welcoming and conducive to seeming calm and relaxing. These five teachers also mentioned incorporating movement into the physical environment.

> I provide a structure for the kids to take physical movement breaks as a group and while I provide structure and routine, I have learned to pay attention to the group and there are times when we need to stop everything and take a movement break.

"It is important to structure the room to allow for more movement." "It changes your whole perspective as to how to approach curriculum. You have more choices, and they have choices. They seem to always make the right choice without any power struggle".

Building a Team/Building Relationships/Developing a Tribe. Five of the teachers reported the importance of building relationships with the students. Five of the teachers reported the importance of developing the classroom comradery as a team or tribe. Some of the statements included "Not only does this give every child a sense of belonging, but it helps them recognize that they are an important member of the team"

119

and "Each and every person and relationship in the classroom is important". All of the literature reviewed for this research indicated that a trauma informed classroom takes into consideration two primary concepts, emotional self-regulation and attachment or relationships/connections. As mentioned before, without the building of safe, trusting, and respectful relationships, other interventions which might be considered trauma informed are not found to be helpful (Minahan, 2019; Post et al., 2020).

Differentiation / Support Modifications. Like flexibility, a trauma informed teacher needs to be able to recognize the importance of differentiation and that one size does not fit all when it comes to learning and the ability to learn (Chafoueas et al., 2016). Five of the teachers spoke of differentiation and modifying assignments or the classroom to accommodate individual learning as well as safety needs.

Since the trainings, I have been more willing to make individual modifications for students as needed. I will adapt an assignment to meet the student where they are at. I understand now that some students will need to slowly build their threshold for struggle and frustration. Thus, I chunk it, and modify the assignment to provide support as needed.

Another teacher reported,

Differentiation is a big thing and I enjoy doing it. I always have alternatives available, so they have choices. If a student has difficulty in certain subjects, I try to figure out what they need... what is it that they are missing, the gap, to implement something different for them.

Teacher 4 reported,

We get together as a team to brainstorm and get ideas to help this child be more

successful. It could be recourses for the child or their family. Or it could be an

adjustment the assignment or in the communication process." Another stated, "I

give more choices now and we take a lot of breaks when needed.

Student Behaviors Indicating Resiliency

Resiliency as defined by this paper as the ability to bounce back or repair; the

ability to recover from adversity. When people are resilient, they have an array of

positive coping skills to utilize in times of adversity or difficulty. Eight of the nine

teachers reported student behaviors had changed since the trainings and since

implementing trauma informed educational practices. Table 10 outlines some of the

many signs that teachers recognized as signs of resiliency. Eight of the nine indicated

there was a focus on resiliency in the trainings and one reported they did not remember.

All nine respondents stated that they believe the practices implemented, have helped to

build student resiliency. All the teachers were able to report seeing many student

behaviors currently, which indicate the students have gained resiliency skills since

implementing trauma informed practices at EESD. All nine teachers indicated they had

instituted many tools from the trainings they attended in order to build student resiliency.

All of the teachers believed that some of the student resiliency comes about from the

relationships that the teachers build with the students. One teacher reported, "one thing

the students with ACEs tend to struggle with is anger and how to appropriately express

and deal with anger and regulate their overwhelming emotions. When a student says they

are sorry I ask them, "what are you sorry for" or "why don't you tell me what happened

and how you might deal with it better next time", I help guide their words because they don't always know what to say". Figure 10

Table 10

Student Behaviors Indicating Resiliency

	Respondents	Frequency
Self-Regulation-Ability to regulate emotion & Self-sooth	9	22
Positive relationships with others	8	17
Problem solving skills evident	5	10
Shows self-control	4	8
Ability to master challenges when believed they couldn't	3	6
Able to follow through	3	3

Self-Regulation Skills. Self-regulation is a key component of resiliency. Students who know how to down-regulate intense emotions are much more able to learn and be able to cope with adversity (Feder et al., 2019). Self-regulation skills were mentioned a total of 22 times by all nine respondents. One teacher said,

> I have seen kids start to self-monitor and ask for both physical and mental breaks. Students have begun to be aware of when they have or are going to 'flip their lid', meaning become angry or upset [and now] they are able to self-intervene and make a different choice and stay with things longer. I have also seen kids who started out on an activity that would completely cause them to freeze from anxiety, usually during testing and they learn to use self-regulation skills for managing that anxiety and they can get themselves unstuck.

Another teacher indicated,

> I can tell them, you can make a choice you could chose to not do the activity
>
> which would result in these consequences, or you could choose to do the activity
>
> and then these following outcomes might happen. The choice is yours. It gives
>
> them a since of independence and ends the power struggle.

"If a student is at their wits end on an assignment, I can let them take a break and work
with them a little later individually.

Positive Relationships with Others. As stated before, relationships are a key
component to trauma informed practices. The ability to build and maintain relationships
is a sign of resiliency. Teacher 1 reported, "Since building a relationship with each child,
I also notice students are getting along better in general." Some of the teachers
mentioned positive relationships with others as signs that they were seeing resiliency in
their students. "It seems the students become less angry and oppositional. They have
better relationships with their peers and with me, not only as the teacher, but also a
person they can come to." Another teacher reported,

> They feel less stressed. Because they know they have an adult there that will
>
> jump in and help them if they need it. I try to be one positive relationship they
>
> can count on. They know I have got their back.

One teacher told the story of a boy who was running out of his classrooms all the time
and just fighting with his teachers,

> But when he came to our class, we started working with him getting in getting
>
> him into the classroom and letting him know how happy we were to have him in
>
> our class. We built a positive relationship with him and made the classroom a

safe place where he was welcomed and was seen as an important member of the classroom community. He was, eventually, able to return to mainstream education.

Problem-Solving Skills Evident. Five of the teachers saw an increase in problem solving skills and this was mentioned 10 times during interviews. The ability to solve problems is an important sign of resiliency. One teacher told the following story.

One girl struggled for the last two years and frequently did not complete work and was mean and said hurtful things to other students and made disturbing artwork. She told adults on campus she wanted to harm them. I started the school year by making her my buddy. I used her as a model student. I gave her jobs to do and spent time with her, her attitude slowly started to change. When she would start to slide back into old ways, I would just say, 'what's the choice you want to make, to make this better?'. She would look at me funny and I would say, 'because you are making a choice right now. And right now, you're choosing to be unkind. Is that the choice you want to make?'. She would always choose to change her behavior.

Shows Self-Control. Similar to the ability to self-regulate emotions, not only must one learn to regulate emotions, but someone who is resilient can also control their emotions and behaviors (Southwick et al., 2014) Respondent's reported,

I am more tolerant of behaviors, within reason, and because of that I think the kids are more tolerant. Students are less reactive. I am less reactive. I allow the student to own their feelings and chose how they are going to express that feeling until they are ready to choose to do something different. And I think because I

am not agitated or iterated about the behavior the rest of the class is like well if

she is ok with it, I guess it is ok. Everyone has gotten a lot better at ignoring

negative behavior. They are modeling their behavior after my behavior.

There was one student, he was very challenging, he would crawl out of his desk

and run out of the room. But as we [teacher and other school personnel] began to

build a relationship with him and other students built a relationship with him, I

began to see positive change. It was slow change, but it was change. His outbursts

decreased. He showed more self-controlled. I had paired him with a mentor

student. He felt he belonged and had a role in the classroom.

Effectiveness of the Trainings

All the teachers felt they had gained new skills (see Table 11). What the table

indicates is that most of the teachers felt the training was relevant to them and they

gained valuable tools for working with their students.

Table 11

What Teachers Feel They Gained Most from the Trainings

What Teachers Gained	# of Respondents	Frequency
Tools and skills	9	18
Importance of **relationships**	6	11
Knowing the **science behind the behaviors**	4	4
Importance of providing **safe** place for kids **(Safety)**	3	3

Importance of Relationships. Six teachers discussed that they now truly know

and understand the importance of building a personal relationship with each and every

child. One teacher stated,

I am fortunate to work in a district that relationships are so important. You know those relationships have to come first. You have to reach out to those kids. You have to let them learn and see they can trust you. That's a huge thing and it's not something they teach you in your credentialing program. They don't teach you how to build the relationship.

Another teacher reported,

You need to build that personal relationship with each kid and their parents (if you can). You need a personal relationship; they need to know that you care about them, that you see them as human beings. They need to know you're going to be there for them and that they can come talk to you if they need to.

Science Behind the Behaviors. Four teachers discussed that they now know and understanding the science behind student behaviors. They reported this was very important to them and wished they had learned these concepts when attending school. They indicated they had learned the different learning styles and universal design, "but until the trainings on the impact of trauma and stress on the brain, I never thought to consider what might be going on with a kid mentally and how that might be impacting their behavior in the moment or how to help them regulate those feelings for a better outcome. I never considered that, I just thought they were trying to get attention or were just disrespectful or willful."

Safe Place/Safety. Another three teachers discussed the importance of making the classroom "a safe place for all students" as well as the "importance of being a safe person who can stay regulated under stress." "I want the students to feel safe and trusted.

I want them to have some power and I truly listen to them. I have lightened up on discipline. We talk about things more."

Kids need to know you are honest and trustworthy, a safe person in a safe environment. My expectation is that you become a wonderful adult. So, in whatever way, wherever they are, they are in a safe place to take steps to get there, however small, however repetitive they are, we have to be able to provide that space.

The teachers interviewed were asked about the effectiveness of the trainings they had attended within the Enterprise Elementary School District. Table 12 shows the informed practices trainings that teachers felt were effective or not. Eight of the nine indicated that the trainings were effective. One felt the training was not realistic to the middle school population. The teacher who reported the trainings were ineffective reported that it was not so much the trainings, but the skills and techniques were not supported by the excessive workload and the administrative policies.

Table 12

Trainings as Effective or Ineffective

	Number of Responses	Frequency
Effective	8	
Tools – skills were effective		6
Relevant for the teachers – effective		5
Ineffective	1	
Admin policies not supportive		1
Excessive workload		1

Need for Additional Training

Eight of the nine teachers felt that there should be additional training, both for those in teacher training programs and for current teachers both new and seasoned. Table 13 shows that six of the teachers felt trauma informed practices should be taught regularly. Eight of the nine reported that all new teachers should get this training and that it should be taught in the credentialling programs. One teacher stated,

> I wish I had known this stuff before I stepped a foot into a classroom. Instead, I learned 10 years later. I think I am a better teacher now, less into controlling behavior and it seems the students actually behave better. They know they can have feelings and the behavior they chose to express those feelings is up to them and there are positive and negative possible outcomes.

Six of the teachers reported 12 times that they wanted more training and 2 teachers stated they wished there was some practical application training in the actual classroom.

Table 13

Need for Additional Training

	Respondents	Frequency
Additional trainings	8	
Pedagogy - credentialing program courses	8	9
More training & timely refresher training	6	12
Practical applications in the classroom	2	2

Summary of Qualitative Findings for Research Question 2

Table 14 is a summary of the qualitative findings for Research Question 2. The qualitative data points to the fact that the nine teachers in EESD did perceive the effectiveness of ACE and TIEP trainings in changing their classroom practices to support

the resiliency of students who had experienced trauma. Skills and practices that the

teachers gained included the importance of building the teacher/student relationship and

utilizing relationship building communication; instituting the skills learned in *Second*

Step & Capturing Kids Hearts programs; adjusting expectations based on the students'

abilities and circumstances as well as idealizing and modifying supports as needed per

the student. Some of the behaviors that the 9 teachers reportedly saw change toward

increased student resiliency were an increased ability for students to regulate emotions

and self sooth; an increase in positive relationships with others; an increase in problem

solving skills and an increase in self-control. All of the teachers indicated they had

gained skills and tools to better respond to and interact with traumatized students. Eight

of the nine indicated that they wanted more of this type of training. One teacher stated, "I

just want more information and ideas for how best to help these students be successful.

More just need more of it so we don't forget and return to the old ways of teaching".

Table 14

Summary of Qualitative Findings for Research Question 2

Theme	Respondents	Frequencies
Changes to Classroom Practices		
Utilizing Relationship Building Communication techniques	9	13
Instituting social and emotional learning curriculum into the classroom	8	28
Adjusting expectations/goals based on student and/or circumstances	4	12
Individualize education to student needs	4	10
Increase Positive Connection	4	6
Physical movement techniques	4	4
Changes in Classroom Management & Instructional Practices		
Flexibility (in routines, expectations, etc.)	8	28
Student (**self-regulation**) spaces & Activities	6	17
Physical environment & movement	5	11

Building a team/Building relationships/tribe	5	14
Differentiation - support modifications	5	11
Student Behaviors Indicating Resiliency		
Self-Regulation-Ability to regulate emotion & Self-sooth	9	22
Positive relationships with others	8	17
Problem solving skills evident	5	10
Shows self-control	4	4
What Teachers Gained from Trainings		
Gained tools and skills	9	18
Importance of **relationships**	6	11
Knowing the **science behind the behaviors**	4	4
Effectiveness of the Trainings		
Tools and Skills	7	8
Relevant for Teachers	7	7
Need for Additional Trainings		
New Teacher Training & Credentialing programs	8	9
More training ongoing & timely refresher training	6	12

Impact of the COVID -19 Pandemic

Since this research was conducted during the COVID-19 pandemic of 2020, the

teachers were asked about the impact of COVID-19 and the pandemic protocols on the

students and the learning environment as a result of the pandemic. Due to COVID-19 the

end of the 2019/2020 school year and the bulk of the 2020/2021 school year, classes were

held online or in a hybrid classroom with half the class in the classroom to allow for

social distancing. The American Psychological Association (2019) has identified signs

and symptoms of stress in children from infancy to 18 years of age. McKegney, (2021)

discusses the impact that COVID-19 has had on youth depending on the stress of their

caretakers/parents/teachers and those around them including exposure to the news. The

analysis identified 3 impacts perceived by the teachers.

Table 15

Impact of COVID-19

Theme	Respondents	Frequency
High levels of stress	9	20
Underperform academically in home environments	7	7
Loss of one-on-one contact with students	5	5

High Levels of Stress. Table 15 indicates that all nine teachers felt there were extremely high levels of stress among both themselves and the students. They reported that there were increased levels of stress in the students which manifested in many different ways from disappearing altogether for the school year, to acting out in virtual classrooms or becoming agitated or irritated more easily. Multiple respondents stated that for most students, especially the younger ones, virtual learning was a challenge and generally not productive. "It was a challenge for me too, I have never taught or been trained to teach virtually."

Underperforming Students. Seven of the nine reported that the students underperformed during COVID-19. "I really had to lower my expectations of what students could and could not do virtually." "It was very difficult to make sure the students were learning the concepts. Most things sent home never came back to me." "Last Spring and this year have been mostly an academic loss it seems. I tried my best, but without the support from home to get the work done, for many it didn't get done."

Loss of One-to-One Contact. The loss of the one-to-one contact was also seen as problematic and perceived to have contributed to lack of academic progress for some of the students throughout the pandemic. "It was really hard to feel connected to the kids when we were fully virtual. Some wouldn't even attend, and some would turn off their

video." Another stated, "it is really difficult to capture a first graders attention online. I can't just 'give them the look' as I can in the classroom and calling students out in front of everyone isn't effective either."

Summary

The purpose of this convergent mixed methods case study was to determine if ACE and TIEP trainings were effective in changing teachers attitudes regarding problematic student behavior and learning problems within the Enterprise Elementary School District. A secondary purpose was to determine if the change in teachers' attitudes may build student resiliency. In accordance with the mixed methods design, a link to the Attitudes Regarding Trauma Informed Care Survey was sent to all 188 teachers in Enterprise Elementary School District. Fifty-nine teachers completed the survey. While the survey was offered for completion, the researcher sent an e-mail asking for volunteers to participate in individual interview process. Ten teachers were interviewed using a script with 10 probing questions to help answer the two research questions. The interviews allowed the researcher to further explore the teacher attitudes and classroom practices. One interview was accidentally erased and could not be used for the purposes of the research.

The quantitative data indicated that overall, the 59 teachers who took the survey staff attitudes are supportive of trauma informed educational practices and utilizing information learned about how adverse childhood experiences or trauma impact students. All answers were above 50% with the highest at 61% in the area of empathy versus control. This indicates that the majority of those who answered the survey now viewed

teaching their students with more empathy and less a need to try and control student behavior.

The qualitative data indicated that all of the teachers interviewed had favorable attitudes toward the ACE's and TIEP trainings. The data also indicates that the trainings not only changed attitudes but also changed education practices and increased student resiliency. The qualitative data also suggests that the pandemic of 2020 made education difficult and traumatic for all, teachers, parents and students alike and resulted in not only high stress, but students underperforming and the loss of the 1:1 connection between teacher and students.

CHAPTER V: FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Chapter V provides a summary of the purpose, research questions, methodology, data collection procedures and population sample. The demographic data of the teachers in Shasta County's Enterprise Elementary School District are also summarized. In addition, the chapter presents major findings, unexpected findings, and conclusions. Chapter V ends with implications for action, recommendations for future research and concluding remarks and reflections.

Purpose Statement

The purpose of this convergent parallel design mixed methods case study was to determine how training on Adverse Childhood Experiences (ACE) and Trauma-Informed Educational Practices (TIEP) affected the attitudes of teachers in Enterprise Elementary School District towards (with) students who had experienced ACE and/or trauma. A further purpose of this study was to understand if teachers in Enterprise Elementary School District perceived the training was effective in changing their classroom practices to support the resiliency of students who had experienced ACEs.

Research Questions

1. To what extent do teachers in Enterprise Elementary School District indicate the trainings on ACEs & TIEPs affected their attitudes towards students who had experienced ACEs?

2. What were the perceptions of teachers in Enterprise Elementary School District on the effectiveness of ACEs & TIEP trainings in changing their classroom practices to support the resiliency of students who had experienced ACEs?

Research Methods and Data Collection Procedures

This research study was a convergent parallel mixed method case study utilizing qualitative and quantitative research methods. The purpose of a case study is to investigate a phenomenon in more depth than a typical quantitative or qualitative study (Baxter & Jack, 2008). Case studies according to Tetnowski (2015), are used to "investigate a contemporary phenomenon within its real-life context.   Baxter and Jack (2008) state that case studies can be used to inform professional practice or decision/policy making. This study focused on a single significant case (Enterprise Elementary School District) as an example of the phenomena of interest (ACE and TIEP trainings). According to McMillan and Schumacher (2010), a case study is the in-depth exploration of a unique system to gain insight into a specific theme. "Case studies provide a more complete understanding of complex situations, identify unintended consequences, and examine the process of policy implementation" (McMillan & Schumacher, 2010, p. 440).

The mixed methods portion of the study, the Convergent Parallel Design formerly known as the Triangulation Design, was used in order to collect both qualitative data through a survey offered to all district teachers and concurrently to qualitatively interview participants to gain a more in-depth understanding of their attitudes and perceptions on ACEs, TIC, and resiliency. According to Creswell & Clark (2017), the convergent Parallel design is the most well-known of the mixed method approaches and was originally known as the "triangulation design where two different methods were used to obtain triangulated results about a single topic" (p. 77).   This method utilizes the strengths of both qualitative and qualitative methods. This method offers the opportunity

to compare the data from both methods for the purposes of validation. There are many benefits for utilizing the convergent design such as being an efficient way of collecting data as both sets of data are collected at the same time independently (Creswell & Clark, 2017; McMillan & Schumacher, 2010). Another benefit is data analysis of the two data sets can be used to compare, connect and contrast data for further clarity and accuracy. The researcher analyses the data both separately and together and seeks convergence, corroboration, collaboration and comparisons (Schoonenboom & Johnson, 2017; see Figure 12).

In this study, the quantitative data were collected in numeric form using a survey (see Appendix B). This survey was sent out to all 188 elementary teachers in Enterprise Elementary School District. While waiting for the results of the survey, 10 volunteer teachers were selected and interviewed to gain their perceptions as to whether these practices improved the resiliency of the students who had experienced ACEs. Conducting both the qualitative and the quantitative research at the same time, was time efficient and allowed the researcher to compare and contrast the data results to determine patterns and meaning.

Quantitative research designs assist with decreasing researcher bias and increasing objectivity of the research (McMillan & Schumacher, 2010). This was a nonexperimental quantitative design utilizing a survey (see Appendix B). According to McMillan and Schumacher (2010), "Nonexperimental designs describe phenomena and examine relationships between different phenomena without any manipulation of conditions that are experienced" (p. 22). Surveys are a form of qualitative, nonexperiential design. Surveys are utilized to identify attitudes and attitudes of the

sample. The survey used in this study is the Attitudes Related to Trauma-Informed Care Scale (ARTIC) Scale developed by The Trauma Stress Institute of Klingberg Family Centers (see Appendix B).

The purpose of the qualitative research component is to gain an understanding of the personal views of those surveyed, as qualitative research is an interactive method focused on the lived experience of those surveyed (McMillan & Schumacher, 2010). Qualitative research according to Patton (2015) is used to gain meaning and understand the perceptions and experience of those interviewed. The purpose of the qualitative method is to gain an understanding of the results of the quantitative results from the survey. In qualitative research, data is collected via interviews and then the researcher identifies themes, and these themes then assist in finding meaning and narrative behind the data collected in the survey and quantitative portion of the research (Patton, 2015). In this study, interviews were used to identify the perceptions of the teachers regarding the effectiveness of trainings in ACE and TIEP in improving the resiliency of the students and thus improving the classroom environment. One of the benefits of the convergent design is the method generally can decrease the effects of researcher bias that can sometimes be found in qualitative research and added qualitative interviews can increase the reliability of the quantitative research (Creswell & Clark, 2017). In the convergent design, the data are collected through the survey for the quantitative portion of the study and then this data are analyzed through descriptive and inferential statistics (Creswell & Clark, 2017).

Population

A population is a group of individual participants that meet a certain criterion. The population of a study is a group of persons who have characteristics in common which separate them from other groups (McMillan & Schumacher, 2010). The general population for this study was elementary teachers in California who have been trained in ACEs and TIEP. According to the NCES, there were an estimated 3.6 million full time equivalent elementary and secondary teachers in 2017 (NCES, 2019). During the 2018-19 school year there were 148,288 elementary teachers in California, serving in 5887 elementary schools, with a total enrollment of 3,010,015 students (NCES, 2019). Elementary school teachers are likely to encounter students with ACEs and subsequently have the opportunity to intervene with students during critical brain developmental periods (Post et al., 2020). In recent years, school districts in California have offered training in Trauma-Informed Educational Practices with elementary teachers, for the purpose of identifying and implementing instructional practices that help students develop skills to improve their behaviors and academic performance (California Department of Education, 2019). While it is known that some schools have offered ACEs & TIEP training for teachers in California, no data exists on the extent of the training offered. Further, there was no information found on whether the trainings were required or voluntary for teachers to attend or if the teachers gained knowledge or skills from the trainings. Therefore, the population selected for this study was elementary school teachers in California who have participated in ACE related TIEP trainings.

Target Population

The target population of this study was elementary teachers in Enterprise Elementary School District, located in Redding California. The Enterprise School District is the only known school district in Shasta County to require training in ACEs and training in TIEP for all of their elementary teachers. The Shasta County Public Health Department began training teachers on trauma informed care beginning in 2010. The Enterprise School District began training in ACE and TIEP around 2015.

The Enterprise Elementary School District is made up of nine schools, with a total enrolment of 3,781 students and approximately 180 full time equivalent credentialed teachers. The district operates four K through 5 schools, two K through 8 schools, one 6 through 8 school, one community day school K through 8, and one K through 12 school.

According to the superintendent the district is committed to providing emotionally safe environments for student learning. The mission at Enterprise Elementary School District is: *Empowering every child, every day, to create a better world*. To support the implementation of trauma-informed educational practices, the district provided social and emotional education utilizing a team of school counselors who collaborated with the teachers to provide techniques and skills to assist students and teachers in managing emotions and building prosocial skills. In addition, each school has a mental health professional assigned to the school to assist the students and the teachers.

