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The Effectiveness of Trauma-Informed Practices and Resilience for Students Impacted by Adverse Childhood Experiences

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The Effectiveness of Trauma-Informed Practices and Resilience for Students Impacted by Adverse Childhood Experiences

by

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Chapter 1: Introduction

In 1998, a groundbreaking medical research study was published that created widespread interest in what researchers were calling adverse childhood experiences (ACEs). Felitti et al.'s (1998) research highlighted the prevalence of adverse incidents and the correlation with future health morbidity. The study established that more than 50% of adults in the study experienced at least one traumatic event during childhood, allowing the research to become a powerful tool to identify and intervene with children. It became apparent that the effects of traumatic events in the lives of children had a huge impact on biological, physiological, and psychological development. An evolution had begun and the impact on learning and resilience was becoming an important consideration for the educational community.

Since the 1970s, research concerning exposure to trauma has had both clinical and educational research applications. Weathers and Keane (2007) defined the challenges that arose when defining and measuring psychological trauma. They included magnitude, complexity, frequency, duration, predictability, and controllability as reasons as to why coming up with a definition of trauma is difficult. Exposure to traumatic events can disrupt brain development and have adverse lifelong social, emotional, and physical consequences. The results for students include deficits in executive functioning, developmental delays, difficulty regulating emotions and behavior, academic performance and IQ, and delinquency (Maynard et al., 2019).

Many states and school districts are recognizing the academic implications of trauma and are changing the way they create and enforce policies and procedures. Recognizing the importance of making schools physically and psychologically safer for students has led to a shift

from ‘hardening’ schools via physical safety and security, to a more balanced approach of comprehensive trauma-informed policies from various public support services (Hoover, 2019). In 2014, the Substance Abuse and Mental Health Services Administration (SAMHSA) created a definition of a trauma-informed approach that would be applicable to an array of public service sectors, including education. SAMHSA’s goal was to create opportunities for the organizations to collaborate and better serve their clients. Three main concepts were considered:

- Trauma focused research work
- Practice-generated knowledge about trauma interventions
- Stories of survivors who have been involved in multiple agencies of support

Thomas et al. (2019) reviewed 2 decades of interdisciplinary research on trauma-informed practices in order to better understand the role they have on educational philosophy, school climate, and preservice teacher education. They concluded that to serve students successfully, educational research would be best served by incorporating systems developed in neuroscience, psychology, and social work in order to create evidence-based educational principles. Thomas et al. opined the importance of including a system wide model of service with explicit attention being placed on schools. Educators are presented daily with the results of student trauma; thus, it is important there are models and frameworks available to allow for collaboration with all agencies and services that support students impacted by trauma.

Research Question

Do trauma-informed practices in schools positively influence academic and developmental student outcomes by creating resilience, thus mitigating the effect of adverse childhood experiences?

Importance of the Topic

As educators, we have the opportunity to create connections that may impact the lives of our students. As the ACE's study has suggested, the influences of trauma have a great impact on learning (Felitti et al., 1998). Classroom implementation of trauma-informed practices that influence resiliency outcomes for students requires a strong framework that encapsulates more than curriculum.

According to the Substance Abuse and Mental Health Services Administration (SAMHSA, n.d.), more than two-thirds of children report at least one traumatic event by the age of 16, one in four high school students were in a physical fight, one in five students were bullied, and one in six students were cyberbullied (SAMHSA, n.d.).

Despite research illustrating how detrimental trauma is on learning, there is very little research available that focuses on education and learning (Longhi, 2015). Thomas et al.'s (2019) 20-year review of research determined there was no formally agreed upon framework for trauma-informed practices and no way to efficiently determine framework effectiveness. However, they declared the importance of reviewing what affects the implementation of trauma-informed practices.

A basic principle of trauma-informed practices involves a change in mindset on the part of educators. The tendency to question what is wrong with a student when a student is struggling must be replaced with the question of what has happened to this student and how did they learn to adapt (American Association of Pediatrics [AAP], 2014; Jennings, 2018). Thomas et al. (2019) referred to this shift in perspective as using a 'trauma lens.' The 'trauma lens' permits educators to extend the focus from what is wrong, to what is needed, and ultimately to what is

possible. By combining academic and psychological abilities of students, a trauma-informed framework can provide both healing and growth, allowing for repair and emergence of replacement behaviors (Waters & Brunzell, 2018). Classrooms present the opportunity to be a powerful place of intervention for posttraumatic healing; educators can provide interventions to repair emotional dysregulation and fix broken attachment.