Sample

The sample includes exactly who was studied. This case study utilized the approach of "sampling an exemplar of phenomenon of interest" (Patton, 2015). Patton (2015) described this method as providing, insights that stand alone as important. The

Enterprise Elementary School Teachers were selected as the exemplars, given the additional investment and trainings given to the teachers to support children struggling with the impacts of trauma or adverse childhood experiences. This study also utilized a combination of convenience, purposeful and random sampling. Convenience and purposeful sampling occur when subjects are selected based on being easily accessible and to best meet the needs of the study (McMillan & Schumacher, 2010).

The sample size for the quantitative portion of this study was 59 participants, who represented 31% of the target population. While there is no agreement in the literature regarding sufficient sample size for convergent mixed methods studies, it is appropriate to select a sample that will allow for a sufficient number to answer the research questions and gain insights from the participants (Creswell, 2006). Creswell (2006) indicated that, "The sample needs to be large enough for statistical procedures to be used that will make it possible for the researcher to draw inferences with some confidence that the sample reflects the characteristics of the entire population" (p. 112) Triangulation of the results of the convergent mixed methods design with 59 participants who completed the quantitative portion of the study combined with individuals who completed interviews was determined by the researcher to be of sufficient size to gain insights into the case study population of 188.

The sample size for the interview portion of the study consisted of 10 teachers from the Enterprise Elementary School District who volunteered to be interviewed (1 interview recording was damaged, thus only 9 interviews were used). Patton (2015) stated there are no rules for sample size in qualitative studies; however, the size needs to be representative of the population being studied. However, in qualitative studies, more

interviews do not necessarily mean better data, due to the fact the data can reach a saturation point where the data becomes repetitive (Vasileiou et al., 2018).

Sample Demographic Data

For the Quantitative portion of the study, the survey was sent to 188 teachers in Enterprise Elementary School District. Of the 188, 59 completed the survey for a response rate of 31.4%. Demographic data for the ARTIC Survey were unavailable, as the Traumatic Stress Institute (TSI) does not release the demographic information for the purposes of maintaining strict confidentiality.

For the qualitative portion of the study there were nine participants. Of the participants participating in the interviews there were one male and eight females. Two of the interview participants had master's degrees and seven had bachelor's degrees (see Table 1). Eight of the interviewees had more than 6 years of teaching experience with 8 of them also having 6 or more years teaching experience in EESD. Seven of the teachers were older than 35 years.

Major Findings

Finding 1: Positive Teacher Attitudes Developed in Response to the ACEs & TIEP Trainings

Teachers developed positive attitudes in response to the ACE and TIEP trainings offered by the Enterprise Elementary School District. The ARTIC Scale survey indicated that the majority of teachers at EESD who completed the survey responded positively to the trauma-informed educational practices they have been learning and practicing over the last several years. The qualitative findings also indicated that the teachers' attitudes were changed as they reported an increased ability to recognize behaviors as symptoms

141

of something else, usually trauma or stressors; not to personalize student behavior but instead to see it as a symptom of something going on with the student; and an increase in compassion and tolerance when responding. Shooks, (2019) and Hinton-Pollard (2020), both conducted research on teacher efficacy and trauma informed trainings and both found that most teachers responded positively to trainings in trauma informed educational practices and adverse childhood experiences the more they receive training and support at a whole school / whole district level. Both studies point to the fact that one simple training will not necessarily evoke change, but there needs to be a whole school approach with a complete school mindset shift towards being trauma informed in both personnel and administration as well as in the classroom.

Finding 2: Confidence in Trauma Informed Educational Skills

Teachers reported gaining confidence in the understanding and use of trauma-informed educational skills in their classrooms. Teachers indicated positive reactions in the survey to trauma-informed educational skills and reported they use the concepts in their classrooms during the qualitative interviews. About two-thirds or 67% of the teachers indicated confidence in their abilities to effectively use trauma informed educational practices on the ARTIC. The level of confidence also was related to the number of years teaching and attending trainings. Newer teachers (and teachers newer to the district) were less confident. McIntyre et al. (2019) found that the more trainings teachers attended that provided practical application in the classroom the greater the learning outcomes for teachers. All nine teachers reported attending at least one training in ACEs and/or TIEP. The nine teachers had a combined total of 59 ACE or TIEP/TIC trainings. The number of trainings they have attended may reflect on the extent of their

positive attitudes and confidence regarding trauma-informed practices. The fact that the two-thirds of the teachers felt at least somewhat confident shows that it is likely that these teachers were mostly from schools where trauma-informed pedagogy has been completely embraced and both Shooks (2019) and Hinton-Pollard (2020) studies lead this researcher to believe that whichever schools the nine interview participants and the 59 survey participants teach at, follow-up and ongoing support for TIEP is likely because they felt confident in their ability to understand ACEs and utilize TIEP. Larsen and Samdal (2012) reported that positive feelings of self-efficacy in Second Step © interventions resulted in positive student outcomes.

Finding 3: Assumptions Prior to Training

Teachers indicated that prior to the ACE & TIEP trainings they had made faulty assumptions about children with problematic behaviors. Some of the assumptions they had made included believing that children were willfully being disobedient or that students would refuse to do assignments just to get to the teacher. Teachers reported that prior to the trainings they personalized student behaviors, believing that students were maliciously doing something to them i.e., refusing to do an assignment, being oppositional or disruptive. Helen Collins Sitler (2009) found that until teachers learn about the impact of adverse child experiences and stress on the brain and how it impacts both behavior and learning, they often view behavior as more volitional, oppositional, or lazy. Sitler indicates that, "the task is to teach with a pedagogy of awareness that provides ongoing support for the needs of all learners (p. 120)".

Finding 4: Changes in Classroom Practices Resulted in Improved Student Behaviors

Teachers perceived that the knowledge and skills they learned in ACE's and TIEP trainings assisted them in making changes with their classrooms that resulted in positive changes in student behaviors. The student behaviors that were most often noted by the teachers included four main skills. The number one and most frequently reported in the interviews was that teachers noticed an increase in student use of self-regulation skills to manage overwhelming feelings. Thus, teachers saw an increase in students being able to effectively calm themselves down when overwhelmed with emotions rather than acting out improperly. Another reported change was an increase in positive relationships with others. Both the teacher and child relationship improved as did the student and student relationships. Teachers also reported an increase in problem solving skills and noted that students were much more able to think through problems rather than shutting down or impulsively act out. The Increases in self-control were evidenced by a decrease in impulsive acting out, decrease in anger outbursts and overall, out of control behavior. These four behaviors are related to improved student resiliency (Souers & Hall, p. 2018). These teachers' perceptions agree with what the current trends in literature are indicating. Numerous research articles have indicated that trauma informed teaching practices and trauma informed curriculums such as Second Step© and Capturing Kids Hearts © help children learn valuable ways to manage the overwhelming emotions from stress and trauma (Maynard, Farina, Dell & Kelly M., 2019; Dorado, Martinez, McArthur, Leibovitz, 2016; Kim, Crooks, Bax &Shokoohi, 2021).

Finding 5: Changes in General Classroom Practices Designed to Build Student Resiliency Resulted From the ACEs & TIEP Trainings

Teachers perceived it was important to incorporate changes in their general classroom practices following the ACEs & TIEP trainings to help build student resiliency. There were four primary changes identified by the nine teachers: utilizing relationship building communication and supportive connections; implementing social and emotional learning curriculums; adjusting and individualizing expectations and education; and incorporating movement techniques into the classroom. These four changes identified by the nine teachers all contribute to student resiliency as evidenced by the teachers' reports and by the literature.

Utilizing relationship building communication and increasing positive connections: Resilience enhancing positive relationships and social connections build resiliency (Arincorayan et al. 2017). Many studies have found that mental illness, addictions, domestic abuse, and poor coping occur mostly in social isolation and/or with negative relational connections (Padgett, D.K., Henwood, B., Abrams, C. & Drake, R.E. 2010; Jascz, 2019). Thus, it is important that students learn healthy positive relational skills and that they feel connected, cared about and important to at least one positive person in their life.

When instituting social and emotional learning interventions and/or curriculum within the classroom, the district trained the teachers and staff in both curriculums and the eight of the nine teachers interviewed reported the curriculums were highly useful and helpful. Both are social-emotional learning programs. These programs promote self-awareness, social awareness, self-management, relationship skills, and responsible

decision making (Flippen Group©, 2019).   The skills in these two programs are designed to promote connections and healthy coping which are signs of resiliency.

Teachers reported adjusting expectations and/or goals based on the student and their circumstances and individualizing education to meet student needs. Trauma-informed schools recognize the importance of individualized learning and borrowed concepts from special education pedagogy, recognizing that a one size education does not fit all. This goes beyond individual learning styles and includes being aware of students current and past living situations, current and past traumas, and current abilities (Fry et al., 2020).

Teachers are incorporating physical movement techniques into everyday practice. The Polyvagal Theory explains that trauma and stress impact the entire brain and body including all internal organs (Porges, 2006). Gordon (2021) indicates that movement, especially if it is carefully individualized, will give one a wide range of trauma healing psychological and physical benefits. He stated that, "Aerobic Exercise, the kind that requires oxygen and stimulates energy, increases stress-relieving, resiliency-building hormones depleted by trauma, including dopamine, serotonin and the endorphins." (p.1)

Finding 6: Changes in Classroom Management and Instructional Practices Contributed to Increased Student Resiliency

Teachers perceived the changes they made as a result of their trauma-informed trainings did contribute to student resiliency. The participants shared that the most important changes included: flexibility in routines and expectations; having student self-regulation spaces and activities; adjusting the physical environment; building a team or tribe in the classroom; and differentiation – support modifications.   Some of the signs of

resiliency that teachers reportedly were seeing in children were increased self-control, improved personal relationships with peers, ability to regulate emotions and ability to self-sooth as well as positively resolve conflict.

Finding 7: Teachers Gained Valuable Knowledge and Skills from the Trainings

Teachers perceived that as the result of the ACEs and TIEP trainings they gained valuable knowledge and skills to help student with ACEs build resiliency. They indicated that knowing the science behind the student behaviors resulting from ACEs was crucial for understanding what classroom interventions can be effective. ACEs related trainings begin with understanding the short-term and long-term effects of ACEs on students as a baseline for building effective and appropriate interventions.

Finding 8: Offer ACEs & TIEP Trainings on a Continuous Basis

All the teachers in the study indicated that more trainings should be offered by the school district on a continuing basis. The teachers said there should be training provided for both new and experienced teachers every year. In addition, the teachers believed that structured follow-up at the school site following trainings would help them to better implement the knowledge and skills they learned. The teachers also suggested the ACE's & TIEP training should be part of teacher credentialing programs to better equip new teachers to assist children with ACEs.

Other studies have concurred with these findings that training needs to occur during teacher education as well as continuously throughout their teaching careers (Ciganek, 2020; Hinton-Pollard, 2020; McIntyre et al., 2019; Shooks, 2019 McIntyre). One of the interview participants, a newer teacher stated,

I did not get the education I needed during my teacher education, and I had no

idea what to do with the "misbehaving" or "checked out" child who likely

experienced trauma. A high number of my students live in poverty or experience

domestic violence or are in foster care. My first couple of days were rough. I am

glad I started getting trained in ACE's and trauma responsive techniques.

<p align="center">Unexpected Finding</p>

Unexpected Finding: Students Reportedly were Better Behaved Upon Return to In-Person Schooling

An unexpected finding was that the students were better behaved upon returning

to the in-person classroom following distance learning due to COVID-19 pandemic

restrictions. Even though there were some acting out behaviors due to the stress of the

back and forth from distance learning to classroom learning, the teachers reported that

overall student behavior improved. According to the teachers, they perceived the

students' number one goal appeared to be to not get sent home from school, indicating a

preference for remaining in the classroom rather than return home to virtual learning.

Teachers also believed that the TIEPs that were in place prior to the pandemic, had also

given students valuable resiliency skills which contributed to the improved behavior.

<p align="center">Conclusions</p>

Conclusion 1: ACE & TIEP Trainings are Beneficial to Teachers

Based on the findings of this study, as supported by the literature, it is concluded

that ACE and TIEP trainings are beneficial to teachers. Teachers who participated in the

trainings gained valuable skills that helped not only students with histories of trauma, but

<p align="center">148</p>

all students, because of the teachers increased awareness of the *Why's* for behavior and in

creating a more inclusive, accepting and supportive classroom.   One teacher stated,

> The classroom just runs so much more smoothly since learning these skills. There
>
> are less outbursts and an increase in academic learning for all the students it
>
> seems. I can never get enough of this training as it really helps.

Hinton-Pollard in her 2020 research, reported that middle school teachers found the

trainings helpful in attempting to meet the needs of students with trauma. All the

teachers in this study felt positively about TIEP and felt the practices were beneficial to

the students and teachers themselves. Shooks found in her 2019 study that teachers, who

had multiple or ongoing trainings in ACE and TIEP, reported an increase in self-efficacy.

Kim et al. (2021) found that these trainings were not only beneficial in changing

attitudes, but when implemented in a *Whole School* or *Whole District* approach also

decreased teacher burnout.

Conclusion 2: A "Whole School" Approach to Training is effective in shifting

teachers attitudes towards students who have experienced ACEs.

Based on the findings of this study, as supported by the literature, it is concluded

that when teachers attend training designed in a whole school approach, they develop

positive attitudes regarding TIEP and helping students who have experienced ACEs. Both

the quantitative and qualitative data indicate that the trainings did result in positive

attitude changes in the teachers. The one teacher who did not feel the trainings were

realistic for middle school, had also reported that there was not a lot of support for

making the necessary changes to utilize the trauma informed approaches. For example,

there were too many students in the classroom and the techniques were not realistic given

the high number of students and the state academic standards and demands. The eight other teachers all felt their schools were highly supportive and felt positively about utilizing the trauma-informed approach, thus the more the whole school was onboard with being trauma informed the more positive the teachers felt. Also, it seems that the more trainings teachers attended the higher their self-efficacy with the TIEP. The teachers who felt the least confident in these practices were newer to teaching or newer to the district and ACEs and TIEP were new to them. Both Shooks (2019) and Hinton-Pollard (2020) similarly found that when all school personnel are trained in ACEs and TIEP and when administration is completely on board with the philosophy and concepts and backs the teachers up through ongoing support and policies and procedures, teacher satisfactions and feelings of self-efficacy improve. Stokes and Brunzell (2019) indicate that a three-tiered approach is important. Tier 1 – Teaching teachers how to assist students in increasing self-regulatory skills. Tier 2 – Increasing relational capacities both by training and providing opportunities for relationship-building (class size and supporting teachers in decreasing their own secondary trauma reactions through trauma informed supervision). And lastly Tier 3, increasing psychological resources for student wellbeing by providing coaching to teachers by professional counselors and providing mental health counseling to students.

Conclusion 3: TIEP's Develop Student Resiliency Skills

Based on the findings of this study, as supported by the literature, it is concluded that when teachers incorporate the TIEP instructional and classroom management practices into their classroom, then student resiliency improves. One thing was clear from the interviews; teachers' attitudes and behaviors were positively changed by the

trainings and both the attitude shift and the TIEP put into practice resulted in increased signs of resiliency in the students. This was evidenced by teachers recognizing student behaviors as symptoms of the student's feelings and that they stopped personalizing student behaviors as personal attacks toward the teacher. Teachers also reported an increase in their tolerance and ability to ignore acting out behavior (when safe to do so), as well as an increase in feelings of compassion and affection towards the students. The teachers who have been teaching at EESD for several years also reported that they saw increased signs of resiliency in the students, such as increased self-control and classroom teamwork. Numerous studies have been conducted in the last several years which show that when teachers who are equipped and supported in understanding ACEs and teaching using TIEP, student outcomes improve socially, emotionally, and academically (Blodgett & Lanigan, 2018; ; Murphey & Sacks, 2019; Phifer & Hull, 2016; Post et al., 2020).

Conclusion 4: Student's Social-Emotional Skills Improve when Teachers deeply understand the TIEP Strategies for Assisting Students in Overcoming the Effects of ACE.

Based on the findings of this study, as supported by the literature, it is concluded that when school districts commit to providing all teachers with training in ACE and TIEP, the new practices they acquire result in improved student social-emotional and academic skills. Teachers in this study reported that the trainings have been helpful, and that they gained valuable skills and knowledge. One teacher reported,

> I have learned to not take things students do or don't do personally. I find I hardly ever have to yell at the students and behaviors seem to be diffused before they escalate now, as long as I stay centered and calm myself.

Findings of other recent studies also had the same findings: ACE and TIEP should be taught to teachers in all schools to improve teacher skills in inclusive classroom management, compassion and understanding, utilizing movement, mindfulness sills, and non-punitive discipline which in turn improved student emotional and social skills as well as academic skills (Ciganek, 2020; Hinton-Pollard, 2020; McIntyre et al., 2019; Shooks, 2019).

Conclusion 5: Relational Skills Improve When Teachers Implement TIEP

Based on the findings of this study, as supported by the literature, it is concluded that when school districts provide training in ACE and TIEP, teacher-student relationships improve, which build the healthy relational skills students need for resiliency. Given that teachers who receive these trainings tend to have more compassion and understanding, they approach education from a more holistic and individualized manner, teacher-student relationships are improved. It is through these improved relationships that students learn to trust because they begin to learn that there are adults who are safe. It is through these relationships that students learn healthy relational skills. Students flourish when someone believes in them. Post et al. (2020) report that stable and consistent relationships are the number one buffer for toxic stress and traumatic experiences and that it is through caring and positive relationships are what bring about a lot of healing. Patricia Jennings (2019) states that teachers can become both a protective factor by having positive regard for their students and being a safe person for the student and they become role models of healthy social and emotional behavior for students to emulate. She also indicates that there are three critical dimensions to the teacher-student relationship. The first is that students learn to see that teachers are sensitive to their

needs and are supportive of them as individuals. The second is utilization, meaning that the student knows and becomes willing to rely on the teacher for help. And third, "A sense of relatedness is reflected in the extent to which students feel successful in their bids for belonging and acceptance" (Jennings, 2019, p. 13). The teacher-student relationship is fundamental in overcoming ACEs.

Conclusion 6: Teachers are Better Prepared to Assist Students as they Return to School

Based on the findings of this study, as supported by the literature, it is concluded that although the disruption caused by the COVID-19 pandemic has been traumatic for both students and teachers, the teachers increased understanding of ACEs and TIEP better prepared them to sensitively support students return to school. Both the findings in this study and in other studies conducted during the 2020 COVID-19 pandemic indicate that the 2020/2021 school year was a difficult and traumatic year for both students and teachers (Yasmin et al., 2021). Because of the tools these teachers had learned prior to COVID-19, as students returned from distance learning the teachers were able to recognize the symptoms of trauma such as spacing out, anxiousness, and difficulty sitting still. They were also able to mitigate the impact of the stress from being a child during a pandemic by utilizing their trauma informed teaching skills, such as implementing more *brain breaks* though movement, breathing and mindfulness activities which helped students regulate their emotions and anxieties. They also utilized their relationship building skills by allowing students to talk both individually and as a group about their fears, concerns and worries. The trusting supportive relationships the teachers had built with the students prior to the pandemic enabled children to return to the classroom with

minimal behavioral disruptions. Several of the teachers reported that students indicated they felt safe at school and did not want to return to distance learning.

<center>**Implications for Action**</center>

Implication 1: Superintendents & School Boards Should Implement ACE and TIEP Training for All Teachers in Their District

This body of research, as well as other recent research, indicate that giving teachers information about the impact of ACE and training in and implementing TIEP positively benefit both the teachers and the students (with or without ACEs). Bryant et al. (2020) report that at least 45% of the children in the United States have experienced at least one ACE. They also state that 61% of Black non-Hispanic and 51% of Hispanic children have experienced ACEs compared to 40% of Caucasian non-Hispanic children. The authors believe that the pandemic for many children is an additional ACE and may also have contributed to additional ACEs such as family financial stress, increased substance use, and an increase in domestic violence.   Thus, it is imperative that schools move in the direction of trauma informed education. Not to do so would put many students at risk for a lifetime of academic, mental, emotional, social, and health problems. Minahan (2019) identified several trauma informed teaching strategies. These strategies include:

- Expect unexpected responses (p. 31)
- Employ thoughtful interactions (p. 31)
- Be specific about relationship building (p. 32)
- Promote predictability and consistency (p. 32)
-

<center>154</center>

- Teach strategies to "change the channel", [i.e., self-regulation and self-soothing skills] (p. 33)

- Give supportive feedback to reduce negative thinking (p. 34)

- Give opportunities for students to feel competent (p. 34)

- Limit exclusionary practices and develop inclusion (p. 34)

- Foster a feeling of safety. (p. 35)

The teachers interviewed all reported implementing practices in their classroom that include these strategies and reported positive results. If the education system in the USA were to focus its energies into providing quality ACE training to all teachers and staff and require the implementation of TIEPs in all schools, then there would be an increase in student resiliency and protective factors for youth to develop into healthier and more adaptable adults. This could be done in multiple years through a phasing approach.

Implication 2: All Teacher Education Programs Should Include Information on ACEs, the Impact of Trauma on the Brain and Body, and Trauma-Informed Educational Practices

Several of the teachers indicated that they wish they had had this knowledge when they first started teaching as they felt unprepared for teaching students who were highly emotionally reactive. Teacher preparation programs for K-12 teachers require courses in Language Arts, Science, Mathematics, Humanities, etc., as well as Fundamentals of Teaching, Student Assessment, Instructional Planning, and Learning Methods (https://www.ctc.ca.gov/credentials/leaflets/single-multiple-subject-credentials-(cl-560c). Teachers generally receive education in Human or Child Development. However, until recently these courses were void of information regarding ACE, trauma and/or stress and

155

how they impact a student's individual emotional, social, and academic functioning. Given that as many as 46 million children living in the United States have likely experienced some form of trauma, it seems imperative that teachers be trained and ready to teach children who have experienced trauma (McIntyre et al., 2019). The better prepared teachers are for managing and mitigating the effects of trauma, the more successful these children are likely to be.

Implication 3: ACEs and TIEP Training Should be Required by the US Department of Education, the California Department of Education and the California Commission on Teacher Credentialing Program Standards and Requirements

It is recommended that education policies, regulations and practices be inclusive of trauma-informed educational practices. Requiring teachers to have ACE & TIEP training should be a requirement just as equity and inclusion training is required. As one of the middle school teachers reported that while the information was helpful, the teacher was unable to implement their learnings due to the large class size and state education standards. Duffy and Comly (2019) indicate that successful trauma-informed schools have a multi-layered trauma informed approach.

> At the Tier 1 level, components typically include revisions to disciplinary policies, social and emotional learning, schoolwide culturally responsive education about trauma, and parent and caregiver education and engagement. Group and individualized intensive supports (e.g., cognitive behavioral therapy and wraparound services) are based on screenings that identify students' exposure to trauma and fall under Tiers 2 and 3. Schools implementing trauma-informed

approaches often develop community partnerships and collaborate across child

services to coordinate care. (p. 5)

This would require both state and federal policy makers to recognize the importance of

promoting and supporting trauma-informed teachers and trauma-informed educational

practices. It would require providing educational funding to states, counties and districts

to ensure the feasibility of implementing these practices. It would require a review and

revision of the federal *Every Student Succeeds Act* legislation to recognize and include

the impact of trauma on learning and the need for trauma-informed schools to include

ongoing support for teachers, staff, parents or caregivers and administration to meet the

needs of every child in school.

Implication 4: Educate and Support Parents

While trauma-informed schools are important and provide important protective

factors to mitigate the impact of trauma, if a student returns home every night to a home

filled with stress, anger, and hostility or domestic violence, substance use, et cetera even

the most supportive trauma-informed teacher and school will have a limited impact. We

cannot put the burden all on teachers. It is imperative to help parents and caregivers.

Parenting is a stressful job and often parents who were raised with their own ACEs have

few positive parenting skills. Supporting parents by providing positive parenting

education programs as well as parent support groups and parent partners or parent

mentors who can support families where they are at, would lift some of the burden off

teachers and the school system. If schools work in tandem with community providers to

support parents, then the schools, the families, and the children will benefit. Johnson et

al. (2018) conducted a meta-analytic study of trauma-informed parenting interventions

and found promising results on child psychosocial outcomes. Imagine the possible resiliency skills of a young adult who experienced ACEs and then had trauma-informed teachers in a trauma-informed school paired with caregivers providing trauma-informed parenting skills in a trauma-informed community. With this approach it might be possible to decrease mental illness, addictions, and criminal behavior in the next generation.

Implication 5: Provide Ongoing Support to Teachers

Teaching students with ACEs is challenging work. Teachers who work with students with ACEs can often struggle, especially if they have their own histories of ACEs. They can also experience secondary or vicarious trauma. Secondary or vicarious trauma is the internal trauma response that happens to one when exposed to others trauma on a regular basis and many teachers also had their own ACEs growing up and continue unbeknownst to the teacher to react from a trauma response rather than a proactive compassionate resilient response. School districts need to provide support to these teachers to decrease the potential for burnout or inadvertently reacting negatively toward a student and essentially re-traumatizing him/her. Essary et al. (2020), identify some strategies for supporting teachers to include: increasing community resources available to them such as counseling, support groups, et cetera; lower class sizes; school counselors to debrief difficult student situations with; teaching teachers self-care and encouraging them to take time to take care of themselves; and school-based strategies such as creating awareness with teachers about what secondary trauma and ensuing burnout looks like and then proving support such as leave of absence policies that take into secondary trauma into account (see Table 16).

Table 16

Strategies for Prevention of Secondary Traumatic Stress Among Educators

Administrative Strategies	Personal Career Strategies	Home Self-Care
Release time & leave	Identify Limits and set them	Self-nurture
Safe physical space	Set long and short-term goals	Seek connection with others
Employee Assistance with psychotherapy support	Ongoing relevant continuing education	Exercise
Student ratio reduction	Engage in professional organizations for support	Maintain healthy eating habits
Paperwork Assistance / workload support	Foster positive collaboration opportunities	Self-Care Planning
Accessible regular and ongoing supervision	Ask for help when needed	Develop and participate in a balance of enjoyed activities
Trust Building /team building		
Access to natural light		
Provide Debriefing support groups and/or ongoing supportive discussion groups		

From "Secondary Traumatic Stress Among Educators," by J. N. Essary, L. Baraza, & R. J. Thurston, 2020, *Kappa Delta Pi Record*, *56*, p. 116 (https://doi.org/10.1080/00228958.2020.1770004). Reprinted with permission. See Appendix P.

Implication 6: School Boards Should Adopt Policies that Institutionalize and Provide Funding for Trainings in ACEs and TIEP in Schools

Often funding for these trainings and practices comes from grants (Jones, Smith & Smith, 2019). Grants generally have an end date. Ongoing sustainability of these trainings and educational practices is imperative to help traumatized students in an ongoing and meaningful way. Funds should be secured at a district level to support trauma-informed building/structural needs, social-emotional learning curriculum(s), related professional development, mental health support for students and staff, as well as partnering with other agencies such as County departments of public health and/or mental health as well as community-based organizations such as local Child Abuse Prevention Agencies.

Implication 7: Make TIEP & ACE Training a Condition of Receiving Federal and State Educational Grant Money

In order to ensure that principals and school districts are held accountable, and that Trauma-Informed Education becomes the norm, receipt of educational grant funding should require that districts implement these ACE & TIEP trainings and educational practices as a contingency for receiving such funding. If districts and schools had additional funding to implement these practices, then students in both rural and urban districts would have a better chance at having a successful educational experience. If districts and schools had additional funding for TIEP then, they would have the resources to successfully implement TIEP and develop whole child trauma-informed schools.

Implication 8: Create Collaborative Trauma Informed Communities

While this study focused on teachers and trauma-informed educational practices, building youth resiliency needs to be a community effort. Teachers cannot do it all. If only one person, entity or organization provides trauma-informed care to a traumatized youth, the likelihood for burnout is high and while the interventions are effective, they are not comprehensive for the greatest possible outcome.   In Shasta County Public Health and the County Office of Education have partnered to provide information and training on ACE and TIEP. Shasta County Public Health is training many organizations in the community including the YMCA, local medical establishments, the Child Abuse Prevention Council, local businesses, and many other organizations in the concepts of trauma, ACE, the trauma response, and ways to mitigate the impact of ACE and build resiliency. Yet industry silos continue to exist and many in the community still do not know about ACE, the trauma response in the brain and how it impacts the developing

child as well as adults. In communities like Shasta County where 40% of the population has experienced four or more ACE (compared to 16% of Californians as a whole), and has high substance abuse, homelessness, numerous high school dropouts, and a high number of children in out-of-home placements, it seems a community-wide collaborate education and intervention is needed (Shastastrongfamilies.org).

Recommendations for Further Research

Based on the findings and research of the study there are several recommendations for further research. Adverse Childhood Experiences and chronic stress are very much a part of the lives of many children and strategies are needed for helping these children build the resiliency skills that they will need to flourish in life rather than just struggle to survive. Because of this much more research is needed.

Recommendation 1: Replicate this study in other districts that are in rural California

It is recommended that, due to the small sample size, this mixed methods study be replicated on a much larger scale including multiple districts with higher participation rates for both the ARTIC and the interviews. The goal would be to see if the positive reactions, attitudes, and outcomes would be the same with an increased number of participants.   If this study were to be replicated at several other rural school districts throughout California, then it would be possible to discover if the findings in this study are an anomaly or not. It is important to know if the findings for EESD would be similar or different in other rural school districts.

Recommendation 2: Conduct a Comparative Study of Student Achievement

Records with Teacher Attitudes Found on the ARTIC

To see if the trainings are impacting student achievement, it is recommended that where possible student records are reviewed prior to implementing trauma informed educational practices and student records are reviewed following six months and then a year after implementation of the trauma informed teaching practices. The purpose of this research would be to see if the changes not only impacted classroom behavior and schoolwork completion, but if the results are also seen academically.

Recommendation 3: Conduct a Mixed Method Comparative Study of Districts

Where There are Collaborative Communities with the Local School Districts

It is recommended that studies be conducted comparing districts with no ACE or TIEP trainings, districts where there is not only ACE and TIEP training, but where districts where County and community agencies along with the schools/school districts collaborate together in a trauma-informed approach. The purpose of this study would be to compare ARTIC scores of teachers from the three different communities to see the difference in school personnel's attitudes towards students with ACEs and TIEP based on the differences in the three communities. This research could determine if students fair better with the "Whole Community Approach" or not.

Recommendation 4: Replicate This Study with a District Which has Adopted the

Whole School Approach Including Training, and Supporting Parents/Caregivers

Replicating this study in a school district where everyone involved in each child's life is trained in ACEs and Trauma Informed Care. It is this researchers' belief that if all who are involved in a student's life are trained in and can model, teach, and

162

reinforce resiliency and positive coping skills, the better the outcome for the student due to the consistency and ongoing support from all. It is likely that if the teacher is the only resource for support, progress and sustainability of the student's resiliency skills, then those skills are likely to be tenuous.

Recommendation 5: Conduct a Correlational Study That Compares Schools Post Pandemic, Which Have Already Implemented Trauma Informed Educational Practices, With Schools Which Have Not Trained or Implemented any ACE or TIEP

The purpose of this research would be to see the resiliency or lack thereof of students returning to school after the pandemic to see if student resiliency differs based on the students emotional and behavioral responses as well as learning abilities following the trauma of a worldwide pandemic. Do the students from trauma informed schools fair better emotionally, mentally, and academically, if their school utilizes trauma informed educational practices prior to the pandemic?

Recommendation 6: Replicate this study comparing schools that provide not only trauma informed education, but provide a "Whole School" approach where trauma informed supervision for staff and teachers occurs as well

It is recommended that this study be replicated, however compare schools with generic trauma informed philosophy with school that provide a "Whole School" approach that not only includes being trauma informed in educational practices but includes trauma informed supervision for staff and teachers as well.   The purpose of this study would be to see if teachers' attitudes towards students and TIEP improve when primary, secondary or vicarious trauma (which impact teachers and staff) are also recognized, and trauma

focused supervision is utilized. This provides additional support to those teachers who

may have their own histories of trauma which impacts how they teach and their attitudes.

Concluding Remarks and Reflections

The researcher was surprised at the outcome of this study. This was because

often when conducting trainings regarding ACEs, sometimes there were teachers who

appeared disinterested or felt that the trainings were an infringement on their time (which

is understandable given the limited amount of free time teachers have). It was interesting

to find out that most of the teachers surveyed and interviewed have really enveloped the

concepts from the trainings and that students are reaping the benefits and developing

resiliency skills. This study did validate this researcher's view that knowledge of ACE

(both our own and others) and the trauma informed educational skills will improve

teachers attitudes towards students who have behavioral or learning problems due to

chronic stress/trauma/ACE. It also verified that what is being taught to teachers is

helping students both in the classroom and in developing resiliency for life.

This researcher has had their own experience with ACEs and had also struggled

during their own K-12 journey. They also experienced their fair share of adverse

experiences from teachers during those years when corporal punishment and shaming

were normal educational practices. Educational adverse experiences included being tied

into their chair, to rulers across the knuckles and told that they were not working up to

their potential, to name a few.   It is the researchers hope that children today no longer

experience school as just one more adverse event that contributes to self-doubt, shame

and feelings of inadequacy.   The researcher grew tremendously during this study and is

now a firm believer in not just trauma-informed school, but in overall trauma informed

organizations and communities. It is the researcher's belief that if everyone in society understands the trauma, stress, brain, body and behavior connection that compassion for self and others would improve all human interactions.   It is the researchers hope that in the future they will continue to learn more about trauma-informed organizations and communities and would like to take the learnings from this study and other studies to help build trauma-informed organizations and trauma informed communities.

Ellis (2020) of the George Washington University Center for Community Resiliency, writes about building community resilience through a community coalition network of organizations and community leaders that share responsibility in driving the process across sectors called Building Community Resilience (BCR). BCR is a systemic approach based on four central components (see Figure 18) which stakeholders apply continually.

- Create a shared understanding of childhood and community adversity

- Assess system readiness by mapping community assets and identifying potential partners for resources and services that can be leveraged to address ACEs

- Develop cross-sector partnerships

- Engage families and community residents in a collaborative response to prevent and mitigate ACEs.

Ellis (2020) does point out that community change can happen without developing a BCR and that to do so community members only need to begin asking questions such as "How can we engage as a community to better understand and serve both students and

others in the community especially those impacted by trauma? What opportunities are there for collaboration with groups/organizations serving families in the community?" (p. 57). By asking these questions, building partnerships, and educating community members about the impact of ACEs and chronic stress, as well as providing resources for support and healing, we can become a more resilient and collaborative community to improve the lives of all children and families (see Figure 18).

Figure 18

Building Community Resilience: Assessment, Readiness, Implementation & Sustainability
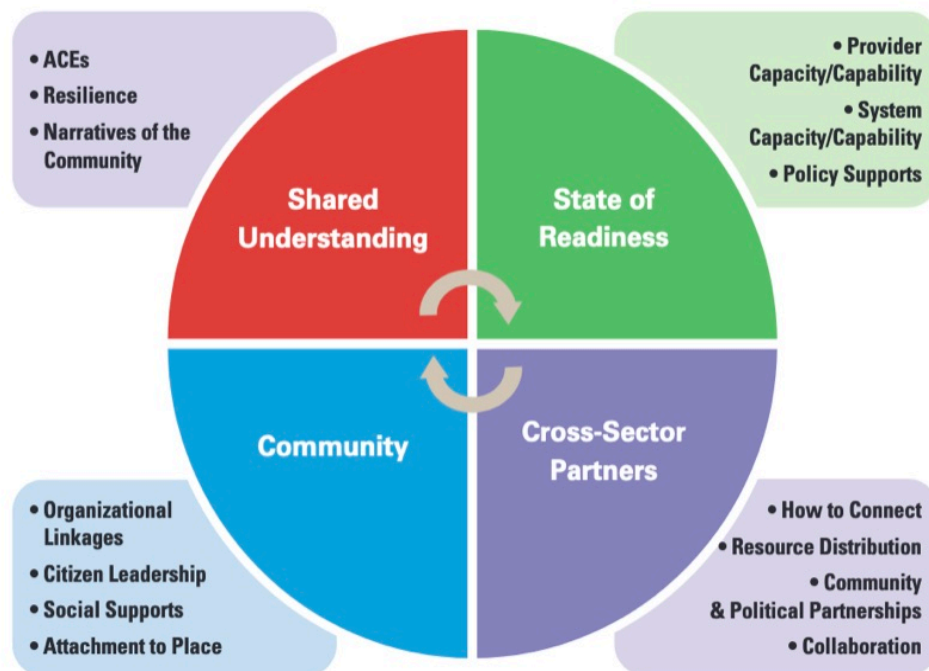
From "A New Framework for Addressing Childhood and Community Experiences: The Building Community Resilience (BCR) Model," by W. Ellis & W. Dietz, 2017, *Academic Pediatrics*, 17, p. S86 (https://doi.org/10.1016/j.acap.2016.12.011). Reprinted with permission. See Appendix P.

The researcher hopes to utilize the BCR model to build a resilient community in Shasta County and elsewhere.

This researcher and the research study faced many challenges including a worldwide pandemic which shut down schools and sent teachers into the unchartered territory of virtual/distance learning. The pandemic was a highly stressful time for many but was especially challenging for teachers, students, and parents, this is one of the reasons the researcher feels the number of survey participants was so small and that so few teachers volunteered to be interviewed.   Also because of the pandemic the researcher was unable to visit the schools and classrooms to collect artifacts related to the trauma-informed practices being used in in EESD.

It is hoped that this body of research will assist districts in deciding to teach school staff about ACEs and implement TIEP within the schools. It is also hoped that this body of research will be used to inform education policy at the state and federal level to make trauma-informed educational practices as well as social and emotional learning a regulatory requirement to meet the needs of the students who have been impacted by trauma and chronic stress. It is also hoped that Shasta County and other struggling communities with high poverty, high addiction, high homelessness, high dropout rates and high numbers of out of home foster-care/kinship care placements will develop comprehensive and collaborative trauma-informed supports for youth, families and individuals impacted by trauma/chronic stress. Resilient students grow into resilient healthy, emotionally regulated, and productive community members. Investing in trauma informed educational systems and trauma-informed communities is essential to building a compassionate and functional society.

REFERENCES

American Psychological Association. (2019, September 5). *Identifying signs of stress in your children and teens.* http://www.apa.org/topics/stress/children

American Psychological Association. (2020, February 1). *Building your resilience.* http://www.apa.org/topics/resilience

Anda, R. F., & Brown, D. W. (2007). Root causes and organic budgeting: Funding health from conception to the grave. *Pediatric Health*. *1*(2): 141-143. https://doi.org/10.2217/17455111.1.2.141

Anda, R. F., Felitti, V. J., Bremner, J. D., Walker, J. D., Whitfield, C., Perry, B. D., Dube, S. R., & Giles, W.H. (2006) The enduring effects of abuse & related adverse experiences in childhood: Convergence of evidence from neurobiology & epidemiology. *European Archives of Psychiatry Clinical Neuroscience*. *256*, 174-186. https://doi.org/10.1007/s00406-005-0624-4

Anda, R., F., & Porter, L. (2018). *ACE Interface, LLC training materials*. http://www.aceinterface.com/

Arincorayan, D., Applewhite, L., Garrido, M., Cashio, V., & Bryant, M. (2017). Resilience-enhancing relationships: What we can learn from those with a history of ACE. *The Army Medical Department Journal*. http://www.cs.amedd.army.mil/amedd_journal.aspx

Baker, C. N., Brown, S. M., Wilcox, P. D., Overstreet, S., & Arora, P. (2016). Development & psychometric evaluation of the attitudes related to trauma-informed care (ARTIC Scale). *School Mental Health* 8, pp. 61-76. https://doi.org/10.1007/s12310-015-9161-0

Bandura, A. (1994). Self-Efficacy in V.S. Ramachaurdram (Ed.) *Encyclopedia of human behavior*. *Vol* 4. Pp. 71-81. https://web.stanford.edu/~kcarmel/ CC_BehavChange_Course/readings/Bandura_Selfefficacy_1994.htm

Bartlett, J. D. & Steber, K. (2019). How to implement trauma- informed care to build resilience to childhood trauma. *Child Trends*. https://www.childtrends.org/publications/how-to-implement-trauma-informed-care-to-build-resilience-to-childhood-trauma

Baxter, P. & Jack, S. (2008). Qualitative case study methodology: Study design & implementation for novice researchers. *The Qualitative Report*, *13*(4), 544-559. https://nsuworks.nova.edu/tqr/vol13/iss4/2

Berger, K. S. (2018). *The developing person: Through childhood and adolescence* (11th ed.). Worth Publishers.

Bellis, M. A., Hardcastle, K., Ford, K., Hughes, K., Ashton, K., Quigg, Z., & Butler, N. (2017). Does continuous trusted adult support in childhood impact life-course resilience against ACE - a retrospective study on adult health-harming behaviors & mental wellbeing. *BioMed Central Psychiatry*, *17*,110. https://doi.org/10.1186/s12888-017-1260-z

Bick, J. & Nelson, C.A. (2016) Early Adverse Experiences & the developing Brain. *Neuropsychopharmacology Reviews*. 41, p 177-196. https://doi.org/10.1038/npp.2015.252

Bhopal, S., Verma, D., Roy, R., Soremekun, S., Kumar, D., Bristow, M., Bhanushali, A.,
Divan, G., & Kirkwood, B. (2019). The contribution of childhood adversity to
cortisol measures of early life stress amongst infants in rural India: Findings from
the early life stress sib-study of the SPRING cluster randomized controlled trial
(SPRING-ELS). *Psych-Neuroendocrinology*, *107*, 241-250.
https://doi.org/10.1016/j.psyneuen.2019.05.012

Blodgett, C., & Lanigan J. D. (2018). The association between adverse childhood
experience and school success in elementary school children. *School Psychology
Quarterly*, *33*(1), 137-146. https://psycnet.apa.org/doi/10.1037/spq0000256

Boals, A. & Banks, J.B. (2012) Effects of traumatic stress and perceived stress on
everyday cognitive functioning. *Cognition and Emotion*, *26*(7), 1335-1343.
https://doi.org/10.1080/02699931.2011.651100

Boparai, S. K. P., Au, V., Koita, K., Oh, D. L., Briner, S., Burke-Harris, N., & Bucci, M.
(2018). Ameliorating the biological impacts of childhood adversity: A review of
intervention programs. *Child Abuse & Neglect*, *81*, 82-105.
https://doi.org/10.1016/j.chiabu.2018.04.014

Bryant, D. J., Oo, M., & Damian, A. J. (2020). The rise of adverse childhood experiences
during the COVID-19 pandemic. *Psychological Trauma: Theory, Research,
Practice, and Policy*, *12*(S1), S193–S194. https://psycnet.apa.org/fulltext/2020-
43450-001.pdf

Brown, D. W., Anda, R. F., Tiemeier, H., Felitti, V. J., Edwards, V. J., Malarcher, A. M., Croft, J. B., Giles, W. H. (2009). Adverse childhood experiences and the risk of premature mortality. *American Journal of Preventative Medicine, 37*, 389-396. https://doi.org/10.1016/j.amepre.2009.06.021

Busso, D. S., & Sheridan, M. A. (2015). Toxic environments and human development. In N. A. Piotrowski (Ed.), *Psychology & behavioral health* (4th ed.). Harvard University. https://scholar.harvard.edu/files/dbusso/files/toxic_environments_and_human_development_1_0.pdf

California Department of Education. (2020). *Data Quest*. https://dq.cde.ca.gov/dataquest/

California Department of Education. (2021, January 11). Supporting resilience in schools [Fact Sheet]. https://www.cde.ca.gov/ls/cg/mh/resilientschools.asp

California Legislative Information. (2019). SB-419 Pupil discipline: suspensions: willful defiance. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml

Careaga, M. B. L., Girardi, C. E. N., & Suchecki, D. (2016). Understanding posttraumatic stress disorder through feat conditioning, extinction and reconsolidation. *Neuroscience & Biobehavioral Reviews*. https://doi.org/10:1016/j.neubiorev.2016.08.023

Carnevali, L., Koenig, J., Sgoifo, A. & Ottaviani, C. (2018). Autonomic and brain morphological predictors of stress resilience. *Frontiers in Neuroscience*. 12(228). https://doi.org/10.3389/fnins.2018.00228

Catalano, A. J., Torff, B., & Anderson, K. S. (2021). Transitioning to online learning

during the COVID-19 pandemic: Differences in access and participation among

students in disadvantaged school districts. *The International Journal of*

Information and Learning Technology. *38*(2), 258-270.

https://doi.org/10.1108/IJILT-06-2020-0111

Cavanaugh, B. (2016). Trauma-informed classrooms and schools. *Beyond Behavior*.

25(2), 41-46. https://doi.org/10.1177/107429561602500206

Centers for Disease Control & Prevention (2021). *Violence prevention: Adverse*

childhood experiences. https://www.cdc.gov/violenceprevention/aces/index.html

Chafoueas, S. M., Johnson, A. H., Overstreet, S., & Santos, N. M. (2016) Toward a

blueprint for trauma-informed service delivery. *School Mental Health*, *8*,144-162.

https://doi.org/10.1007/s12310-015-9166-8

Chinitz, S., Guzman, H., Amstutz, E., Kohchi, J., & Alkon, M. (2017). Improving

outcomes for babies & toddlers in child welfare: A model for infant mental health

intervention & collaboration. *Child Abuse & Neglect*, 70, 190-198.

https://psycnet.apa.org/doi/10.1016/j.chiabu.2017.05.015

Cicchetti, D. (2010). Resilience under conditions of extreme stress: a multilevel

perspective. *World Psychiatry, 9*(3), 145-54.

https://doi.org/10.1002/j.2051-5545.2010.tb00297.x

Ciganek, L. (2020). *Novice teachers' perceptions of their preparedness to teach students*

experiencing trauma: A mixed methods study (Publication No. 28151973).

[Doctoral dissertation, Southeastern University]. ProQuest Dissertations & Theses

Global.

Clements-Nolle, K., & Waddington, R. (2019). Adverse childhood experiences and

    psychological distress in juvenile offenders: The protective influence of resilience

    and youth assets. *Journal of Adolescence Health, 64*, 49-55.

    https://doi.org/10.1016/j.jadohealth.2018.09.025

Colin, V. L., & Low, N. (1991). Infant attachment: What we know now. *US Department*

    of Health & Human Services. https://aspe.hhs.gov/basic-report/infant-attachment-

    what-we-know-now

Conners, M. E. (2011) Attachment theory: A 'secure base' for psychotherapy integration.

    Journal of Psychotherapy Integration, *21*(3), 348-362.

    https://doi.org/10.1037/a0025460

Creswell, J. W. (2006). *Research design qualitative, quantitative and mixed methods*

    Approaches (2nd ed.). Sage.

Creswell, J. W., & Clark, V. L. (2017). *Designing and conducting mixed methods*

    research (3rd ed.). Sage.

Crouch, E., Probst, J. C., Radcliff, E., Bennett, K. J., & McKinny, S. H. (2019).