Focus of the Review

The review of literature in Chapter 2 defines trauma-informed practices and resilience as they relate to positive implementation outcomes for students impacted by trauma. I identify seven research studies ranging in dates from 2009 to 2020, focusing on defining trauma-informed practices, the impact of resilience on ACEs, and the effectiveness of trauma-informed practices when working with school-age children.

Academic Search Premier was used as a starting point for my literature review of evidence-based studies regarding trauma-informed educational models and frameworks, the impact of resilience on ACEs, and current trauma informed frameworks implanted in organizations focused on student outcomes. I supplemented my search with EBSCO, Google, ERIC, and ProQuest queries. I searched the following keywords and combinations of keywords to locate appropriate studies: adverse childhood experiences, resilience, trauma, trauma academics, trauma-informed, trauma-informed learning, trauma-informed schools, trauma-sensitive, trauma legislation, trauma models, and trauma studies. I relied on data collected from federal and state agencies, advocacy group websites, and publications to collect current trauma-informed studies, practices, models, and frameworks. I examined the endnotes and references for any recent articles or journals that had similar terms and keywords in the titles.

Definitions of Key Terms

Frameworks: a structure or system for the realization of a defined result/goal. Many frameworks comprise one or more models… and often based on (best) practices. Compared with methods, frameworks give the users much more freedom regarding the (partial or entire) use of the framework and the use of the models or techniques therein (Verbrugge, 2016).

Models: a way of thinking and a way of working. Possible additional components of a method are:

- management models
- presentation models
- support models (Verbrugge, 2016)

Resilience: the process of adapting well in the face of adversity, trauma, tragedy, threats, or significant sources of stress—such as family and relationship problems, serious health problems, or workplace and financial stressors. It means 'bouncing back' from difficult experiences…Resilience is not a trait that people either have or do not have. It involves behaviors, thoughts and actions that can be learned and developed in anyone (American Psychological Association [APA], n.d.).

Social Emotional Learning (SEL): the process through which children and adults understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions (Collaborative for Academic, Social, Emotional Learning [CASEL], n.d.).

Somatization: occurs when psychological trauma or stress is expressed as physical symptoms.

Trauma-Informed: one in which all parties involved recognize and respond to the impact of traumatic stress on those who have contact with the system including children, caregivers, staff, and service providers. Programs and agencies within such a system infuse and sustain trauma awareness, knowledge, and skills into their organizational cultures, practices, and policies. They act in collaboration with all those who are involved with the child, using the best available science, to maximize physical and psychological safety, facilitate the recovery or adjustment of the child and family, and support their ability to thrive (National Child Traumatic Stress Network ([NCTSN], 2017). I use the term trauma-informed throughout my review.

Chapter 2 : Review of Literature

This literature review examines current trauma-informed practices, explores the role of resilience in mitigating the effects of trauma, and reviews the outcomes of implementing trauma-informed practices. A total of seven studies are reviewed in Chapter 2. Conclusions and recommendations are presented in Chapter 3.

Chapter 1 established the impact of trauma on learning, the importance of trauma-informed practices, and the role that resilience plays in achieving favorable academic and social outcomes. I discussed the need for trauma-informed practices in school districts that may affect student resiliency outcomes and consequently impact lifelong academic and social-emotional development.

Chapter 2 examines an overview and synthesis of 20 years of literature examining the implementation of trauma-informed practices in schools, resiliency outcomes of adolescents affected by Adverse Childhood Experiences (ACEs), and implementation results of youth-based programs that incorporated trauma-informed practices, including resilience training. As there is a substantiated relationship between trauma and developmental outcomes (Felitti et al., 1998), not all trauma-informed practices are implanted via educational institutions. Adolescents may encounter trauma-informed practices in a variety of multidisciplinary settings such as: social services, juvenile justice, medical, and/or mental health practitioners.