    Prevalence of ACEs among US children. *Child Abuse & Neglect*, *92*, 209-218.

    https://doi.org/10.1016/jchiabu.2019.04.010

Crouch, E., Radcliff, R., Strompolis, M., & Srivastav, A. (2019). Safe, stable, and

    nurtured: Protective factors against poor physical and mental health outcomes

    following exposure to ACEs. *Journal of Child & Adolescent Trauma, 12*, 165-

    173. https://doi.org/10.1007/s40653-018-0217-9

Craig, S. E. (2016). The trauma-sensitive teacher: To engage children with early trauma

 histories focus on relationships not reenactments. *Educational Leadership*, *74*,

 28-32. http://www.ascd.org/

Cummings, K. P., & Swindell, J. (2019). Using trauma-sensitive lens to support

 children with diverse experiences. *Young Exceptional Children*, *22*(3).

 https://doi.org/10.1177/1096250618756898

Dadds, M. R., & Tully, L. A. (2019). What is it to discipline a child: What should it be?

 A reanalysis of time-out from the perspective of child mental health, attachment

 and trauma. *American Psychologist*, *74*(7), 794-808.

 https://doi.org/10.1037/amp0000449

Dana, D. (2018). *The polyvagal theory in therapy*. W.W. Norton & Company, Inc.

Dietz, E. W. (2017). A new framework for addressing adverse childhood and

 community experiences: The building community resilience (BCR) model.

 Academic Pediatrics, *17*, S86-S93.

 https://doi.org/10.1016/j.acap.2016.12.011

Dombo, E. A. & Sabatino, C. A. (2019). Trauma care in schools. *American Educator*,

 43(2), 18-21. https://www.aft.org/ae/summer2019/dombo-sabatino

Dong, M., Anda, R. F., Felitti, V. J., Dube, S. R., Williamson, D. F., Thompson, T. J.,

 Loo, C. M., & Giles, W. H. (2004). The interrelatedness of multiple forms of

 childhood abuse, neglect and household dysfunction. *Child Abuse &*

 Neglect, *28*, 771-784. https://doi.org/10.1016/j.chiabu.2004.01.008

Duffy, M., & Comly, R. (2019). Trauma-informed schools in Pennsylvania: Aligning

    expansion with high quality implementation. A PACER Policy Brief *in*

    Research for Action. http://www.researchforaction.org

Ellis, W. R. (2020). Healing communities to heal schools: Since student trauma is often

    rooted in inequitable conditions, trauma-informed practices need to reach whole

    communities. *Educational Leadership 78(2)*, 52-52. https://journals.sagepub.com/

Ellis, W. & Dietz, W. (2017). A new framework for addressing childhood and

    community experiences: The building community resilience (BCR) model.

    Academic Pediatrics. 17, pp. S86-S93.

    https://doi.org/10.1016/j.acap.2016.12.011

Essary, J. N., Baraza, L., & Thurston, R. J. (2020). Secondary traumatic stress among

    educators. *Kappa Delta Pi Record, 56*, 116-121.

    https://doi.org/10.1080/00228958.2020.1770004

Feder, A., Fred-Torres, S., Southwick, S. M., & Charney, D. S. (2019). The biology of

    human resilience: Opportunities for enhancing resilience across the life span.

    Biological Psychiatry, 86(6), 443-453.

    https://doi.org/10.1016/j.biopsych.2019.07.012

Felitti, V. J., Anda, R. F., Dube, S. R., Williamson, D. F., Spitz, A. M., Edwards, V.,

    Koss, M. P., & 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. *The American Journal of*

    Preventative Medicine; 14(4), 245-258.

    https://doi.org/10.1016/S0749-3797(98)00017-8

Flippen Group. (2009). Implementing Capturing Kids Hearts ©.

    https://www.capturingkidshearts.org/

Fowler, M. (2015). Dealing with compassion fatigue. *Education Digest*.

    www.eddigest.com

Freyd, J. J. (1996). *Betrayal trauma: the logic of forgetting childhood abuse*. Harvard

    University Press.

Freyd, J. J. (2019). *What is betrayal trauma theory?*

    https://dynamic.uoregon.edu/jjf/defineBT.html

Garmezy, N. (1974). The study of competence in children at risk for severe

    psychopathology. In E. L. Anthony & C. Koupernik (Eds.), *The child in his*

    family: Children at psychiatric risk (p. 65). John Wiley & Sons.

Gardner, R. L. & Stephens-Pisecco. (2019). Fostering childhood resilience: A call to

    educators. *Preventing School Failure: Alternative Education for Children &*

    Youth, *63*(3), 195-202. https://doi.org/10.1080/1045988X.2018.1561408

Gerrity, E., & Folcarelli, C. (2008). *Child traumatic stress: What every policymaker*

    should know. National Center for Child Traumatic Stress.

Giesbrecht, T., & Merckelbach, H. (2009). Betrayal trauma theory of dissociative

    experiences: Stroop and directed forgetting findings. *American Journal of*

    Psychology, *122*(3), 337. http://www.jstor.org/stable/27784407

González, T., Etow, A., & De La Vega, C. (2019). Health Equity, School Discipline

    Reform, and Restorative Justice. *The Journal of Law, Medicine & Ethics: A*

    Journal of the American Society of Law, Medicine & Ethics, *47*(2 suppl), 47–50.

    https://doi-org.libproxy.chapman.edu/10.1177/1073110519857316

Gordon, J. (2021). How movement and exercise can help us heal from trauma.

    Excerpted from *Transforming Trauma*. HarperCollins Publishers in *Thrive*

    Global. https://thriveglobal.com/stories/how-movement-and-exercise-can-help-

    us-heal-from-trauma/

Goodwin-Glick, K. L. (2013). *Impact of trauma-informed care professional*

    development on school personnel perceptions of knowledge, dispositions and

    behaviors towards traumatized students. https://etd.ohiolink.edu/

Gordon, J. (2021). *How movement and exercise can help us heal from trauma*.

    https://thriveglobal.com/stories/how-movement-and-exercise-can-help-us-heal-

    from-trauma/

Hargreaves, M. B., Verbitsky-Savitz, N., Coffee-Borden, B., Perreras, L., Whilte, C. R.,

    Pecora, P. J., Morgan, G. B., Barila, T., Ervin, A., Case, L., Hunter, R., & Adams,

    K. (2017) Advancing the measurement of collective community capacity to

    address ACE and resilience. *Children & Youth Services Review*, *76*, 142-153.

    https://doi.org/10.1016/j.childyouth.2017.02.021

Hinton-Pollard, C. (2020). *An interpretative phenomenological study of California*

    middle school teacher perspectives on integrating core curricular trauma-

    informed practices (Publication No. 28149214) [Doctoral dissertation,

    Northcentral University]. ProQuest Dissertations & Theses Global. (2460108889).

Honsinger, C., & Brown, M. H. (2019). Preparing trauma-sensitive teachers: Strategies

    for teacher educators. *Teacher Educators Journal*, *12*,129-152.

    https://www.ateva.org/journal-1/

Hughes, K., Bellis, M. A., Hardcastle, K. A., Sethi, D., Butchart, A., Mikton, C., Jones, L., & Dunne, M. P. (2017). The effect of multiple adverse childhood experiences on health: a systematic review and meta-analysis. *The Lancet Public Health*, *2*(8), 356–366. https://doi-org.libproxy.chapman.edu/10.1016/S2468-2667(17)30118-4

Ismail, F. Y., Fatemi, A., & Johnston, M. V. (2017). Cerebral plasticity: Windows of opportunity in the developing brain. *European Journal of Pediatric Neurology*, *21*(1), 23-48. https://doi.org/10.1016/j.ejpn.2016.07.007

Jascz, M. (2019). *Healthy relationships 101.* Center for Nonviolent Communication.

Jennings, P. A. (2019). Teaching in a trauma-sensitive classroom, *American Educator*, *43*(2). https://www.aft.org/ae/summer2019/jennings

Johnson, L. S., Elam, K., Rogers, A. A., & Hilley, C. (2018). A meta-analysis of parenting practices and child psychosocial outcomes in trauma-informed parenting interventions after violence exposure. *Prevention Science*, *19*, 927-938. https://doi.org/10.1007/s11121-018-0943-0

Kataoka, S. H., Vona, P., Acuna, A., Jaycox, L., Escudero, P., Rojas, C., Ramirez, E., Langley, A., & Stein, B. D. (2018). Applying a trauma informed school systems approach: Examples from school community-academic partnerships. *Ethnicity & Disease*, *28*(2), 417-426. https://doi.org/10.18865/ed.28.S2.417

Kim, S., Crooks, C. V., Bax, K., & Shokoohi, M. (2021). Impact of trauma-informed training and mindfulness-based social-emotional learning program on teacher attitudes and burnout: A mixed-methods study. *School Mental Health*, *13*(1), 55–68. https://doi.org/10.1007/s12310-020-09406-6

Knudson, J., & Cantor, P. (2020). Ensuring whole-child well-being as a foundation for

    learning: relationships, routines, & resilience in the time of COVID-19. *Policy*

    and Practice Brief. California Collaborative on District Reform.

Kumar, D. R., Aslinia, F., Yale, S. H., & Mazza, J. J. (2011). Jean-Martin Charco: The

    father of neurology. *Clinical Medical Research, 9*(1), 46-49.

    http://www.clinmedres.org/content/9/1/46.short

Lange, B. C. L., Callinan, L. S., & Smith, M. V. (2019). Adverse childhood experiences

    and their relation to parenting stress and parenting practices. *Community Mental*

    Health Journal, 55, 651-662. https://doi.org/10.1007/s10597-018-0331-z

Larsen, T., & Samdal, O. (2012). The importance of teachers' feelings of self-efficacy in

    developing their pupils' social and emotional learning: A Norwegian study of

    teachers' reactions to the Second Step program. *School Psychology International,*

    33(6), 631–645. https://doi.org/10.1177/0143034311412848

Levendosky, A. A., & Buttenheim, M. (2000). A multi-method treatment for child

    survivors of sexual abuse: An intervention informed by relational and trauma

    theories. *Journal of Child Sexual Abuse: Research, Treatment, & Program*

    Innovations for Victims, Survivors, & Offenders, 9(2): 1-19.

    https://doi.org/10.1300/J070v09n02_01

Li, Y., Hassett, A. L., & Seng, J. S. (2019). Exploring the mutual regulation between

    oxytocin and cortisol as a marker of resilience. *Achieves of Psychiatric Nursing,*

    33(2), 164-173. https://doi.org/10.1016/j.apnu.2018.11.008

Luca, V. D., & Liang-Ching, H. (2019). Addictive effect of childhood trauma and recent

 stressful events as predictors for current suicide ideation in schizophrenia.

 Congress of the Schizophrenia International Research Society, 10-14.

 Schizophrenia Bulletin, *45*, S277. https://doi.org/10.1093/schbul/sbz018.472

Malarbi, S., Abu-Rayya, H. M., Muscara, F., & Stargatt, F. M. (2017).

 Neuropsychological functioning of childhood trauma and post-traumatic stress

 disorder: A meta-analysis. *Neuroscience and Biobehavioral Reviews*, *72*, 68-

 86. https://doi.org/10.1016/j.neubiorev.2016.11.004

Marshall, E. M., & Frazier, P. A. (2019). Understanding post trauma reactions within an

 attachment theory framework. *Current Opinion in Psychology*, *25*, 167-171.

 https://doi.org/10.1016/j.copsyc.2018.08.001

Martin, C. G., Cromer, L. D., & Freyd, J. J. (2010). Teacher perceptions of effects of

 childhood trauma. *Journal of Child & Adolescent Trauma*, *3*, 245-254.

 https://doi.org/10.1080/19361521.2010.523061

McGruder, K. (2019). Children learn what they live: Addressing early childhood trauma

 resulting in toxic stress in schools. *Mid-Western Educational Researcher*, *31*(1),

 117-137. https://web.b.ebscohost.com/

McIntyre, E. M., Baker, C. N., & Overstreet, S. (2019). Evaluating foundational

 professional development training for trauma-informed approaches in school.

 Psychological Services, *American Psychological Association*, *16*(1).

 https://doi.org/10.95-102.10.1037/ser0000312

McKegney, C. C. (2021). Understanding child development in the assessment of stress

    in children amidst the COVID-19 pandemic. *Pediatric Nursing*. 47(1) p 48 -51.

    https://www.proquest.com/openview/

McMillan, J. H., & Schumacher, S. (2010). *Research in education*. Pearson.

Minahan, J. (2019). Trauma-informed teaching strategies. *Educational Leadership*, *2*,

    30. http://www.ascd.org

Murphey, D., & Sacks, V. (2019). Supporting students with ACEs: How educators &

    schools can help. *American Educator*, *43*(2).

    https://www.aft.org/sites/default/files/ae-summer2019.pdf

National Center of Education Statistics. ttps://nces.ed.gov/datalab/index.aspx

National Center for Injury Prevention & Control, Division of Violence Prevention.

    (2020). *Adverse childhood experiences* [Fact Sheet].

    https://www.cdc.gov/violenceprevention/aces/index.html

National Child Traumatic Stress Network. (2008). *Psychological and behavioral impact*

    of trauma. [Fact Sheet]. https://www.nctsn.org/

National Scientific Council on the Developing Child. (2010). *Early Experiences Can*

    Alter Gene Expression and Affect Long-Term Development: Working Paper No.

    10. http://www.developingchild.net

OptimistMinds. (2021). *Resiliency theory (A complete guide)*.

    https://optimistminds.com/resilience-theory/

Oxford University Press. (2021) *Oxford English dictionary*.

    https://www.oed.com/

Padgett, D.K., Henwood, B., Abrams, C. & Drake, R.E. (2010). Social Relationships

    Among Persons Who Have Experienced Serious Mental Illness, Substance Abuse

    and Homelessness: Implications for Recovery. *American Journal of*

    Orthopsychiatry. 78: 333-339. https://doi.org/10.1037/a0014155

Patton, M. Q. (2015). *Qualitative research & evaluation methods* (4th ed.). Sage.

Piaget, J. (1954). The construction of reality in the child (M. Cook, Trans.). Basic Books.

    https://doi.org/10.1037/11168-000

Phifer, L. W., & Hull, R. (2016). Helping students' health: Observations of trauma-

    informed practices in the schools. *School Mental Health*, *8*, 201-205.

    https://doi.org/0.1007/s12310-016-9183-2

Population Reference Bureau. (2019). *KidsData* [Data Sheet].

    https://www.kidsdata.org/region/326/shastacounty/

Porges, S. W. (2007). The polyvagal perspective. *Biological Psychology*. *74*, 116-143.

    https://doi.org/10.1016/j.biopsycho.206.06.009

Porges, S. W. (2017). *The pocket guide to the polyvagal theory*.

    W.W. Norton & Company, Inc.

Porter, L. L. (2003). *The science of attachment*.

    https://www.naturalchild.org/articles/guest/lauren_lindsey_porter.html

Post, P. B., Grybush, A. L., Elmadani, A., & Lockhart, C. E. (2020). Fostering resilience

    in classrooms through child-teacher relationship training. *International Journal of*

    Play Therapy, 29(1), 9-19. https://doi.org/10.1037/pla0000107

Prather, W., & Golden, J. A. (2009) A behavioral perspective of childhood trauma &

  attachment issues. *International Journal of Behavioral Consultation & Therapy*

  5(1), 56-74. http://dx.doi.org/10.1037/h0100872

Price, O.A. & Ellis, W. (2018). Student trauma is widespread. Schools don't have to

  go it alone. *Education Week*. 37(23), 18-19. https://www.edweek.org

QSR International. (2019). *NVIVO Software*

Resiliency. (2020). *Oxford online dictionary*.

  https://en.oxforddictionaries.com/definition/resiliency

Robb, L. (2008). *But they all read at different levels*. Scholastic, Inc.

Roberts, C. M. (2010). *The dissertation journey* (2nd ed.). Corwin.

Romero, V. E., Robertson, R., & Warner, A. (2018). *Building resilience in students*

  impacted by adverse childhood experiences: a whole-staff approach. Corwin.

Rossen, E., & Hull, R. (2013). *Supporting & educating traumatized students*. New York,

  NY. Oxford University Press.

Rubinstein, T. (2015). Relational theory: A refuge and compass. *Clinical Social Work*

  Journal, 43, 398-406. https://doi.org 10.1007/s10615-015-0523-8

Sacks, V., & Murphey, D. (2018). The prevalence of adverse childhood experiences,

  nationally, by state, and by race or ethnicity. *Child Trends*.

  http://hdl.handle.net/20.500.11990/1142

Sadin, M. (2017). *The perceptions of special education teachers regarding trauma-*

  informed care: A qualitative case study (Publication No. 10744280)

  [Doctoral dissertation, Northcentral University]. ProQuest Dissertations and

  Theses.

Schepers, O. (2017). *A teacher at risk: Giving voice to teacher secondary traumatic stress*. [Doctoral Dissertation, University of Colorado]. ProQuest Dissertations and Theses.

Schickedanz, A., Halfon, N., Sastry, N., & Chung, P. J. (2018). *Parents' adverse childhood experiences and their children's behavioral health problems*. https://doi-org.libproxy.chapman.edu/10.1542/peds.2018-0023

Schoonenboom, J., & Johnson, R. B. (2017). How to construct a mixed method research design. *Kolner Zeitschrift Fur Soziologie Und Sozialpsychologie*, *2*, 107. https://doi.org/10.1007/s11577-017-0454-1

Schuengel, C., Oosterman, M., & Sterkenberg, P. S. (2009). Children with disrupted attachment histories: Interventions and psychophysiological indices of effects. *Child & Adolescent Psychiatry and Mental Health*, *3*(26). https://doi.org/10.1186/1753-2000-3-26

Sciaraffa, M. A., Zeanah, P. D., & Zeanah, C. H. (2018). Understanding & promoting resilience in the context of ACE. *Early Childhood Education Journal*, *46*, 343-353. https://doi.org/10.1007/s10643-017-0869-3

Scott, S., & Crino, R. D. (2014). Early maladaptive schema and social and occupational functioning: The mediating role of psychiatric symptomology. *Australian Journal of Psychology*, *66*(4). https://doi.org/10.111/1jpy.12061

Seng, J. & CAsCAid Group. (2018). From fight or flight, freeze or faint to "flow": Identify a concept to express a positive embodied outcome of trauma recovery. *Journal of American Psychiatric Nurses Association*, *25*(3). https://doi.org/10.1177/1078390318778890

Shasta County Health & Human Services. (2012). *Shasta County ACE survey*.

> https://shastastrongfamilies.org/data-statistics/

Shasta County Health & Human Services. (2019). *Measurable criminogenic risk factors*

> *Shasta County, California*. https://www.co.shasta.ca.us/docs/libraries/hhsa-
>
> docs/community-health-data/shasta-county-criminogenic-risk-factors.pdf

Shooks, B. (2020). *The impact of trauma-informed pedagogical practices on teacher self-*

> *efficacy* (Publication No. 28025831) [Doctoral dissertation, Cornerstone
>
> University]. ProQuest Dissertations & Theses Global.

Sitler, H. C. (2008). Teaching with awareness: The hidden effects of trauma on learning.

> *The Clearing House*, *82*(3), 119-123. https://doi.org/10.3200/TCHS.82.3.119-124

Souers, K.V., & Hall, P. (2018). *Relationship, responsibility, and regulation: Trauma-*

> *invested practices for fostering resilient learners*. ASCD.

Southwick, S. M., Bonanno, G. A., Masten, A. S., Pater-Brick, C., & Yehuda, R. (2014).

> Resilience definitions, theory, and challenges: interdisciplinary perspectives.
>
> *European Journal of Psycho-traumatology*, *5*.
>
> https://doi.org/10.3402/ejpt.v5.25338

Stateman-Weil, K. (2015). Preschool through grade 3: Creating trauma sensitive

> classrooms. *Young Children*, *70*(2), 72-79.
>
> https://www.jstor.org/stable/ycyoungchildren

Stokes, H., & Brunzell, T. (2019) Professional learning in trauma informed positive

> education: Moving school communities from trauma affected to trauma aware.
>
> *School Leadership Review*, *14*(2), 6.
>
> https://scholarworks.sfasu.edu/slr/vol14/iss2/6

Substance Abuse and Mental Health Services Administration. 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, 2014.

Szyf, M., & Bick, J. (2013). DNA methylation: A mechanism for embedding early life

    experiences in the genome. *Child Development*. *84*(1), 49-57.

    https://doi.org/10.1111/j.1467-8624.2012.01793.x

Terrasi, S. & Crain de Galarce, P. (2017). Trauma & learning in America's classrooms.

    Kappamagazine.org, *98*(6). Sage.

Tetnowski, J. (2015). Qualitative case study research design. *Perspectives on Fluency*

    and Fluency Disorders. *25*, 39-45. https://pubs.asha.org

The Search Institute. (2009). *40 developmental assets*. https://www.search-

    institute.org/downloadable/Ann-Arbor-Handout-2.pdf

Tierney, A. L., & Nelson, C. A. (2009). Brain development and role of experience in the

    early years. *Zero to Three*, *30*(2), 9-13.

    https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3722610/

Traub, F., & Boynton-Jarrett, R. (2017). Modifiable resilience factors to childhood

    adversity for clinical pediatric practice. *Pediatrics*, *139*(5), 1-14.

    https://doi.org/10.1542/peds.2016-2569

Vasileiou, K., Barnett, J., Thorpe, S., & Young, T. (2018). Characterizing and justifying

    sample size sufficiency in interview-based studies: systematic analysis of

    qualitative health research over a 15-year period. *BMC Medical Research*

    Methodology, *18*(1), 148. https://doi-org.libproxy.chapman.edu/10.1186/s12874-

    018-0594-7

Watson, M., & Ecken, L. (2019). *Learning to trust: Attachment theory and classroom*

    management (2nd ed.). Oxford University Press.

Weber, D. A., & Reynolds, C. R. (2004). Clinical perspectives on neurobiological effects

    of psychological trauma. *Neuropsychology Review*, *14*(2), 115-129.

    https://doi.org/10.1023/b:nerv.0000028082.13778.14

Werner, E. E., & Smith, R. S. (1989). High-risk children in young adulthood: A

    longitudinal study from birth to 32 years. *American Journal of*

    Orthopsychiatry,*59*(1), 72-81. https://doi.org/10.1111/j.1939-

    0025.1989.tb01636.x

Wilson, K. R., Hansen, D. J., & Li, M. (2011). The traumatic stress response in child

    maltreatment and resultant neurological effects. *Aggression & Violent Behavior*,

    16, 87-97. https://doi.org/10.1016/j.avb2010.12.007

Wilson, M. (2013). Compassionate school model: Creating trauma sensitive schools

    Publication No. 3535951) [Doctoral dissertation, Seattle Pacific University].

    ProQuest Dissertations and Theses.

Wink, M. N., LaRusso, M. D., & Smith, R. L. (2021). Teacher empathy and students with

    problem behaviors: Examining teachers' perceptions, responses, relationships,

    and burnout. *Psychology in the Schools*. 1-22. https://doi.org10.1002/pits.22516

White, K., Brenamer, S., & Centre for Attachment-based Psychotherapy. (2008). *Trauma & Attachment*. London: Rutledge.

Yasmin, H., Khalil, S., & Mazhar, R. (2020). COVID 19: Stress management among students and its impact on their effective learning. *International Technology and Education Journal*, *4*(2), 65–74. https://dergipark.org.tr/en/pub/itej/issue/60167/872468

Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). *Schema therapy: A practitioner's guide*. Guildford Press.