Trauma-Informed Practices in Schools

The National Child Traumatic Stress Network (NCTSN) was initiated by Congress in 2000 as part of the Children's Health Act to raise the standard of care and increase access to services for children and families who experience or witness traumatic events. The NCTSN is

administered by the Substance Abuse and Mental Health Administration (SAMHSA) and coordinated by the UCLA-Duke National Center for Child Traumatic Stress (NCCTS).

The NCTSN defined a trauma-informed child and family service system as:

> one in which all parties involved recognize and respond to the impact of traumatic stress on those who have contact with the system including children, caregivers, and service providers. Programs and agencies within such a system infuse and sustain trauma awareness, knowledge, and skills into their organizational cultures, practices, and policies. They act in collaboration with all those who are involved with the child, using the best available science, to maximize physical and psychological safety, facilitate the recovery of the child and family, and support their ability to thrive (NCTSN, 2017).

The NCTSN's (2017) foundation of trauma-informed practices, referred to as the '4Rs,' consist of:

1. realizing the widespread impact of trauma and pathways to recovery,
2. recognizing traumas signs and symptoms,
3. responding by integrating knowledge about trauma into all facets of the system,
4. resisting re-traumatization of trauma-impacted individuals by decreasing the occurrence of unnecessary triggers and by implementing trauma-informed policies, procedures, and practices (p. 4).

Thomas et al. (2019) created an interdisciplinary overview and synthesis of literature that examined interventions used in schools to determine the dominant framework used to promote trauma-informed practices and the effectiveness in influencing teacher practices.

> The purpose of the review was to identify lines of inquiry related to trauma-informed school practice in empirical literature across disciplines and summarize those to identify implications for changing teaching practice… Specifically, this review focused on peer-reviewed articles across disciplines, published between 1998 and 2018. The inclusion of two decades purposefully includes the timeframe prior to the emergence of the Cognitive Behavioral Intervention for Trauma in Schools around the year 2000 (see https://cbitsprogram .org/learn-more) and aligns with the timeframe of the work by Felitti et al. (1998) establishing a correlation between traumatic childhood experiences and challenges later in life. (pp. 428-429)

The initial literature search identified 4,056 articles which resulted in a selection of 163 articles to be reviewed. Subsequently, 33 educational-based articles were identified and selected for research inclusion. The selected articles were published between 2001 and 2018 and represented several disciplines and methodologies. Thomas et al. (2019) reviewed each study concentrating on the characterization of the empirical work that focused on school-based, trauma-informed interventions, and to make observations regarding how multi-disciplinary researchers intersect with regard to inquiries, contributions, and/or intended audience.

Following general observations about features of the reviewed studies, researchers addressed questions regarding a dominant framework for promoting and practicing trauma-informed care in schools and the effectiveness of school-based supports. Next, they discussed implications for comprehensive, research-based discussions regarding trauma-informed school practices. Finally, they educed recommendations for changing teaching practice and amended research hypotheses.

Thomas et al.'s (2019) review did not identify a specific framework as dominant in regard to promoting or practicing trauma-informed care in schools or researching trauma-informed practices in schools. They based this decision on the types of interventions researched and the range of methods used to examine each chosen intervention. Additionally, they pointed out methodological decisions regarding study participants and how studies were incorporated within specific settings.

The 33 articles included the practices of 30 different interventions. Thomas et al. (2019) described studies according to the most frequently used methods or research design as well as the most common disciplinary outlets to identify disparity and future strategy for research regarding changes to teacher practice as well as impact on other multidisciplinary institutions. Seventeen articles included quantitative inquiries, followed by 10 that used qualitative inquiries. Mixed methods were reported least often, only six studies employed mixed methodologies.

Given Thomas et al.'s (2019) findings that there is no dominant or formally agreed upon framework for trauma-informed practices, as well as no consistent determination of effectiveness, it is important to examine what is informing understandings and implementation of trauma-informed practices occurring in states, districts, and schools. Furthermore, the recommended practices promoted on Department of Education (DOE) websites and in some of the research literature, authors and advocates were unclear when providing evidence that the guidance offered was rooted in an empirical base.

In advocating for trauma-informed positive education, Brunzell et al. (2015) urged providers to consider 'teaching with strengths approaches;' educators frequently draw upon this perspective. The classroom can be positioned as a dynamic source of intervention for

posttraumatic healing in special education as well as general education classrooms which may include trauma affected students.