Zeynel, Z., & Uzer, T. (2020). Adverse childhood experiences lead to trans-generational transmission of early maladaptive schemas. *Child Abuse & Neglect*, *99*. https://doi.org/10.1016/j.chiabu.2019.104235

APPENDICES

APPENDIX A

Synthesis Matrix

Citations		ACE/ Trauma	TIC/TIP/ TIEP	Intervention	Risk	Resiliency	Polyvagal/ Neuroscience	Attachment	Other
Adelman, & Taylor	2013	x	x						x
Anda, , Felitti, Bremner, Walker, Whitfield, Perry, Dube, Giles	2006	x					x		
Arincorayan, Applewhite, Garrido, Cashio, Bryant,	2017	x				x		x	
Bellis, Hardcastle, Ford, Hughes, Ashton, Quigg, Butler	2017	x				x		x	
Bick, & Nelson,	2016	x				x	x		
Blaustein	2013	x	x	x					
Blodgett & Lanigan	2018	x			x	x			
Boals & Banks	2012	x					x		
Boparai, Au, Koita, Oh, Briner, Burke-Harris, Bucci	2018	x							
Brown Anda, Tiemeier, Felitti, Edwards, Croft, Giles	2009	x	x	x	x			x	
Clements-Nolle & Addington	2019	x				x		x	
Chafoueas, Johnson, Overstreet, Santos	2016		x	x					
Craig, S.E.	2016	x						x	
Couch, Probst, Radcliff & Bennet, McKinny	2019	x							
Crouch, Radcliff, Strompolis & Srivastav	2019								
Cummings & Swindell	2019	x				x		x	
Dana	2019	x	x	x					
Everly & Firestone	2018	x			x		x		
Gardner & Stephens-Pisecco	2013	x		x		x		x	x
Goodwin-Glick	2017	x	x	x					
Hargreaves, Verbitsky-Savitz, Coffee-Borden, Perreras, Whilte, Pecora, Morgan, Barila, Ervin, Case, Hunter, Adams	2019					x		x	
Honsinger & Brown	2017	x				x			x
Jennings	2019	x	x					x	
Kataoka, Vona, Acuna, Jaycox, Escudero, Rojas, Ramirez, Langley, Stein	2019	x				x			x

Citations	Year	ACE/ Trauma	TIC/TIP/ TIEP	Intervention	Risk	Resiliency	Polyvagal/ Neuroscience	Attachment	Other
Romero, Robertson & Warner	2018	x	x	x					
Rossen & Hull	2018	x				x			
Malarbi, Abu-Rayya & Stargatt	2017	x					x		x
Marshall & Frazier	2013	x	x					x	
Martin, Cromer, & Freyd	2019	x						x	
McGruder	2019	x	x	x					
McIntyre, Baker, & Overstreet,	2010	x						x	
Murphey & Sacks	2019	x	x	x	x				
Nealy-Oparah & Scruggs-Hussein	2019	x		x					
Porges	2018								
Phifer & Hull.	2017	x		x		x	x	x	
Post, Grybush, Elmadani & Lockart	2016		x						
Prather & Golden	2020	x				x		x	
Qureshi, Long, Bradshaw, Pyne, Magruder, Kimbrell, Hudson, Jawaid, Schulz, Kunik	2009	x				x	x	x	
Sadin.	2017	x	x	x					x
Sciaraffa, Zeanah, Zeanah	2011						x		
Seng & CAsCAid Group University of Michigan	2018								
Sitler	2018	x				x	x		
Stateman-Weil	2015	x	x				x	x	
Stokes & Brunzell	2019	x	x					x	
Terrasi & Crain de Galarce	2008	x				x			
Traub, Boynton-Jarrett	2017	x					x		
Vanderwegen	2013	x	x	x					
Watson & Ecken	2017	x						x	
Weber & Reynolds	2004	x					x		
Wilson, Hansen & Li	2011	x			x		x		
Wilson	2013	x	x	x				x	

APPENDIX B

Attitudes Regarding Trauma Informed Care Survey

ARTIC | *Attitudes Related to Trauma-Informed Care Scale*
VERSION: ARTIC-45 EDUCATION

TRAUMATIC STRESS INSTITUTE

People who work in education, health care, human services, and related fields have a wide variety of beliefs about their students, their jobs, and themselves. The term "student" is interchangeable with "client," "person," "resident," "patient," or other terms to describe the person being served in a particular setting.

Trauma-informed care is an approach to engaging people with trauma histories in education, human services, and related fields that recognizes and acknowledges the impact of trauma on their lives.

☐**INSTRUCTIONS**

For each item, select the circle along the dimension between the two options that best represents your personal belief during the past two months at your job.

Sample

	1	2	3	4	5	6	7	
Ice cream is delicious	☐	☐	☐	☐	☐	☐	☐	Ice cream is disgusting.

☐ *Note: In this SAMPLE ITEM, the respondent is reporting that he/she believes that ice cream is much more delicious than disgusting.*

I believe that…

		1	2	3	4	5	6	7	
1	Students' learning and behavior problems are rooted in their behavioral or mental health condition.	☐	☐	☐	☐	☐	☐	☐	Students' learning and behavior problems are rooted in their history of difficult life events.
2	Focusing on developing healthy, healing relationships is the best approach when working with people with trauma histories.	☐	☐	☐	☐	☐	☐	☐	Rules and consequences are the best approach when working with people with trauma histories.
3	Being very upset is normal for many of the students I serve.	☐	☐	☐	☐	☐	☐	☐	It reflects badly on me if my students are very upset.
4	I don't have what it takes to help my students.	☐	☐	☐	☐	☐	☐	☐	I have what it takes to help my students.
5	It's best not to tell others if I have strong feelings about the work because they will think I am not cut out for this job.	☐	☐	☐	☐	☐	☐	☐	It's best if I talk with others about my strong feelings about the work so I don't have to hold it alone.
6	The students were raised this way, so there's not much I can do about it now.	☐	☐	☐	☐	☐	☐	☐	The students were raised this way, so they don't yet know how to do what I'm asking them to do.
7	Students need to experience real life consequences in order to function in the real world.	☐	☐	☐	☐	☐	☐	☐	Students need to experience healing relationships in order to function in the real world.
8	If students say or do disrespectful things to me, it makes me look like a fool in front of others.	☐	☐	☐	☐	☐	☐	☐	If students say or do disrespectful things to me, it doesn't reflect badly on me.
9	I have the skills to help my students.	☐	☐	☐	☐	☐	☐	☐	I do not have the skills to help my students.
10	The best way to deal with feeling burnt out at work is to seek support.	☐	☐	☐	☐	☐	☐	☐	The best way to deal with feeling burnt out at work is not to dwell on it and it will pass.
11	Many students just don't want to change or learn.	☐	☐	☐	☐	☐	☐	☐	All students want to change or learn.

CONTINUED ☐

I believe that…

1	2	3	4	5	6	7

12. Students often are not yet able or ready to take responsibility for their actions. They need to be treated flexibly and as individuals. ☐ ☐ ☐ ☐ ☐ ☐ ☐ Students need to be held accountable for their actions.

13. I realize that students may not be able to apologize to me after they act out. ☐ ☐ ☐ ☐ ☐ ☐ ☐ If students don't apologize to me after they act out, I look like a fool in front of others.

14. Each day is uniquely stressful in this job. ☐ ☐ ☐ ☐ ☐ ☐ ☐ Each day is new and interesting in this job.

15. The fact that I'm impacted by my work means that I care. ☐ ☐ ☐ ☐ ☐ ☐ ☐ Sometimes I think I'm too sensitive to do this kind of work.

16. Students have had to learn how to trick or mislead others to get their needs met. ☐ ☐ ☐ ☐ ☐ ☐ ☐ Students are manipulative so you need to always question what they say.

17. Helping a student feel safe and cared about is the best way to eliminate undesirable behaviors. ☐ ☐ ☐ ☐ ☐ ☐ ☐ Administering punitive consequences is the best way to eliminate undesirable behaviors.

18. When I make mistakes with students, it is best to move on and pretend it didn't happen. ☐ ☐ ☐ ☐ ☐ ☐ ☐ When I make mistakes with students, it is best to own up to my mistakes.

19. The ups and downs are part of the work so I don't take it personally. ☐ ☐ ☐ ☐ ☐ ☐ ☐ The unpredictability and intensity of work makes me think I'm not fit for this job.

20. The most effective helpers find ways to toughen up – to screen out the pain – and not care so much about the work. ☐ ☐ ☐ ☐ ☐ ☐ ☐ The most effective helpers allow themselves to be affected by the work – to feel and manage the pain – and to keep caring about the work.

21. Students could act better if they really wanted to. ☐ ☐ ☐ ☐ ☐ ☐ ☐ Students are doing the best they can with the skills they have.

22. It's best to treat students with respect and kindness from the start so they know I care. ☐ ☐ ☐ ☐ ☐ ☐ ☐ It's best to be very strict at first so students learn they can't take advantage of me.

23. Healthy relationships with students are the way to good student outcomes. ☐ ☐ ☐ ☐ ☐ ☐ ☐ People will think I have poor boundaries if I build relationships with my students.

24. I feel able to do my best each day to help my students. ☐ ☐ ☐ ☐ ☐ ☐ ☐ I'm just not up to helping my students anymore.

25. It is because I am good at my job that the work is affecting me so much. ☐ ☐ ☐ ☐ ☐ ☐ ☐ If I were better at my job, the work wouldn't affect me so much.

26. Students do the right thing one day but not the next. This shows that they are doing the best they can at any particular time. ☐ ☐ ☐ ☐ ☐ ☐ ☐ Students do the right thing one day but not the next. This shows that they could control their behavior if they really wanted to.

27. When managing a crisis, enforcement of rules is the most important thing. ☐ ☐ ☐ ☐ ☐ ☐ ☐ When managing a crisis, flexibility is the most important thing.

28. If I don't control students' behavior, bad things will happen to property. ☐ ☐ ☐ ☐ ☐ ☐ ☐ As long as everyone is safe, it is ok for students to become really upset, even if they cause some property damage.

29. I dread going to my job because it's just too hard and intense. ☐ ☐ ☐ ☐ ☐ ☐ ☐ Even when my job is hard and intense, I know it's part of the work and it's ok.

CONTINUED ☐

194

I believe that…

		1	2	3	4	5	6	7	
30	How I am doing personally is unrelated to whether I can help my students.	☐	☐	☐	☐	☐	☐	☐	I have to take care of myself personally in order to take care of my students.
31	If things aren't going well, it is because the students are not doing what they need to do.	☐	☐	☐	☐	☐	☐	☐	If things aren't going well, it is because I need to shift what I'm doing.
32	I am most effective as a helper when I focus on a student's strengths.	☐	☐	☐	☐	☐	☐	☐	I am most effective as a helper when I focus on a student's problem behaviors.
33	Being upset doesn't mean that students will hurt others.	☐	☐	☐	☐	☐	☐	☐	If I don't control students' behavior, other students will get hurt.
34	If I told my colleagues how hard my job is, they would support me.	☐	☐	☐	☐	☐	☐	☐	If I told my colleagues how hard my job is, they would think I wasn't cut out for the job.
35	When I feel myself "taking my work home," it's best to bring it up with my colleagues and/or supervisor(s).	☐	☐	☐	☐	☐	☐	☐	When I feel myself "taking my work home," it's best to keep it to myself.

☐*Note: Some of the following items pertain to people working at organizations that have ALREADY implemented trauma-informed care to some degree. If you do NOT work at such an organization, use the "N/A" option for any items that are not applicable to you.*

I believe that…

		1	2	3	4	5	6	7	N/A	
36	Students react positively to the trauma-informed care approach.	☐	☐	☐	☐	☐	☐	☐	☐	Students react negatively to the trauma-informed care approach.
37	I do not have enough support to implement trauma-informed care.	☐	☐	☐	☐	☐	☐	☐	☐	I have enough support to implement trauma-informed care.
38	The trauma-informed care approach takes too much time.	☐	☐	☐	☐	☐	☐	☐	☐	The trauma-informed care approach saves time in the long run.
39	When I feel like I can't handle this alone, I can go to my colleagues and/or supervisor(s) for help.	☐	☐	☐	☐	☐	☐	☐	☐	There is not much support from my colleagues and/or supervisor(s) for my work.
40	The trauma-informed care approach is effective.	☐	☐	☐	☐	☐	☐	☐	☐	The trauma-informed care approach is not effective.
41	I have the support I need to work in a trauma-informed way.	☐	☐	☐	☐	☐	☐	☐	☐	The program talks about trauma-informed care, but it is really business as usual.
42	I am able to carry out all my responsibilities with respect to the trauma-informed care approach.	☐	☐	☐	☐	☐	☐	☐	☐	I am not able to carry out all my responsibilities with respect to the trauma-informed care approach.
43	There is not much support from the administration for my work.	☐	☐	☐	☐	☐	☐	☐	☐	There is clear indication that the administration supports my work.
44	I cannot manage all that the trauma-informed care approach requires.	☐	☐	☐	☐	☐	☐	☐	☐	I can manage all that the trauma-informed care approach requires.
45	Everyone is committed to working in a trauma-informed way long term.	☐	☐	☐	☐	☐	☐	☐	☐	This emphasis on working in a trauma-informed way is just a passing phase.

Thank you for your participation.

APPENDIX C

Request for Superintendent's Permission to Survey and Interview Teachers

Trauma Informed Schools
Kohl, Alyson <kohl@brandman.edu>
Thu 1/23/2020 7:57 AM
To:

- bwinstead@eesd.net <bwinstead@eesd.net>

Hello Dr. Winstead,

I am a doctoral student at Brandman University, and I work for Shasta County Health and Human Services as a program manager. I am also an ACE trainer. I am working on my doctoral dissertation on how ACE training and trauma informed practices have or have not changed teachers' attitudes about student learning and behavioral challenges and how their teaching and classroom management practices have or have not changed. I understand that your schools utilize trauma informed approaches. I would like to request permission to survey and interview your teachers for this purpose (I plan on giving those who participate thank you gift cards). Please let me know if this is a possibility or not. Also, is there a process that I need to go through to make this happen. Please let me know how best to proceed. I would be glad to meet with you if you would like to discuss my dissertation plan.

Thank you for your time and for consideration of this matter,

Alyson Kohl

530-XXX-5453 or cell 530-848-XXXX

Request for Principal's Permission to Survey and Interview Teachers

To the Elementary School Principals of Enterprise Elementary School District,

My name is Alyson Kohl. I am an educator and a mental health professional, obtaining my doctorate in education at Brandman/Chapman University. I live here in Redding and work for the Shasta County Health & Human Services.

Shasta County has many of the factors which contribute to adverse childhood experiences including high poverty, high substance use, high foster care rates, high incarceration, high domestic violence, high divorce rates, high homelessness, high isolation, low community connections, poor public transportation and few family supportive resources.

According to my research, elementary schools are often the first place where symptoms of childhood trauma can be recognized, treated and mitigated. Elementary schools have the unique opportunity to teach not only a love of learning but positive social and emotional skills for improved resiliency and long-term positive outcomes.

- Would you like to know if educating teachers in the effects of Adverse Childhood Experiences, Love and Logic, Capturing Kids Hearts and Second Step has changed both their attitudes and attitudes about student learning and behavior as well as classroom management practices?
- Would you like to know if teachers believe the innovative practices implemented in your schools have improved student resiliency?

I would like to provide some answers to you regarding these questions.

As part of the study, I propose to send a survey to the teachers in your elementary schools with the attached Attitudes Related to Trauma-Informed Care Scale via a 10-minute electronic survey. From that survey I will ask to interview 12 volunteer elementary school teachers (preferably one from each school) for an in-depth analysis exploring teachers lived experiences related to student adverse childhood experiences, and the trainings they have received. Each teacher who participates in the 30-minute interview will receive a $25.00 gift certificate.

I am requesting permission to survey and interview the teachers in your schools. I believe this is an important opportunity to see if the efforts of the district to provide innovative services to not only assist teachers but instill skills of resiliency for improved student outcomes. I also commit to sharing the outcomes of the study with you when it is completed.

Thank you for considering this request.

Sincerely,

Alyson R Kohl, MA, LMFT

APPENDIX E

Study Information

To the Elementary School Teachers of Enterprise Elementary School District,

      My name is Alyson Kohl. I am an educator and a mental health professional with the Shasta County Health and Human Services, obtaining my doctorate in educational leadership at Brandman/Chapman University. I live and work here in Redding. I am conducting a research study on teachers' attitudes and attitudes regarding the effects of adverse childhood experiences, trauma informed educational practices, and student resiliency.

      Shasta County has many of the factors which contribute to adverse childhood experiences including high poverty, high substance use, high foster care rates, high incarceration, high domestic violence, high divorce rates, high homelessness, high isolation, low community connections, poor public transportation and few family supportive resources.

      According to my research, elementary schools are often the first place where symptoms of childhood trauma can be recognized, treated and mitigated. Elementary schools have the unique opportunity to teach not only a love of learning but positive social and emotional skills for improved resiliency and long-term positive outcomes.

      My research study is designed to understand the lived experiences of elementary school teachers in the Enterprise Elementary School District regarding adverse childhood experiences experienced by students, trauma informed practices, and the trainings you have received on these topics. I want to learn how you view the use of these trauma informed responses in regard to improving student learning, behavior and resiliency skills.

      Attached to this e-mail you will find a link to a survey called the Attitudes Related to Trauma-Informed Care Scale survey. The scale is a 45-question survey which should take less than 10 minutes to take. Your personal responses will be kept strictly confidential and only aggregate data will be used in the analysis of the data.

      Also, as part of the study I will be interviewing 12 volunteer elementary school teachers (preferably one from each school) for a more in-depth understanding of your lived experiences. Those of you who volunteer to be interviewed will be given a number to ensure confidentiality. The interview will be conducted wherever you prefer to be interviewed – your classroom, my office, your home, the phone, etc. If you are interested in being interviewed, please e-mail me at the e-mail address below.

      If you have questions about the study, the process, confidentiality, etc... or if you have any concerns about the survey or the study you may contact me at 530-848-2892 or by e-mail at kohl@brandman.edu. Also, please note that you may withdraw from the study at any time.

Thank you in advance.

Sincerely,

Alyson R Kohl, MA, LMFT

APPENDIX F

Informed Consent

INFORMATION ABOUT: Teachers Attitudes Regarding Adverse Childhood
Experiences and Trauma Informed Classroom Practices

RESPONSIBLE INVESTIGATOR: Alyson Kohl, M.A., LMFT

PURPOSE OF STUDY: You are being asked to participate in a research study
conducted by Alyson a doctoral student from the School of Education at Brandman
University/Chapman University College. The purpose of this explanatory mixed
methods study is to determine the attitudes and lived experience of teachers regarding
adverse childhood experiences and trauma informed classroom practices.

The interview(s) will last approximately 30 minutes and will be conducted in person, via
skype or over the phone. In addition, participants will complete an electronic survey
using the Attitudes Regarding Trauma Informed Care Scale by The Traumatic Stress
Institute. The survey will take approximately 10 minutes to complete.

I understand that:

a) There are minimal risks associated with participating in this research. I understand
   that the Investigator will protect my confidentiality by keeping the identifying
   codes and research materials in a locked file drawer that is available only to the
   researcher.
b) I understand that the interview will be audio recorded. The recordings will be
   available only to the researcher and the professional transcriptionist. The audio
   recordings will be used to capture the interview dialogue and to ensure the accuracy
   of the information collected during the interview. All information will be identifier-
   redacted, and my confidentiality will be maintained. Upon completion of the study all
   recordings will be destroyed. All other data and consents will be securely stored for
   three years after completion of data collection and confidentially shredded or fully
   deleted.
c) The possible benefit of this study to me is that my input may help add to the research
   regarding teachers' attitudes towards Adverse Childhood Experiences and Trauma
   Informed Classroom Practices. The findings will be available to me at the conclusion
   of the study and will provide new insights about the coaching experience in which I
   participated. I understand that I will not be compensated for my participation.
d) If you have any questions or concerns about the research, please feel free to contact the
   researcher by e-mail at kohl@brandman.edu or by phone at 530-848-2892 or Dr.
   Patrick Ainsworth (Advisor) at painsworth@brandman.edu.
e) My participation in this research study is voluntary. I may decide to not participate
   in the study, and I can withdraw at any time. I can also decide not to answer
   particular questions during the interview if I so choose. I understand that I may
   refuse to participate or may withdraw from this study at any time without any

negative consequences. Also, the Investigator may stop the study at any time.

f) No information that identifies me will be released without my separate consent and that all identifiable information will be protected to the limits allowed by law. If the study design or the use of the data is to be changed, I will be so informed, and my consent re-obtained. I understand that if I have any questions, comments, or concerns about the study or the informed consent process, I may write or call the Office of the Vice Chancellor of Academic Affairs, Brandman University, at 16355 Laguna Canyon Road, Irvine, CA 92618, (949) 341-7641.

I acknowledge that I have received a copy of this form and the "Research Participant's Bill of Rights." I have read the above and understand it and hereby consent to the procedure(s) set forth.

_____
    Signature of Participant

_____
    Signature of Principal Investigator

_____
    Date

APPENDIX G

Participant Bill of Rights

BRANDMAN
University Chapman University System

BRANDMAN UNIVERSITY INSTITUTIONAL REVIEW BOARD

Research Participant's Bill of Rights

Any person who is requested to consent to participate as a subject in an experiment, or who is requested to consent on behalf of another, has the following rights:

1. To be told what the study is attempting to discover.

2. To be told what will happen in the study and whether any of the procedures, drugs or devices are different from what would be used in standard practice.

3. To be told about the risks, side effects or discomforts of the things that may happen to him/her.

4. To be told if he/she can expect any benefit from participating and, if so, what the benefits might be.

5. To be told what other choices he/she has and how they may be better or worse than being in the study.

6. To be allowed to ask any questions concerning the study both before agreeing to be involved and during the course of the study.

7. To be told what sort of medical treatment is available if any complications arise.

8. To refuse to participate at all before or after the study is started without any adverse effects.

9. To receive a copy of the signed and dated consent form.

10. To be free of pressures when considering whether he/she wishes to agree to be in the study.
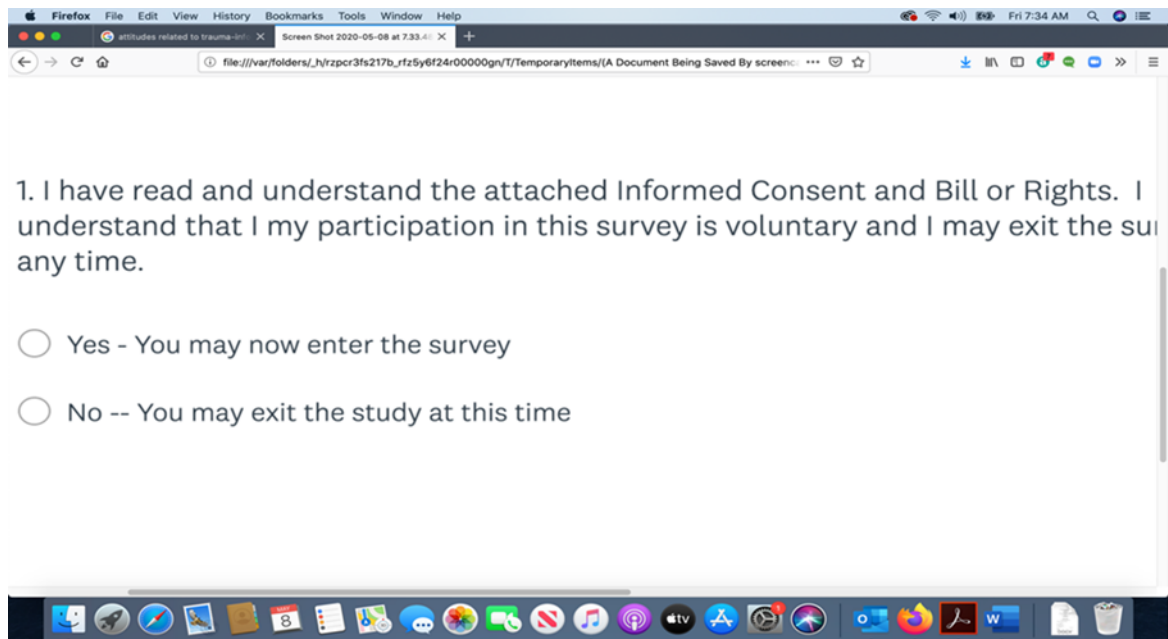
If at any time you have questions regarding a research study, you should ask the researchers to answer them. You also may contact the Brandman University Institutional Review Board, which is concerned with the protection of volunteers in research projects. The Brandman University Institutional Review Board may be contacted either by telephoning the Office of Academic Affairs at (949) 341-9937 or by writing to the Vice Chancellor of Academic Affairs, Brandman University, 16355 Laguna Canyon Road, Irvine, CA, 92618.

Brandman University IRB   Adopted   November 2013

APPENDIX H

Introduction to Survey

Thank you for agreeing to participate in this research on teachers' attitudes and attitudes about adverse childhood experiences, trauma informed care/practices and resiliency. Upon completion of the study, you will receive an aggregate report of your results. The researcher will not have access to this individual report.

Please read the attached Informed consent and Bill of Rights. Click the attached link to indicate that you give your consent to participate in the study. Upon stating yes to the informed consent, you will receive a link to the Survey. You may stop the survey at any time. It is best not to overthink the answer and respond with your first perceptual thought. It is anticipated this survey will take approximately 10 minutes to complete. If you wish to participate in the interview portion of the study, please e-mail the researcher at kohl@brandman.edu or call the researcher at 848-2892.

APPENDIX I

Demographics and Standard Graphs for ARTIC

We take the protection of your confidentiality seriously. Again, your answers to individual items and your scores will not be shared with anyone. On any demographic item you can check "Prefer not to answer."

By answering demographic items, we can provide your organization with more detailed reports to support trauma- informed care (TIC) implementation. You are also providing valuable information to advance research in the TIC field.

Please answer the following demographic questions:

How familiar are you with trauma-informed care?

- ❏ Not at all familiar
- ❏ A little familiar
- ❏ Moderately familiar
- ❏ Very familiar

How many hours of formal training about psychological trauma or trauma-informed care have you received?

- ❏ <5
- ❏ 6-15
- ❏ 16-30
- ❏ >30

To what extent do you feel confident in your skills practicing a trauma-informed care approach?

- ❏ Not at all confident
- ❏ A little confident
- ❏ Moderately confident
- ❏ Very confident

To what extent has your organization embraced trauma-informed care?

- ❏ Not at all
- ❏ A little
- ❏ Moderately
- ❏ Completely

Primary Sector of Organization and Job Role

Education - Early Childhood, Primary, Secondary,

Special Ed

Choose the Job role that BEST fits your job:

- ❏ Administrator
- ❏ Teacher
- ❏ Teacher Aide
- ❏ Guidance Staff
- ❏ Mental Health or Health Care Staff
- ❏ Paraprofessional or Direct Care Staff
- ❏ Support Staff
- ❏ Prefer not to answer

Years in this role

- ❏ <1
- ❏ 1-5
- ❏ 6-10
- ❏ 11-15
- ❏ 16-20
- ❏ >20
- ❏ Prefer not to answer

Years with your organization

- ❏ <1
- ❏ 1-5
- ❏ 6-10
- ❏ 11-15
- ❏ 16-20
- ❏ >20

Age

- ❏ 18-24
- ❏ 25-34
- ❏ 35-44
- ❏ 45-54
- ❏ 55-64
- ❏ 65+
- ❏ Prefer not to answer

Gender

- ❏ Male
- ❏ Female
- ❏ Transgender
- ❏ Non-binary
- ❏ Prefer to self-describe: _____
- ❏ Prefer not to answer

Race and Ethnicity Identify

Identify your ethnicity:

- ❏ Hispanic, Latino, or Spanish origin
- ❏ Not Hispanic, Latino, or Spanish Origin
- ❏ Prefer not to answer

Identify your race (select all that apply):

- ❏ American Indian or Alaska Native
- ❏ Asian American
- ❏ Black or African American
- ❏ Native Hawaiian or Other Pacific Islander
- ❏ White
- ❏ Other (specify): _____
- ❏ Prefer not to answer

Highest level of education completed

- ❏ Less than high school diploma
- ❏ Completed high school or GED
- ❏ Associates degree or some college
- ❏ Bachelor's degree
- ❏ Master's degree
- ❏ Doctoral or professional degree
- ❏ Prefer to not answer

Annual household income

- ❏ <20,000
- ❏ 20,000-40,000
- ❏ 40,000-60,000
- ❏ 60,000-80,000

- ❏ 80,000-100,000
- ❏ 100,000-120,000
- ❏ >120,000
- ❏ Prefer not to answer

<u>Standard Report Graphs – see sample report (see Appendix N)</u>

1. ARTIC Overall and Subscales, All Respondents, by timepoint
2. Sub-Graphs: Individual graphs for overall and subscales, All Respondents, by timepoint - with benchmark lines
3. ARTIC Overall, all job roles, by timepoint - with benchmark line
4. ARTIC Overall, years with organization, by timepoint - with benchmark line
5. ARTIC Overall, confidence in skills practicing TIC approach, by timepoint - with benchmark line
6. ARTIC Overall, all department, program, or site, by timepoint - with benchmark line

APPENDIX J

Interview Script and Questions

My name is Alyson Kohl. I am currently an Adverse Childhood Experiences and Trauma Focused trainer for Shasta County Public Health. I am a doctoral candidate at Brandman University in Organizational Leadership. I am conducting research into teachers' attitudes regarding adverse childhood experiences (ACE), student problematic behavior and learning problems, trauma informed educational practices and childhood resiliency. ACE are negative experiences children have which can impact brain development due to the autonomic nervous system (ANS) being wired for survival through flight, fight or freeze when the ANS perceives danger. To mitigate the long-term effects of ACEs it is important to build resiliency in children. Resiliency is the ability to bounce back from adversity and is developed through positive relationships and skill development. The purpose of this inquiry is to seek your attitudes/attitudes and perceptions regarding student behavior, ACEs and the trauma informed practices the district has implemented. I will be interviewing 12 other teachers like yourself. The information you share, along with others, will hopefully provide a clear picture of the perspective of teachers on being trained in ACEs and Trauma Informed Practices (TIP). This knowledge will be used to inform teachers, principals, and superintendents in the effectiveness of these trainings and practices.

The questions I will be asking are the same for everyone in the study. The reason for this is to try and guarantee, as much as possible, that all interviews with participating teachers will be conducted in a consistent manner. I want to remind you, any information obtained in connection to this study will remain confidential. All of the data will be

reported without reference to any individual(s). For ease of our discussion and accuracy, I will record our conversation as indicated in the Informed Consent sent to you via e-mail. I will have the recording transcribed to a Word document and will send it to you via electronic mail so that you can check to make sure that I have accurately captured your thoughts and ideas. The digital recording will be erased following review and approval of the transcription. In order to maintain student confidentiality please refrain from naming any children. Please use the term "Child A, Child B", etc...

Did you receive the Informed Consent and Brandman Bill of Rights I sent you via e-mail? Do you have any questions or need clarification about either document? If so, would you be so kind as to sign the hard copy of these IRB requirements for me to collect? Thank you for agreeing to participate in this research on Adverse childhood experiences (ACE), Trauma Informed Practice (TIP) and Resiliency.   This interview will take approximately 45 to 60 minutes. At any point during the interview, you may ask that I skip a particular question or stop the conversation altogether. Do you have any questions before we begin? Okay, let's get started, and thanks so much for your time.

Important Note for the Interviewer: To ensure validity and reliability, please ask each question for every teacher.

Research Questions

To ensure reliability and validity some questions may be repeated.

Adverse Childhood Experiences

Question:

1. What trainings have you participated in regarding Adverse Childhood Experiences?

Probe:

    A. What Trauma Informed Educational Practices training have you received?

    B. Describe any changes you have made to your classroom practices since the training?

    C. Describe the follow-up after the training or subsequent trainings offered? If so, What?

Effects of ACE

    Use Appendix O – Part 1-Symptoms of ACE for the following questions:

Question:

2. What types of behavior problems did students display in your classroom prior to the trainings?

Probe:

    A. Describe any of the problematic behaviors you observed in your classroom.

    B. How did behavior problems affect your classroom? Please give examples.

    C. Can you share a time when the training affected your classroom or your classroom management?

Question:

3. What types of student learning problems did students display in your classroom prior to the trainings?

Probe:

    B. Describe any learning problems from Appendix O you observed in your classroom.

    C. How did learning problems affect your classroom? Please give examples.

Attitudes/Attitudes

Questions:

4. What were your attitudes and attitudes regarding problematic student learning and behaviors prior to trainings?

5. After going through the training did your attitudes/attitudes change regarding classroom behavior & learning problems? How so?

Probe:

    A. How do you perceive the trainings have changed your classroom management practices?

    B. How do you perceive the trainings have changed your instructional practices?

6. What changes have you seen in your students since these trainings?

    A. What student behaviors have changed?

    B. What changes in learning or achievement have you witnessed?

Resiliency

Use AppendixO – Part 2- Signs of Resiliency to help you with the following questions

Question:

7. A major purpose of the trainings is to equip teachers with the knowledge and practices to help students develop resiliency skills.

Probe:

    A. Did the training have a focus on building student resiliency?

    B. Among the practices you have implemented, have any of those helped to build student resiliency.

C. What student behaviors do you see now that indicates and increase in student resiliency? Can you give an example?

8. Describe the effectiveness of the trainings on equipping you to respond to ACE behaviors in the Classroom.

A. What have you learned from the trainings?

B. Please explain how you feel the training was effective/ineffective?

C. What improvements would you suggest in the training?

D. Should additional trauma informed practices training be offered in the school. Why/Why not?

That concludes the interview. Thank you for your participation.

APPENDIX K

Interview Review and Field Test Participant Feedback Questions

While conducting the interview you should take notes of their clarification request or comments about not being clear about the question. After you complete the interview ask your field test interviewee the following clarifying questions. <mark>**Try not to make it another interview; just have a friendly conversation**</mark>. Either script or record their feedback so you can compare with the other two members of your team to develop your feedback report on how to improve the interview questions.

Before the brief post interview discussion, give the interviewee a copy of the interview protocol. If their answers imply that some kind of improvement is necessary, follow up for specificity.

1. How did you feel about the interview? Do you think you had ample opportunities to describe what you do as a leader when working with your team or staff?

2. Did you feel the amount of time for the interview was ok?

3. Were the questions by and large clear or were there places where you were uncertain what was being asked? *If the interviewee indicates some uncertainty, be sure to find out where in the interview it occurred.*

4. Can you recall any words or terms being asked about during the interview that were confusing?

5. And finally, did I appear comfortable during the interview… (I'm pretty new at this)?

Remember, the key is to use common, conversational language and very user-friendly approach. Put that Emotional Intelligence to work☺

APPENDIX L

Alignment of Research Questions, Interview Questions, and Supporting Literature

Research Questions	Interview Questions	Supporting Literature*
To what extent do teachers in Shasta County Enterprise Elementary School District indicate the trainings on the Trauma Informed Evidence-Based Practices affected their attitudes towards students who had experienced ACEs?	1. What trainings have you participated in regarding Adverse Childhood Experiences? 2. What types of behavior problems did students display in your classroom prior to the trainings? 3. What types of student learning problems did students display in your classroom prior to the trainings? 4. What were your attitudes towards problematic student learning & behaviors prior to trainings? 5. After going through the training did your attitudes/attitudes change? How so? 6. What changes have you seen in your students since the trainings?	Rossen, E. & Hull, R. (2013) Martin, C.G., Cromer, L.D. & Freyd, J.J. (2010) McIntyre, E.M., Baker, C.N. & Overstreet, S. (2019) Sitler, H.C. (2008) Craig, S.E. (2016) Terrasi, S. & Crain de Galarce, P. (2017) Jennings, P.A. (2019) Cummings, K.P. & Swindell, J. (2019) Kataoka, S.H., Vona, P., Acuna, A., Jaycox, L., Escudero, P., Rojas, C., Ramirez, E., Langley, A., Stein, B.D. (2018) Nealy-Oparah, S. & Scruggs-Hussein, T. C. (2018) Honsinger, C. & Brown, M.H. (2019) Seng, J. & CAsCAid Group University of Michigan (2018) Anda, R. F, Felitti, V.J., Bremner, J.D., Walker, J.D., Whitfield, C., Perry, B.D., Dube, S.R., Giles, W.H. (2006) Blaustein, M.E. (2013) Adelman, H.S. & Taylor, L. (2013) Bick, J. & Nelson, C.A. (2016) Crouch, E., Radcliff, R., Strompolis, M. & Srivastav, A. (2019) Crouch, E., Probst, J.C., Radcliff, E. & Bennett, K.J. & McKinny, S.H. (2019)

213

What were the perceptions of teachers in Shasta County Elementary Schools on the effectiveness of the Trauma Informed Evidence-Based Practice trainings in changing their classroom practices to support the resiliency of students who had experienced ACEs?	7. A major purpose of the trainings is to equip teachers with the knowledge and practices to help students develop resiliency skills. 3. Describe the effectiveness of the trainings on equipping you to respond to ACE symptoms in the classroom.	Chafoueas, S.M., Johnson, A.H., Overstreet, S., Santos, N.M. (2016) Blodgett, C. & Lanigan, J. D. (2018) Phifer, L.W. & Hull, R. (2016) Watson, M.,& Ecken, L. (2019) Romero, V.E., Robertson, R. & Warner, A. (2018) Post, P.B., Grybush, A.L., Elmadani, A. & Lockart, C.E. (2020) Clements-Nolle, K. & Waddington, R. (2019) Gardner, R. L. & Stephens-Pisecco (2019) Arincorayan, D., Applwhite, L., Garrido, M., Cashio, V., Bryant, M. (2017) Hargreaves, M.B., Verbitsky-Savitz, N., Coffee-Borden, B., Perreras, L., Whilte, C.R., Pecora, P.J., Morgan, G.B., Barila, T., Ervin, A., Case, L., Hunter, R., Adams, K. (2017) Sciaraffa, M.A., Zeanah, P.D., Zeanah, C.H. (2018) Cohen, H. (2016) Everly, G.S. & Firestone, R.M. (2013) Traub, F., Boynton-Jarrett, R. (2017)

Brandman University Institutional Review Board (BUIRB) Approval

Form 6: Approval

MyBrandman <my@brandman.edu>

Fri 6/26/2020 12:27 PM

To: Kohl, Alyson <kohl@brandman.edu>

Cc: Ainsworth, Patrick <painswor@brandman.edu>; edd <edd@brandman.edu>

Hello Alyson Kohl,

You have been approved for Form 6, Approval of Formal Study Proposal.

Next step: IRB (Please visit the Brandman University IRB site at

https://irb.brandman.edu/Pages/Home.aspx)

Please submit your Form 7, Request to Schedule Oral Defense once the following are completed: IRB approval and your Chair has approved you to move forward and proceed with scheduling the Final Defense.

Form 7 uploads (2 separate documents)

Abstract required format: Word Document

Final Dissertation: Word Document or PDF

Thank you,

Ed.D Team

School of Education

Brandman University

16355 Laguna Canyon Road

Irvine, CA 92618

edd@brandman.edu

www.brandman.edu

Unfortunately, this e-mail is an automated notification, which is unable to receive replies. If you have questions please e-mail us

at edd@brandman.edu. You may also call Nicole Cook, Doctoral Program Support Specialist at 949-

341-9962.

Online ARTIC Report - Enterprise Elementary: Trauma-Informed Care Study

Introduction

Thank you for using the Attitudes Related to Trauma-Informed Care (ARTIC) Scale. For eligible users, one hour of consultation is included in your purchase to assist with understanding your scores.

Here is the dashboard report of results thus far at Enterprise Elementary: Trauma-Informed Care Study. This report is for 1 timepoint using ARTIC-45 Education. ARTIC Scale data was collected at the following times:

Timepoint 1 (T1) – 10/14/2020

Scoring: Means, Percentile Ranks, and Benchmarks

ARTIC scores range from 0 to 7. Scores are reported here as **means** and **percentile ranks**. A **mean** score is the average of a group of individual respondent scores. **Percentile ranks** show how the mean score compares to large representative samples in either the Human Services/Health sector or the Education sector. The percentile rank of a score is the percentage of scores in the sample that are equal to or lower than it. For example, a score at the 55th percentile means that the score is greater than 55 percent of the people in the sample.

Graphs divide the scores into three benchmark ranges based on percentile rank.

- Thrive Range: 75th - 100th percentile

- Grow Range: 25th - 75th percentile

- Learn Range: 0 - 25th percentile

Graphs Displayed on Dashboard Tabs

The dashboard of scores are displayed on the following tabs to the right. The dashboard only shows selected demographic categories.

- **ARTIC Score Results**

  This tab shows the Overall and 7 subscale scores at all timepoints. There is a graph showing a summary of scores and individual subgraphs for the Overall score and each subscale.

  For each subgraph, there are **Results** and **Recommendations** specific to that graph. These recommendations are NOT linked to your specific results, but rather reflect current best practice about TIC implementation. For the Overall score and each of the subscale scores, there are recommendations for how to change professional attitudes in **five TIC implementation domains**:

  1. Leadership and Communication

  2. Hiring and Orientation

  3. Training

  4. Coaching

  5. Peer Support

- **ARTIC Scores By Department/Site/School (for Advanced Plus Package only)**

  The graph on this tab compares Overall ARTIC scores by department, site, or school for the Advanced Plus package only.

- **ARTIC Scores By Job Role**

  The graph on this tab compares Overall ARTIC scores by job role. To protect confidentiality, we only report scores for job roles where there are 10 or more respondents in that group.

- **ARTIC Scores By Years with Organization**

  The graph on this tab compares the Overall ARTIC scores by years with your organization. To protect confidentiality, we only report scores for categories where there are 10 or more respondents in that group.

- **Confidence Practicing Trauma-Informed Care (TIC)**

  The graph on this tab does **NOT** show ARTIC scores. This graph shows the percentage of your respondents that selected particular answers to the question of how confident they feel practicing TIC.

Description of ARTIC

The ARTIC Scale is a tool that measures professional and para-professional attitudes related to trauma-informed care (Baker, Brown, Wilcox, Overstreet, & Arora, 2015). It is one of the only, and most widely used, validated measures of trauma-informed care currently available.

Trauma-informed care is a complex approach to service delivery and education and the ARTIC Scale measures only one of many possible indicators of TIC. **The ARTIC Scale CANNOT, on its own, determine if an individual, program, school, organization, or service system is trauma-informed.**

We strongly recommend that the results of the ARTIC Scale be used for quality improvement in a manner consistent with TIC principles -- Safety; Trustworthiness and Transparency; Collaboration and Mutuality; and Empowerment, Voice and Choice (SAMHSA, 2014). **We strongly discourage results from being used in a punitive manner to penalize individuals, programs, organizations, and service systems.**

The ARTIC – 45 version produces an overall score and scores for seven subscales. The ARTIC – 10 version is a short form that only produces an overall score. Below are descriptions of the score categories.

<u>Overall Score</u>

This is a mean score reflecting answers on all items of the ARTIC Scale. It is a global score of attitudes toward TIC.

<u>Seven Subscales Scores</u>

1. **Underlying Causes of Problem Behavior and Symptoms.** This subscale measures whether professional attitudes endorse the view that client or student behaviors and symptoms are adaptive and malleable versus intentional and fixed.

2. **Staff Responses to Problem Behavior and Symptoms.** This subscale measures attitudes about whether professional responses to problem behavior should focus on the importance of the relationship, flexibility, kindness, and safety as the agents of change versus focus on accountability, consequences, and rules as the agent of change.

3. **Empathy and Control.** This subscale measures attitudes about whether professional behavior should be empathy-focused versus control-focused.

4. **Self-Efficacy at Work.** This subscale measures attitudes about whether professionals feel able and confident to meet the demands of working with a traumatized population versus feel unable to meet the demands.

5. **Reactions to the Work.** This subscale measures attitudes about whether professionals appreciate the effects of secondary trauma/vicarious trauma and cope by seeking support versus minimize the effects of secondary trauma/vicarious trauma and cope by ignoring or hiding the impact.

6. **Personal Support for Trauma-Informed Care.** This subscale measures attitudes about whether professionals feel supportive of, and confident about, implementation of TIC versus concerned about implementation of TIC.

7. **System-wide Support for Trauma-Informed Care.** This subscale measures attitudes about whether the wider system (i.e. administration, supervisors, colleagues) supports TIC versus does not support TIC.

217

ARTIC Score Results

Summary of Scores: ARTIC 45 - Education
Enterprise Elementary: Trauma-Informed Care Study

75-100 %tile - Thrive

25-75 %tile - Grow

0-25 %tile - Learn
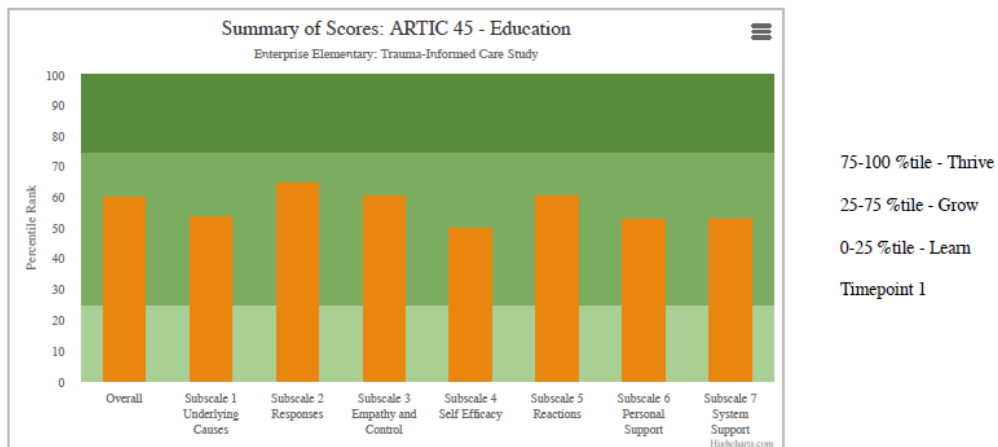
Timepoint 1

ARTIC Subgraphs: Overall Score and Seven Subscales with Recommendations

Overall

HIGHER SCORES = Overall staff attitudes that are supportive of TIC
LOWER SCORES = Overall staff attitudes that are NOT supportive of TIC.

75-100 %tile - Thrive

25-75 %tile - Grow

0-25 %tile - Learn
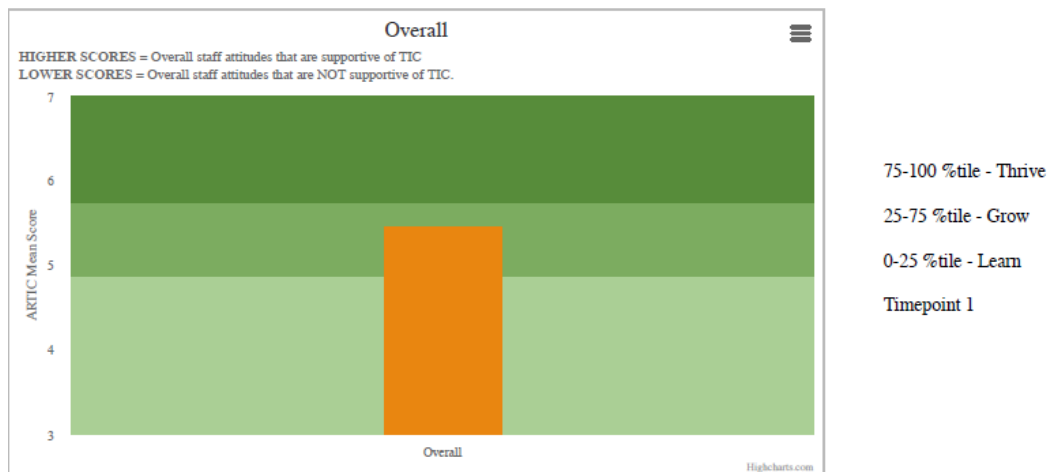
Timepoint 1

Results

- The mean score for the Overall subscale at Timepoint 1 is 5.46. This score is at the 60 %tile. This falls within the Grow range

Recommendations to Change Attitudes: Overall Score

Leadership and Communication

- Educate leadership about the prevalence of trauma and the importance of trauma-sensitive schools (TSS)
- Educate the school board about the importance of TIC
- Communicate leadership support of TIC to staff
- Choose a recognized, evidence-informed model to implement TIC or use recognized resources for self-guided implementation
- Dedicate necessary financial and human resources, recognizing that TIC is a paradigm shift taking a sustained effort over many years

Hiring and Orientation

- Ensure hiring process reflects TIC principles of safety, trustworthiness and transparency, collaboration, and empowerment
- Explain to job applicant the school's commitment to TIC
- Use screening and interview questions that probe for trauma-informed attitudes and behaviors
- Include items in performance review materials that address trauma-informed attitudes and behaviors

Training

- Provide foundational training on trauma and TIC to ALL current and new staff (including support staff) that uses a common language and framework
- Train trainers to provide this training to staff in an ongoing way
- Provide booster trainings on trauma and TIC to sustain knowledge and attitude change

Coaching

- Provide coaching to all staff that have direct contact with students; not just classroom teachers
- Include items on classroom observation tools that reflect TIC principles
- Coaches should reflect the TIC principles of safety, trustworthiness and transparency, collaboration, and empowerment in their coaching with teachers and staff
- Provide training for coaches on trauma-informed coaching or "reflective coaching"
- Schedule coaching to happen on a regular basis; not only in response to a problem

Peer Support

- Identify TIC champions at the school
- Model via role play and other methods trauma-informed interactions with students in meetings
- Begin faculty/grade-level/subject matter meetings with short rituals that build connection and a feeling of community
- Recognize trauma-related dynamics that emerge among adults in the school who work with students that have suffered trauma (parallel process)

Subscale 1
Underlying Causes of Problem Behavior and Symptoms

HIGHER SCORES = Staff attitudes that support a view of student behavior/symptoms as adaptive and malleable.
LOWER SCORES = Staff attitudes that support a view of student behavior/symptoms as intentional and fixed.