Similar to trauma-informed school practice, there has been a significant growth in interest and implementation of other approaches such as Positive Behavioral Interventions and Supports (PBIS), social emotional learning, restorative practices, mindfulness, and emphasis on school culture and climate. Many of these approaches provide healing, connection, support, and learning that are particularly helpful for trauma-exposed students. However, trauma-informed practices in schools should not be perceived as just "another thing that will come and go" (Thomas et al. 2019, p. 445). Due to the ever-increasing levels of adversity facing children and youth in society, the need for providing environments where students feel cared for, safe, and empowered will continue to be formidable.

Finally, Thomas et al. (2019) advocated for a multi-disciplinary discussion in service of a research-informed practices approach that results in achievable recommendations which incorporate respect for individuals and organizations with explicit attention to schools. Because school-based practitioners espy the impact of trauma in the lives of their students on a daily basis, researchers recommended that these practices move forward with prevention and recovery at the forefront of each multi-disciplinary organization.

Thomas et al. (2019) asserted:

> Educational researchers along with school-based practitioners would be wise to incorporate pioneering research occurring in neuroscience, psychology, and social work to better inform their research and practice agendas. Likewise, we encourage researchers outside of education to position teachers and, specifically, teaching, as well as the other

> adults in schools (i.e., professional school counselors, teaching assistants, and bus drivers) and their activities more prominently in their research agendas. (p. 448)

In 2016, Blitz et al. published a study that explored the application of the trauma-informed Sanctuary Model to address student trauma in schools. According to Bloom and Farragher (2013), the Sanctuary Model represents an organization wide system that is based on seven commitments which create anchors for decision making at all organizational levels:

1. Nonviolence
2. Emotional intelligence
3. Social learning
4. Open communication
5. Democracy
6. Social responsibility
7. Growth and change

Thus, creating a cohesive organizational culture that can provide a united context from which healing from traumatic experiences can be addressed.

Blitz et al. (2016) explored the application of the trauma-informed Sanctuary Model to be used as an exploratory study of school climate to establish a "baseline to inform the development of culturally responsive trauma-informed practices as a whole school approach" (p. 99).

Researchers implemented this experimental study at an elementary school, in the Northeast United States spanning kindergarten through fifth grades. The school had approximately 1,200 students that were divided into two groups, one consisting of primary students (Grades K-2) and the other comprised of intermediate students (Grades 3-5). School

demographics indicated that approximately 65% of the students identified as White, and more that 70% of all families in the district were 'economically disadvantaged.' The school district employed 80 teachers and 40 paraprofessionals. Survey responses were received by 85% of the staff; 39 employees completed short, unstructured interviews which allowed for the opportunity to learn more about staff perspectives and needs. Blitz et al. (2016) stated that data showed a disproportionate number of negative test scores, higher discipline referrals, and suspension rates for students of color and those who are 'economically disadvantaged.' The first step of the research was to identify concerns and perspectives that could prove valuable to developing a culturally responsive trauma-informed school.

Data collection methodology consisted of:

1. An online survey
2. A follow up paper survey
3. Unstructured interviews with school employees

The researchers used the principles from the Southern Poverty Law Center's Teaching Tolerance project (Teaching Tolerance, n.d.) which provided a definition of a culturally responsive trauma-informed school to identify areas for future growth and development and framed the context for the survey questions. In order to reduce social desirability bias, survey questions asked respondents to report on observed behaviors from other adults in the building not using their own personal perceptions. The online survey adopted the following four principles from Teaching Tolerance:

1. Adopt a social-emotional lens
2. Know the students and continually develop cultural responsiveness

3. Move the discipline paradigm from punishment to opportunities to teach desired behavior
4. Resist the criminalization of school behavior

Researchers included a fifth principle to assess workplace climate, which is an important piece of trauma-informed practices:

5. maintain an inclusive, cohesive, and nurturing professional work environment.

The final principle was created to:

6. address culture in the school (Teaching Tolerance, n.d.).

Data from the second survey were analyzed based on the mean score of each item, grouped according to the six principles. Researchers chose not to include differences between the initial and second respondent survey groups as the focus was on overall school climate. An aggregate mean for each principle was calculated to identify employee perceptions of how often the measured behaviors were observed. All survey questions asked school personnel to identify how frequently they observed the behaviors demonstrated by adults in their school building on a 1 to 5 scale. The resulting Cronbach's alpha for the total instrument was .94 which indicates high reliability.