75-100 %tile - Thrive

25-75 %tile - Grow

0-25 %tile - Learn
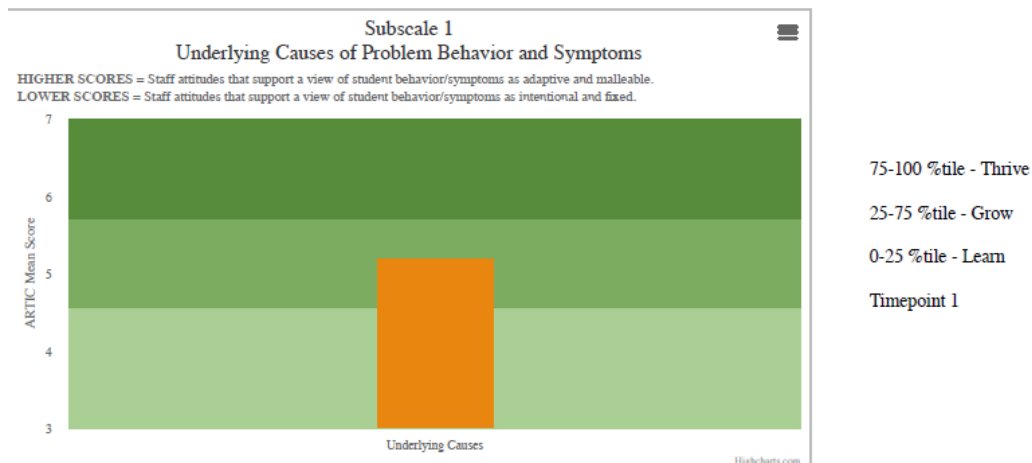
Timepoint 1

Results

- The mean score for the Underlying Causes subscale at Timepoint 1 is 5.20. This score is at the 54 %tile. This falls within the Grow range

Recommendations to Change Attitudes: Underlying Causes of Problem Behavior and Symptoms

Leadership and Communication

- Institute a school-wide behavior management system that considers the question, "How did the student's behavior meet an understandable need in the moment?" and factors the student's history and underdeveloped skills in their response. The behavior management system recognizes that understanding problem behavior does NOT mean excusing that behavior
- When a school leader becomes involved with a student discipline situation, explore the questions: Why did the student act the way they did? How did it meet an understandable need? What is known about the student's history?

Hiring and Orientation

- Propose a scenario in the interview about a student behavior. Ask for hypotheses about "Why the student acted the way they did? How did it meet an understandable need?"
- Stress in orientation the message that students behave the way they do to meet a need and it is the staffs' job to understand that need. Staff also behave the way they do to meet a need which their supervisors need to understand

Training

- Teach about the prevalence of adversity and trauma
- Teach about the importance of adversity and trauma in understanding the root cause of problem behavior and learning difficulties. Problem behaviors are learned ways of adapting to traumatic circumstances
- Teach how trauma negatively affects the brain, and how this relates to learning and behavior problems

Coaching

- Coaches should ask why the student acted the way they did if appropriate to what they are observing
- Coaches should recognize that school staff members are also meeting a need through their unprofessional or problematic job behaviors, which is important to understand. At the same time, staff must be held accountable for their problem job behavior
- Coaches should stress that staff not take student behavior personally because it is a learned way of coping with past trauma

Peer Support

- With all problem behavior, but especially persistent problem behavior, engage the team in brainstorming why the student acted the way they did and what skills they need to meet with less negative consequences
- Peer support should stress that staff not take student behavior personally because it is a learned way of coping with past trauma

Subscale 2
Staff Responses to Problem Behavior and Symptoms

HIGHER SCORES = Staff attitudes that support responses to problem behavior based on relationship-building, flexibility, and kindness.
LOWER SCORES = Staff attitudes that support responses to problem behavior based on accountability, consequences, and rules.
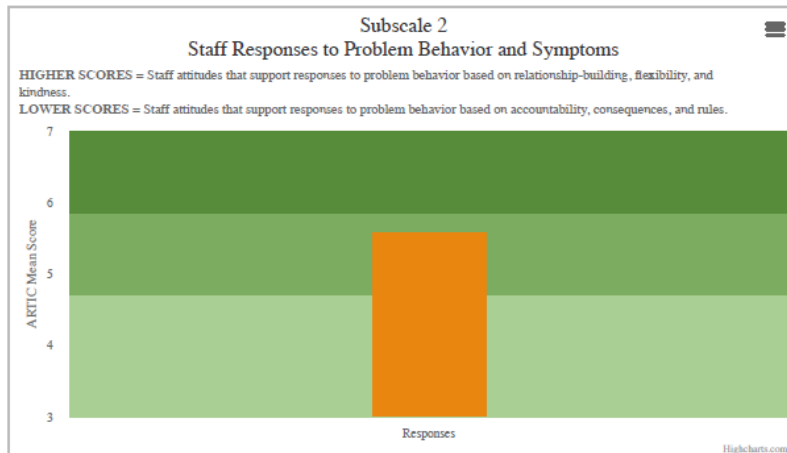
75-100 %tile - Thrive

25-75 %tile - Grow

0-25 %tile - Learn

Timepoint 1

Results

- The mean score for the Responses subscale at Timepoint 1 is 5.59. This score is at the 65 %tile. This falls within the Grow range

Recommendations to Change Attitudes: Staff Responses to Problem Behavior Symptoms

Leadership and Communication

- Balance flexibility and accountability in policy related to students and staff
- Model compassion, relationship building, and kindness in interactions with students and staff
- Praise and reward staff behavior displaying kindness, flexibility, and individualization

Hiring and Orientation

- Use interview questions to probe for job applicant's default reaction to student problem behavior (i.e. "A student storms into the classroom and throws their backpack down nearly knocking over a table, how you would respond?")
- If possible, have job applicant observe a classroom and ask how applicant might have responded to situations they observed

Training

- Teach how a strong adult-student relationship is the most powerful tool to influence behavior and is the primary agent of change with students with trauma histories
- Teach how a strong adult-student relationship changes the physiology of the brain and nervous system
- Help teachers and staff strengthen their own emotion regulation strategies and how this helps students regulate their emotions when upset
- Teach the value of routines and rituals such as morning meetings and community circles

Coaching

- Coaches should model compassion, relationship building, kindness and accountability in their work with faculty and staff
- Coaches should ally with teachers' strengths, offering reassurance and praise whenever possible

Peer Support

- Promote the building of strong relationships within the school staff, and encourage everyone to have a voice
- Utilize effective conflict management among staff such as restorative approaches

Subscale 3
Empathy and Control

HIGHER SCORES = Staff attitudes that support professional behavior being empathy-focused.
LOWER SCORES = Staff attitudes that support professional behavior being control-focused.

75-100 %tile - Thrive

25-75 %tile - Grow

0-25 %tile - Learn

Timepoint 1

Results

- The mean score for the Empathy and Control subscale at Timepoint 1 is 5.60. This score is at the 61 %tile. This falls within the Grow range

Recommendations to Change Attitudes: Empathy and Control

Leadership and Communication

- Treat the staff as you want them to treat the students
- Promote empathy in interactions with staff
- Validate staff's challenges during cultural change process
- Focus on staff's strengths
- Balance accountability and flexibility
- Manage conflict in a manner that is direct, firm, compassionate, and seeks to preserve relationships

Hiring and Orientation

- Screen and interview for applicants who are comfortable making mistakes, value appropriate vulnerability, and tolerate ambiguity

Training

- Train all teachers in positive classroom management techniques
- Teach the value of routines and rituals such as morning meetings and community circles
- Provide training on healthy relationships and attachment as the critical agent of change with students
- Stress importance of students being able to make mistakes and learn from them

Coaching

- Normalize making and learning from mistakes
- Stress the critical importance of rupture and repair in relationships as in applies to students and peers

Peer Support

- Build a culture among staff that it is okay to not know, share mistakes, and learn from the team
- Build a culture where it is encouraged to ask for and accept help
- Talk about the difficult balance between continually monitoring for safety while resisting taking control

222
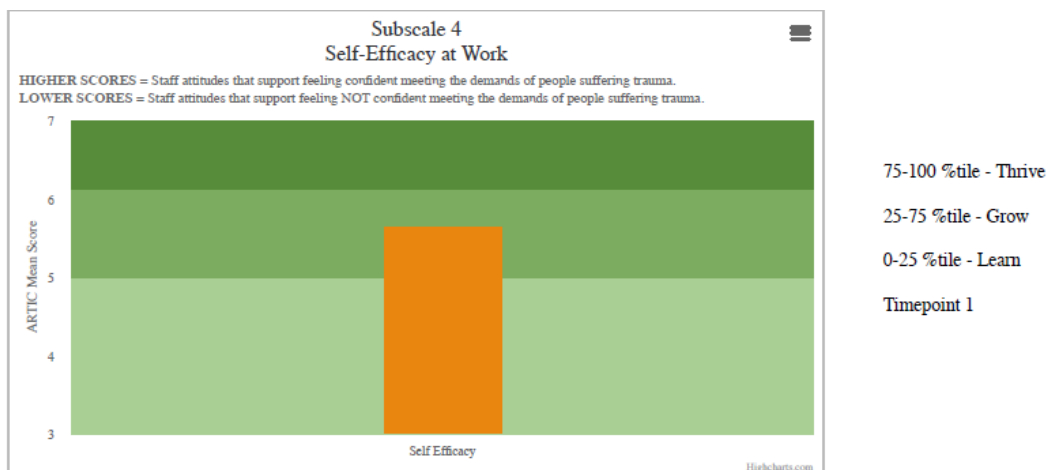
Results

- The mean score for the Self Efficacy subscale at Timepoint 1 is 5.65. This score is at the 50 %tile. This falls within the Grow range

Recommendations to Change Attitudes: Self-Efficacy at Work

Leadership and Communication

- Allocate resources for training and regular coaching to teach and reinforce trauma-informed behavior with students
- Continually normalize the challenges of working with trauma survivor students

Hiring and Orientation

- Use interview questions that probe for resiliency factors in staff
- Partner new staff with a mentor that embodies TIC principles and practices

Training

- Use experiential training methods to concretely demonstrate TIC interactions with students and build confidence in the approach
- Train staff about the importance of resilience and self-care to being successful at work

Coaching

- Role play in coaching trauma-informed ways of interacting with difficult students
- Establish a safe and supportive climate for teachers to openly discuss difficulties of the work

Peer Support

- Create a learning culture in the school where staff can learn from peers, make mistakes, build skills
- Build a safe and supportive culture where staff can talk openly about their triumphs and struggles and get support for their work

Subscale 5
Reactions to the Work

HIGHER SCORES = Staff attitudes that support appreciating the effects of secondary trauma/vicarious trauma and coping by seeking support.
LOWER SCORES = Staff attitude that support minimizing the effects of secondary trauma/vicarious trauma and coping by ignoring or hiding the impact.

75-100 %tile - Thrive

25-75 %tile - Grow

0-25 %tile - Learn

Timepoint 1

Results

- The mean score for the Reactions subscale at Timepoint 1 is 5.63. This score is at the 61 %tile. This falls within the Grow range

Recommendations to Change Attitudes: Reactions to the Work

Leadership and Communication

- Publically acknowledge and discuss secondary trauma, fostering a culture that openly discusses it rather than hides it
- Allocate resources to address secondary trauma such as wellness programming, reasonable class size, adequate health benefits, and vacation time
- Debrief major incidents and consider effect on staff

Hiring and Orientation

- Use interview questions that ask directly about what actions applicants take for self-care
- Include frank discussion of secondary trauma and self-care in orientation training

Training

- Train staff about the definition and inevitable impact of secondary trauma as well as ways to address the effects
- Train staff about the critical importance of talking openly about, and seeking support for, secondary trauma as an antidote to its effects

Coaching

- Encourage discussion of secondary trauma in coaching situations and see a teacher's raising the topic as a strength
- Inquire routinely about teacher self-care
- Debrief major incidents and consider the impact on teachers and staff

Peer Support

- Implement a ritual at every faculty/grade level/subject matter meeting that touches on secondary trauma (brief meditation, moment of gratitude, appreciation for other team members, sharing of a self-care strategy, etc.)
- Celebrate successes as a group
- Recognize when stress is high or staff conflict is high and consider secondary trauma as a factor

Subscale 6
Personal Support for Trauma-Informed Care

HIGHER SCORES = Staff attitudes that endorse feeling personally supportive of TIC and believing it is/will be effective.
LOWER SCORES = Staff attitudes that endorse NOT feeling personally supportive of TIC and being concerned it is/will be ineffective.

75-100 %tile - Thrive
25-75 %tile - Grow
0-25 %tile - Learn
Timepoint 1
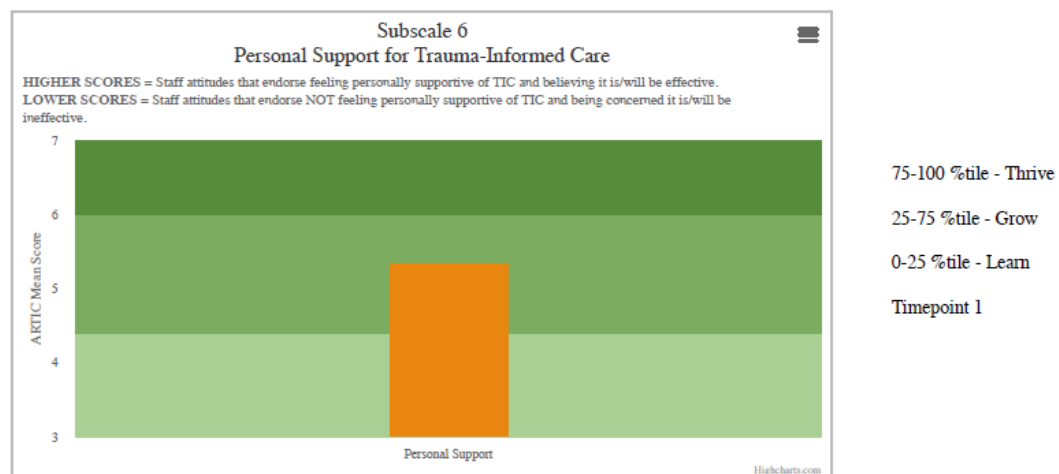
Results

- The mean score for the Personal Support subscale at Timepoint 1 is 5.34. This score is at the 53 %tile. This falls within the Grow range

Recommendations to Change Attitudes: Personal Support for Trauma-Informed Care

Leadership and Communication

- Attend to the pace of change, being sure to teach new skills before expecting staff to behave differently. This will build personal support for TIC
- Highlight and celebrate successes in TIC implementation to build staff member's personal support for TIC
- Implement TIC with a combination of process (getting input on the change) and mandate (requiring change to happen according to a time frame)

Hiring and Orientation

- Screen and interview for applicants that value connection and relationships, collaboration, team work, flexibility, and willingness to individualize
- Discuss rational and successes of TIC practice from the outset in orientation

Training

- Systemically train all staff about trauma and TIC to create a common language and framework
- Provide concrete examples of successful use of TIC practices during training
- Acknowledge the prevalence of childhood adversity and trauma in all populations and suggest ways for teachers and staff to address their own trauma

Coaching

- Openly discuss concerns, fears, disagreements, and hopes related to a TIC approach with teachers and staff
- Address concrete skill-building of teachers and staff

Peer Support

- Regularly discuss application of TIC principles and practices to student situations in meetings
- Work deliberately to build feeling of community in the school to help staff feel supported to carry out TIC
- Develop rituals in meetings for sharing successes of using TIC practices

Subscale 7
System Support for Trauma-Informed Care

HIGHER SCORES = Staff attitudes that support a view that the wider system (i.e. administration, supervisors, colleagues) supports TIC.
LOWER SCORES = Staff attitudes that support a view that the wider system does NOT support TIC.
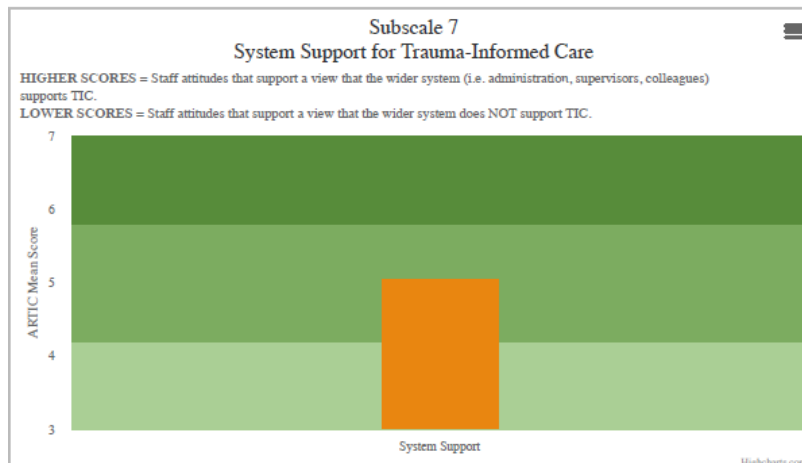
75-100 %tile - Thrive

25-75 %tile - Grow

0-25 %tile - Learn

Timepoint 1

Results

- The mean score for the System Support subscale at Timepoint 1 is 5.05. This score is at the 53 %tile. This falls within the Grow range

Recommendations to Change Attitudes: System Support for Trauma-Informed Care

Leadership and Communication

- Leaders publically demonstrate and communicate leadership support for TIC
- Model TIC principles and practices with peers and staff – "practice what you preach"
- Promote staff who embody TIC
- Integrate language about TIC into mission statements, policy, and procedures

Hiring and Orientation

- Reference organization's commitment to TIC in job announcements, screening, and interviews
- Include overview of TIC in staff orientation

Training

- Require leaders to participate in training about trauma and TIC
- Systemically train staff (including support staff) about trauma and TIC and keep content alive through refreshers

Coaching

- Structure coaching and train coaches to establish a feeling of safety and support when working with teachers and staff

Peer Support

- Designate TIC Champions and authorize them to provide training and modeling in the school
- Ensure that faculty leaders buy-in to TIC principles and practices

ARTIC Overall Scores By Groups
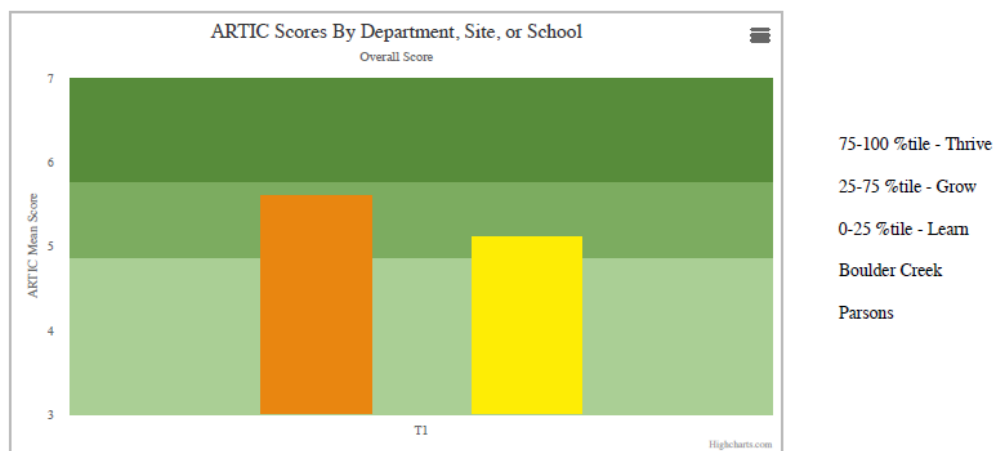
ARTIC Scores By Department, Site, or School
Overall Score

75-100 %tile - Thrive

25-75 %tile - Grow

0-25 %tile - Learn

Boulder Creek

Parsons

To protect participant confidentiality, categories must have at least 10 participants in order to populate the graph.

Results

- The Overall score for **Boulder Creek**, **Parsons** at Timepoint 1 falls in the Grow range.
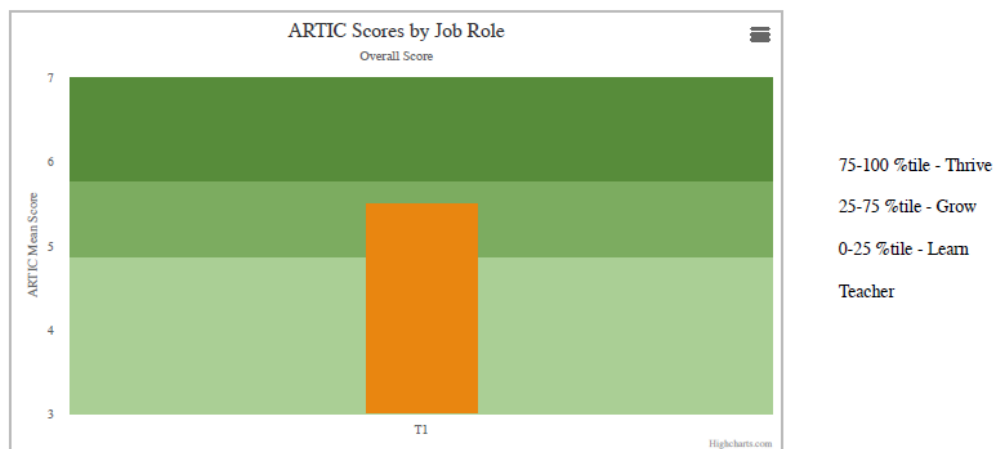
ARTIC Scores by Job Role
Overall Score

75-100 %tile - Thrive

25-75 %tile - Grow

0-25 %tile - Learn

Teacher

To protect participant confidentiality, categories must have at least 10 participants in order to populate the graph.