Data from the unstructured interview portion of the study (Blitz et al., 2016) were completed after both surveys were completed. The purpose of the interviews was to understand perspectives on:

- Race and culture
- The impact of trauma and stress on students based on a priori codes
- Condense/identify clusters

- Examine connections between evidence and concepts
- Identify themes
- Make comparisons and/or contrasts

Blitz et al. (2016) reviewed the results from the surveys and interviews and opined that each of the six principles of the Sanctuary Model are an effective trauma-informed response to enhancing school climates. The researchers suggested that "trauma-informed approaches emphasize strengths-based and systems focused interventions that can challenge stereotyping and deficit thinking while directing supportive responses that teach prosocial behavior and build resiliency" (p. 118).

Resilience

The National Child Trauma Stress Network (NCTSN) definition of trauma-informed schools emphasizes building resilience by preparing schools to be responsive to the needs of their students through seamless access to social, behavioral, and emotional supports involving all school community members, in addition to access to evidence-based, developmentally appropriate child and family services. This mandates the engagement of all administrators, educators, and staff as they are each involved with the daily life of students who have experienced trauma and/or loss.

Goldenson et al. (2020) examined the impact of ACEs in vulnerable adolescents and assessed whether resilience would have a moderating impact on psychological functioning. The purpose of the study researched whether higher resilience scores would moderate the relationship between the number of ACEs and scores on the other psychological measures implemented by the researchers.

The Child Youth Resiliency Measure (CYRM) was utilized to assess whether resilience buffered the impact of ACEs. Goldenson et al. (2020) acknowledged there is compelling evidence about the negative impact of ACE on adult outcomes (Felitti et al., 1998). However, fewer studies exist that investigate mitigating factors, such as the role of resiliency. The authors identify resilience as the presence of certain protective factors, such as a fulfilling career, supportive personal relationships, and an internal locus of control that mitigates the impact of ACEs. Individuals higher in these mitigating factors, according to Goldenson et al., were more likely to have grown into content and well-adjusted adults.

The 40 study participants were between the ages of 12 to 17 during the initial intake stage of treatment at the San Diego Center for Counseling (SD-CC). The majority were females and of Hispanic or Latino ancestry. Participants had been referred to SD-CC after exposure to family violence, which included witnessing domestic abuse and/or having directly incurred some type of abuse. Participants were administered the following assessment protocols:

- The ACE-Q addressed various forms of adversity occurring before the age of 18
- The CPSS assessed PTSD severity in children ages 8 to 18
- The PAI-A to assess the presence of any pathology and/or psychological disorders
- The CYRM to assess a spectrum of resources that may contribute to resilience

The researchers used SPSS to conduct their analysis which included t-tests, the Mann-Whitney U-test, and Pearson's correlation to analyze the association between variables. Overall, the sample was resilient and reported an average of 3.65 ACEs. There were not significant gender differences in resilience scores. Correlation analysis revealed that there was no significant relationship between age and ACEs or between age and resilience scores.

The study created a composite ACE distress measure by summing across ten ACE items identified by the participants. Findings revealed participants with strong resiliency had lower levels of psychopathy, despite higher levels of ACEs. This suggests that the factors associated with resilience provided a buffer against the impact of ACEs.

Goldenson et al.'s (2020) data indicate a positive relationship between the number of ACEs and the presentation of trauma related psychopathy in youth. Of particular interest is that as ACE distress increased, those high on resilience reported less somatization and depression than those who were identified as having low resilience. Somatization occurs when psychological trauma or stress is expressed as physical symptoms.

The opposite was found for those low on resilience. The researchers assert that "given the well-documented and grave long-term consequences of having a high number of ACEs, furthering our understanding of resilience and protective factors is critical" (Goldenson et al., 2020, p. 2).

The researchers proposed that future initiatives should not only focus on measuring and reducing the number of ACEs children and youth are exposed to, but that their data contributed to research that highlights the importance of measuring and building resilience to overcome and address the poor outcomes associated with ACEs.

Chamberlain et al. (2016) investigated how resilience is related to individual characteristics and skills that can be reinforced through learning. Crouch et al. (2018) proposed the importance of identifying vulnerable youth and that, resilience building through fostering positive relationships and prosocial outlets can mitigate the impact of multiple ACEs.