Results

- The Overall score for **Teacher** at Timepoint 1 falls in the Grow range.
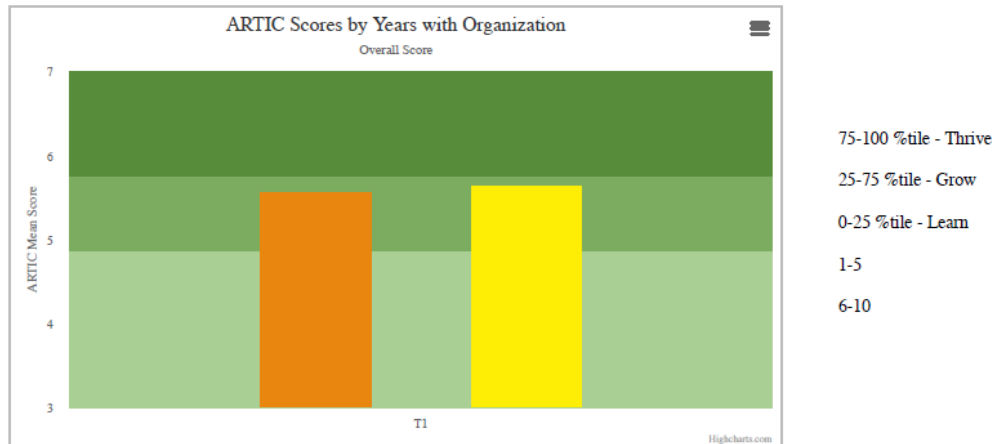
227

ARTIC Scores by Years with Organization

Overall Score

75-100 %tile - Thrive

25-75 %tile - Grow

0-25 %tile - Learn

1-5

6-10

To protect participant confidentiality, categories must have at least 10 participants in order to populate the graph.

Results

- The Overall score for respondents with **1-5**, **6-10** years with the organization at Timepoint 1 falls in the Grow range.

Percentage of Self-Reported Confidence

Confidence Practicing TIC

All Respondents

- Not at all confident
- A little confident
- Moderately confident
- Very confident
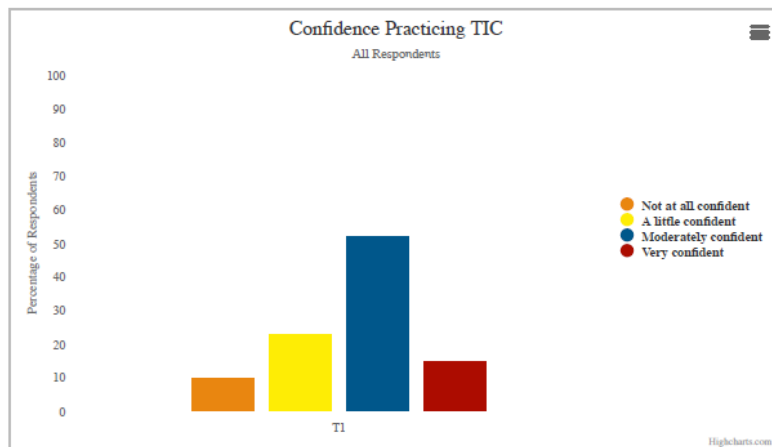
Results

- 10% of respondents at Timepoint 1 answered that they were **Not at all confident** practicing TIC
- 23% of respondents at Timepoint 1 answered that they were **A little confident** practicing TIC
- 52% of respondents at Timepoint 1 answered that they were **Moderately confident** practicing TIC
- 15% of respondents at Timepoint 1 answered that they were **Very confident** practicing TIC

228

Resources on System Implementation of Trauma-Informed Care

General

1. Substance Abuse and Mental Health Services Administration's (SAMHSA's) Concept of Trauma and Guidance for a Trauma-Informed Approach (2014).
2. Key Ingredients for Successful Trauma-Informed Implementation. (Center for Health Care Strategies, 2016).
3. Creating Trauma-Informed Child-Serving Systems. (National Child Traumatic Stress Network, 2007).
4. Trauma-Informed Care: Perspectives and Resources Website. (Georgetown University Center for Child and Human Development).
5. Trauma-Informed Care Implementation Resource Center Website. (Center for Health Care Strategies).
6. Trauma-Informed Oregon Website.

Trauma-Informed Care Implementation Guides

1. Trauma-Informed Organizational Change Manual. (University of Buffalo School of Social Work, 2019).
2. Trauma-Informed Organizational Toolkit for Homeless Services. (National Center for Family Homelessness, 2009).
3. Trauma-Informed Care Behavioral Health Services: Treatment Improvement Protocol (TIP) 57. (SAMHSA, 2014).
4. Six Core Strategies for Reducing Seclusion and Restraint. (National Association of State Mental Health Program Directors, 2006).

Trauma-Informed Care System Change Models

1. Traumatic Stress Institute Whole System Change Model.
2. Sanctuary.
3. Attachment, Regulation, and Competency (ARC).
4. Community Connections.
5. National Council of Behavioral Health.
6. Children and Residential Experiences: Creating Conditions for Change (CARE) Practice Model.
7. Alive and Well Communities.

Trauma-Sensitive Schools

1. Child Trauma Toolkit for Educators. (National Child Traumatic Stress Network, 2008).
2. Helping Traumatized Children Learn: A Report and Policy Agenda, Volume 1. (Trauma and Learning Policy Institute, 2005)
3. Helping Traumatized Children Learn: Creating and Advocating for Trauma-Sensitive Schools, Volume 2. (Trauma and Learning Policy Institute, 2013).
4. Trauma-Sensitive Schools Online Professional Development Website. (Wisconsin Department of Public Instruction).
5. Washington State Compassionate Schools Training Website. (Washington State Office of the Superintendent of Public Instruction).
6. The Heart of Learning and Teaching: Compassion, Resiliency, and Academic Success. (Wolpow et. al, 2009).
7. Calmer Classroom: A Guide to Working with Traumatised Children. (State Government of Victoria, 2007).

Secondary Traumatic Stress/Vicarious Trauma

1. Vicarious Trauma Toolkit. (Office of Victims of Crime, Office of Justice Programs).
2. Headington Institute.
3. Secondary Traumatic Stress: A Fact Sheet for Child-Serving Professionals. (National Child Traumatic Stress Network, 2011).
4. What About You? A Workbook for Those Who Work with Others. (National Center for Family Homelessness, 2008).

KLINGBERG FAMILY CENTERS

370 Linwood Street, New Britain, CT 06052 | Telephone: 860.832.5562
Websites: www.traumaticstressinstitute.org | www.klingberg.org

Symptoms of Adverse Childhood Experiences & Resiliency

Behavioral Symptoms

Inability to regulate emotions	Poor relations with others (peers & teachers)
Difficulties with authority	Spacing out
Negative thinking	Executive functioning challenges
Hypervigilance	Negative attention seeking
Believing no one cares	Anxiety
Poor impulse control	Social isolation
Bullying	Being a victim of bullying
Difficulty trusting	Excessive shame
Clinginess	Grandiosity
Underdeveloped since of self	

Subjugation

Approval seeking behavior	Poor self-discipline
Lack of flexibility	Entitlement attitude
Becomes agitated under stress	Hopelessness

Learning Difficulties

Self-disparaging statements	Learning disabilities
Defeatist attitude	Don't ask for help
Difficulty thinking or concentrating	Don't try new things or hard assignments
Shuts down under stress	Poor self-efficacy

Signs of Resiliency

• Positive relationships with others	• Ability to regulate emotion
• Self-Efficacy – believes in self	• Ability to master challenges
• Positive stress coping strategies	• Strong executive functioning
• Future oriented & Optimism	• Intact cognition
• Self-soothing	• Able to use mind -body skills
• Sense of belonging	• Ability to think things through – see the bigger picture
• Positive realistic perception of self & others	• Sense of humor
• Relaxed and easygoing	• Ability to plan
• Problem solving skills	• Empathy and warmth for others and self
• Learns from past experiences	• Flexibility / able to compromise
• Healthy self-esteem	• Engaged at school
• Shows self-control	• Patient
• Creative	• Confronts fears directly
• Trust's self	• Appropriate boundaries with others
• Independent yet interdependent	• Able to communicate needs
• Healthy expectations and goals	• Insight and reflective skills
• Able to accept responsibility	• Can label & express feelings
• Sets high but achievable goals	• Patience
• Able to follow through	•

APPENDIX P

Permissions

Permission for Figures 1, 3, 4 and 5

Payment Information
Alyson Kohl
kohl@brandman.edu
Payment method: Invoice
Customer Location:
Ms. Alyson Kohl
Order Details
Order Number: 1130139
Order Date: 01 Jul 2021
Article:
1. Nature Reviews Neuroscience
Stress signaling pathways that impair prefrontal cortex structure and function.
Billing Status:
Open
0.00 USD
Republication Permission
LICENSED CONTENT
REQUEST DETAILS
Order License ID 1130139-1
Order detail status Completed
ISSN 1471-0048
Type of use Republish in a thesis/dissertation
Publisher Nature Research
Portion Chart/graph/table/figure
Publication Title Nature Reviews Neuroscience
Article Title: Stress signaling pathways that impair prefrontal cortex structure and function.
Date 12/31/1999
Language English
Country United Kingdom of Great Britain and Northern Ireland
Rightsholder Springer Nature BV
Publication Type e-Journal
Start Page 410
End Page 422
Issue 6
Volume 10
URL http://www.nature.com/nrn/
Distribution United States
Manage Account https://marketplace.copyright.com/rs-ui-web/manage_account/orders/vie...

Springer Nature BV Terms and Conditions
If you are placing a request on behalf of/for a corporate organization, please use RightsLink. For further information visit http://www.nature.com/reprints/permission-requests.html and https://www.springer.com/gp/rights-permissions/obtaining-permissions/882. If the content you are requesting to reuse is under a CC-BY 4.0 license (or previous version), you do not need to seek permission from Springer Nature for this reuse as long as you provide appropriate credit to the original publication. https://creativecommons.org/licenses/by/4.0/

Portion Type Chart/graph/table/figure
Number of charts/graphs/tables/figuresrequested 1
Format (select all that apply)
Electronic
Who will republish the content?
Academic institution
Duration of Use Life of current edition
Lifetime Unit Quantity Up to 499
Rights Requested Main product
Translation Original language of publication
Copies for the disabled? No
Minor editing privileges? No
Incidental promotional use? No
Title Teachers Attitudes Regarding ACE & Trauma Informed Educational Practices
Instructor name Dr Patrick Ainsworth
Institution name Brandman University
Expected presentation date 2021-07-14
The requesting person/ organization to appear on the license
Alyson Reynolds Kohl
Title, description or numeric reference of the portion(s)
Amygdala control during stress conditions
Editor of portion(s) Arnsten, Amy F. T.
Volume of serial or monograph 10
Page or page range of portion 410-422
Title of the article/chapter the portion is from
Stress signaling pathways that impair prefrontal cortex structure and function.
Author of portion(s) Arnsten, Amy F. T.
Publication date of portion 2009-05-31

Permission for Figure 6

"Reprinted from Publication title, Vol /edition number, Author(s), Title of article / title of chapter, Pages No., Copyright (Year), with permission from Elsevier [OR APPLICABLE SOCIETY COPYRIGHT OWNER]." Also, Lancet special credit - "Reprinted from The Lancet, Vol. number, Author(s), Title of article, Pages No., Copyright (Year), with permission from Elsevier."

4. Reproduction of this material is confined to the purpose and/or media for which permission is hereby given.

5. Altering/Modifying Material: Not Permitted. However, figures and illustrations may be altered/adapted minimally to serve your work. Any other abbreviations, additions, deletions and/or any other alterations shall be made only with prior written authorization of Elsevier Ltd. (Please contact Elsevier's permissions helpdesk here). No modifications can be made to any Lancet figures/tables and they must be reproduced in full.

6. If the permission fee for the requested use of our material is waived in this instance, please be advised that your future requests for Elsevier materials may attract a fee.

7. Reservation of Rights: Publisher reserves all rights not specifically granted in the combination of (i) the license details provided by you and accepted in the course of this licensing transaction, (ii) these terms and conditions and (iii) CCC's Billing and Payment terms and conditions.

8. License Contingent Upon Payment: While you may exercise the rights licensed immediately upon issuance of the license at the end of the licensing process for the transaction, provided that you have disclosed complete and accurate details of your proposed use, no license is finally effective unless and until full payment is received from you (either by publisher or by CCC) as provided in CCC's Billing and Payment terms and conditions. If full payment is not received on a timely basis, then any license preliminarily granted shall be deemed automatically revoked and shall be void as if never granted. Further, in the event that you breach any of these terms and conditions or any of CCC's Billing and Payment terms and conditions, the license is automatically revoked and shall be void as if never granted. Use of materials as described in a revoked license, as well as any use of the materials beyond the scope of an unrevoked license, may constitute copyright infringement and publisher reserves the right to take any and all action to protect its copyright in the materials.

9. Warranties: Publisher makes no representations or warranties with respect to the licensed material.

10. Indemnity: You hereby indemnify and agree to hold harmless publisher and CCC, and their respective officers, directors, employees and agents, from and against any and all claims arising out of your use of the licensed material other than as specifically authorized pursuant to this license.

11. No Transfer of License: This license is personal to you and may not be sublicensed, assigned, or transferred by you to any other person without publisher's written permission.

12. No Amendment Except in Writing: This license may not be amended except in a writing signed by both parties (or, in the case of publisher, by CCC on publisher's behalf).

13. Objection to Contrary Terms: Publisher hereby objects to any terms contained in any purchase order, acknowledgment, check endorsement or other writing prepared by you, which terms are inconsistent with these terms and conditions or CCC's Billing and Payment terms and conditions. These terms and conditions, together with CCC's Billing and Payment terms and conditions (which are incorporated herein), comprise the entire agreement between you and publisher (and CCC) concerning this licensing transaction. In the event of any conflict between your obligations established by these terms and conditions and those established by CCC's Billing and Payment terms and conditions, these terms and conditions shall control.

14. Revocation: Elsevier or Copyright Clearance Center may deny the permissions described in this License at their sole discretion, for any reason or no reason, with a full refund payable to you. Notice of such denial will be made using the contact information provided by you. Failure to receive such notice will not alter or invalidate the denial. In no event will Elsevier or Copyright Clearance Center be responsible or liable for any costs, expenses or damage incurred by you as a result of a denial of your permission request, other than a refund of the amount(s) paid by you to Elsevier and/or Copyright Clearance Center for denied permissions.

Permission for Figure 9

Alyson

By way of this email I am granting permission to use the Pair of ACEs graphic in your dissertation for academic purposes only. I have attached a copy of the tree that has the Ellis copyright on it.

Thank you and good luck with your defense!

Wendy

Wendy R. Ellis DrPH, MPH

Assistant Professor, Global Health

Director, Center for Community Resilience

Sumner Redstone Global Center for Prevention & Wellness

School of Public Health

George Washington University

wendye@gwu.edu

202-994-0146 (Direct)

Check go.gwu.edu/CCR for updates

Follow us on Twitter @ResilNation

Here in Washington DC, we are on the unceded ancestral lands of the Piscataway and Nacotchtank (Anacostan) people. Click this link to learn more about the indigenous lands you occupy: https://native-land.ca

Permission for Figure 10

This is a License Agreement between Alyson Reynolds Kohl ("User") and Copyright Clearance Center, Inc. ("CCC") on behalf of the Rightsholder identified in the order details below. The license consists of the order details, the CCC Terms and Conditions below, and any Rightsholder Terms and Conditions which are included below.

All payments must be made in full to CCC in accordance with the CCC Terms and Conditions below.

Order Date
28-Jun-2021
Order License ID
1129295-1
ISBN-13
9781572308381
Type of Use
Republish in a thesis/dissertation
Publisher
THE GUILFORD PRESS
Portion
Chart/graph/table/figure
Licensed Content
Publication Title
Schema Therapy: A Practitioner's Guide
Author/Editor
Weishaar, Marjorie E., Young, Jeffrey E., Klosko, Janet S.
Date
03/27/2003
Language
English
Country
United States of America
Rightsholder
Guilford Publications, Inc.
Publication Type
Book
Request Details
Portion Type
Chart/graph/table/figure
Number of charts / graphs / tables / figures requested 1
Format (select all that apply)
Print, Electronic
Who will republish the content?
Academic institution
Duration of Use
Life of current edition
Lifetime Unit Quantity
Up to 499
Rights Requested
Main product
Distribution
United States
Translation
Original language of publication
Copies for the disabled? No

Minor editing privileges? No
Incidental promotional use? No
Currency USD
New Work Details
Title: Teachers Attitudes Towards ACE and Trauma Informed Care
Instructor name
Dr Patrick Ainsworth
Institution name
Brandman University
Expected presentation date
2021-07-14
Additional Details
The requesting person / organization to appear on the license
Alyson Reynolds Kohl
Reuse Content Details
Title, description or numeric reference of the portion(s)
Schema Domains & Dimensions According to Young et al
Editor of portion(s) NA
Volume of serial or monograph NA
Page or page range of portion Don't remember
Title of the article/chapter the portion is from Don't remember
Author of portion(s) Weishaar, Marjorie E.; Young, Jeffrey E.; Klosko, Janet S.
Issue, if republishing an article from a serial N/A
Publication date of portion 2003-03-27
Rightsholder Terms and Conditions
Due to the nature of our material for mental health professionals, we would like to review each request for which derivative rights are requested. Therefore we would like to have Managed Redirects for these requests.

Permission for Figure 11

Payment Information
Alyson Kohl
kohl@brandman.edu
Payment method: Invoice
Billing Address:
kohl@brandman.edu
Customer Location:
Ms. Alyson Kohl
Order Details
Order Number: 1129808
Order Date: 30 Jun 2021
Article:
1. Biological psychiatry
The Biology of Human Resilience: Opportunities for Enhancing Resilience Across
the Life Span.
Billing Status:
Open
0.00 USD
Republication Permission
LICENSED CONTENT
Order License ID 1129808-1
Order detail status Completed
ISSN 1873-2402
Type of use Republish in a thesis/dissertation
Publisher ELSEVIER INC.
Portion Chart/graph/table/!gure
Publication Title Biological psychiatry
Article Title the Biology of Human Resilience: Opportunities for Enhancing Resilience
Across the Life Span.
Author/Editor Society of Biological Psychiatry.
Date 12/31/1994
Language English
Country United States of America
Rightsholder Elsevier Science &
Technology Journals
Publication Type e-Journal
Start Page 443 End Page 453 Issue 6 Volume 86
URL http://www.sciencedirec
t.com/science/journal
/00063223
Manage Account https://marketplace.copyright.com/rs-ui-
web/manage_account/orders/vie...
1 of 3 7/1/21, 11:03 AM
Elsevier Science & Technology Journals Terms and Conditions

Portion Type Chart/graph/table/figure
Number of charts /graphs / tables /figures requested 1
Format (select all that apply) Electronic
Who will republish the content? Academic institution
Duration of Use Life of current edition
Lifetime Unit Quantity Up to 499
Rights Requested Main product
Distribution United States
Translation Original language of publication
Title Teachers Attitudes Regarding Adverse Childhood Experiences
Instructor name Dr Patrick Ainsworth
Institution name Brandman University
Expected presentation date 2021-07-14
The requesting person/ organization to appear on the license
Alyson Reynolds Kohl
Title, description or numeric reference of the portion(s)
Resiliency
Editor of portion(s) Feder, Adriana; Fred-Torres, Sharely; Southwick, Steven M.; Charney, Dennis S.
Volume of serial or monograph 86 Page or page range of portion 443-453
Title of the article/chapter the portion is from The Biology of Human Resilience: Opportunities for
Enhancing Resilience Across the Life Span.
Author of portion(s) Feder, Adriana; Fred-Torres, Sharely; Southwick, Steven M.; Charney, Dennis S.
Issue, if republishing an article from a serial 6
Publication date of portion 2019-09-14
Manage Account https://marketplace.copyright.com/rs-ui-web/manage_account/orders/vie...

Permission for Figure 12

ts

When re-using content under these terms, you must provide a full citation to the original source of the SAGE material wherever such material appears in your publication.

If you determine that your re-use does require permission, please see Process for Requesting Permission for further instruction.

>

Dissertation/Thesis Reuse

You may use up to three (3) figures/tables or a total of up to 400 words from a SAGE book in your dissertation/thesis, provided the work will not be hosted on a commercial platform (such as ProQuest).

If your re-use exceeds this allowance, or if you will be posting your work on a commercial platform, you will need to request permission for the reuse.

Short Excerpts

You may republish no more than a total of 200 words of text from a single SAGE book within your new publication.

STM

SAGE is a signatory member of the STM Guidelines 🗗 , which allows small amounts of material to be re-used by participating publishers under pre-agreed terms. If your publisher is also a signatory and the content you wish to use falls within the allowed totals under the Guidelines, you may reuse the content without permission.

Referencing

References to a SAGE book that do not directly reuse content do not require permission.

Author Reuse

SAGE authors wishing to reuse their own work may be able to do so within limitations. Please see Information for SAGE Authors.

Permission for Figure 18

Payment Information
Alyson Kohl
kohl@brandman.edu
Payment method: Invoice
Billing Address:
kohl@brandman.edu
Customer Location:
Ms. Alyson Kohl
Order Details
Order Number: 1129625
Order Date: 29 Jun 2021
Article:
1. Academic pediatrics : the social journal of the
Academic Pediatric Association
A New Framework for Addressing Adverse Childhood and Community
Experiences: The Building Community Resilience Model.
Republication Permission
LICENSED CONTENT
Order License ID 1129625-1
Order detail status Completed
ISSN 1876-2859
Type of use Republish in a thesis/dissertation
Publisher Academic Pediatric Association
Portion Chart/graph/table/figure
Publication Title Academic pediatrics :the official journal of the Academic Pediatric Association
Article Title A New Framework for Addressing Adverse Childhood and Community
Experiences: The Building Community Resilience Model.
Author/Editor Academic Pediatric Association.
Rightsholder Elsevier Science &
Technology Journals
Publication Type e-Journal
Start Page S86
End Page S93
Issue 7S
Volume 17
Manage Account https://marketplace.copyright.com/rs-ui-web/manage_account/orders/vie...
1 of 3 6/29/21, 7:27 PM
Portion Type Chart/graph/table/figure
Number of charts /graphs / tables /figures requested 1
Format (select all that apply) Electronic
Who will republish the content? Academic institution
Duration of Use Life of current edition
Lifetime Unit Quantity Up to 499
Rights Requested Main product
Distribution United States
Title Teachers Attitudes Regarding Trauma Informed Practices
Instructor name Dr Patrick Ainsworth
Institution name Brandman University
Expected presentation date 2021-07-14
The requesting person/ organization to appear on the license
Alyson Reynolds Kohl
Title, description or numeric reference of the portion(s)
Building Community Resilience: Assessment, Readiness, Implementation & Sustainability
Editor of portion(s) Ellis, Wendy R; Dietz,

William H
Volume of serial or monograph 17
Page or page range of portion S86-S93
Title of the article/chapter the portion is from
A New Framework for Addressing Adverse Childhood and Community Experiences: The
Building Community Resilience Model.
Author of portion(s) Ellis, Wendy R; Dietz, William H
Issue, if republishing an article from a serial 7S
Publication date of portion 2017-08-31
Manage Account https://marketplace.copyright.com/rs-ui-web/manage_account/orders/vie...
2 of 3 6/29/21, 7:27 PM
Total Items: 1 Subtotal: 0.00 USD
Order Total: 0.00 USD
Elsevier Science & Technology Journals Terms and Conditions
Elsevier publishes Open Access articles in both its Open Access journals and via its Open Access articles
option in subscription journals, for which an author selects a user license permitting certain types of reuse
without permission. Before proceeding please check if the article is Open Access on
http://www.sciencedirect.com and refer to the user license for the individual article. Any reuse not included
in the user license terms will require permission. You must always fully and appropriately credit the author
and source. If any part of the material to be used (for example, figures) has appeared in the Elsevier
publication for which you are seeking permission, with credit or acknowledgement to another source it is
the responsibility of the user to ensure their reuse complies with the terms and conditions determined by the
rights holder. Please contact permissions@elsevier.com with any queries.
Manage Account https://marketplace.copyright.com/rs-ui-web/manage_account/orders/vie...
3 of 3 6/29/21, 7:27 PM

Permission for Table 16