Goldenson et al. (2020) opined that understanding the process of adversity and subsequent psychological outcomes may contribute to more precise and targeted interventions.

Goldenson et al. (2020) contributed to an increasing body of research on the mitigating impact of resilience on ACEs. They suggested that "assessing resilience in conjunction with ACEs is essential" (p. 8). Thus, it can be inferred that by incorporating resilience-based interventions, outcomes traditionally impacted negatively by ACEs have the opportunity to be mitigated by resilience.

Limitations of the study were a small sample size, no control group, and use self-reporting tools to gather data. Collecting data on private, personal events that deal with trauma resulted in participants being reluctant to speak about their experiences due to fear of mandatory reporting mandates.

In 2014, Bethell et al. utilized data from the 2011-2012 National Survey of Children's Health (NSCH) to assess the prevalence of ACEs and the link between factors affecting children's development and lifelong health. The study revealed lower rates of school engagement and higher rates of chronic disease among children with ACE experiences. The researchers created two hypotheses to govern their research. First, children who had experienced ACEs would have worse outcomes and more school problems compared to children who did not; secondly, learning and exhibiting resilience might mitigate their outcomes. The researchers defined resilience, in regard to children aged 6 to 17, as "staying calm and in control when faced with a challenge" (p. 2108).

The original ACE study determined significant adult health problems linked to childhood abuse, neglect, and exposure to violence (Felitti et al., 1998). A modified version of nine adverse

childhood experiences list was developed by the NSCH and was also utilized by Bethell et al. (2014):

- Socioeconomic hardship
- Divorce/separation of parent
- Death of parent
- Parent served time in jail
- Witness to domestic violence
- Victim of neighborhood violence
- Lived with someone who was mentally ill or suicidal
- Lived with someone with alcohol/drug problem
- Treated or judged unfairly due to race/ethnicity

Bethell et al. (2014) used multivariate and multilevel regression to explore associations between ACEs, demographics, child resilience, health, family, and community factors. Nested t-tests compared the state and national differences in the prevalence of ACEs. A multilevel logistic regression model was utilized to examine the association between individual child, family, and health care characteristics and the prevalence of ACEs. Quantitative data collection from the study utilized logistic regression models to calculate adjusted odds ratios that indicated whether certain subgroups of children were more or less likely to have ACEs and whether or not the experience predicted the likelihood that children would have the conditions, risks, resilience, school success, and other factors the study evaluated. SPSS 19 was used to calculate the statistical data. The primary limitation described by researchers is that there is no current longitudinal population-based study that includes information on ACEs. They suggested this data

would assist in documenting the causal effects of both the development of health problems and the mitigating effects of protective factors, such as resilience.

Bethell et al.'s (2014) study results were broken down into five parts:

1. Prevalence of ACEs
2. Associations with child health conditions and risks
3. Associations with child resilience and family and neighborhood factors
4. Associations with school success factors
5. Associations with receiving care in a family centered medical home

My interests lie in the data collected in the prevalence of ACEs, associations with child resilience and family and neighborhood factors, and associations with school success factors.

Bethell et al. (2014), also included data from their previous analysis of data from the 2011–12 NSCH which reviewed prevalence of ACEs. They reported that as of 2014, 48% of U.S. children had at least one of the nine key ACEs evaluated by the NSCH. In regard to associations with child resilience and family and neighborhood factors, the researchers noted children with many ACEs were less likely than those without to demonstrate resilience.

It was also determined that children with ACEs were less likely to live in a protective home environment, have mothers who were healthy, and have supportive parents. Slightly more than 33% of children who have positive health factors also had ACEs and 48.4% of children who demonstrated resilience also had ACEs. Additionally, 49.2% of children impacted by ACEs were 'usually or always' engaged in school. Bethell et al. (2014) noted that resilience mitigated the impact of ACEs on grade repetition and school engagement.

According to Bethell et al. (2014), given the high prevalence of ACEs among adults and children in the U.S. and the potential benefits of promoting resilience for all people, it is "essential that the U.S. continue to collect population-based data on ACEs and resilience" (p. 2112). They also recommended the development of an enduring collaboratively endorsed research and policy agenda to assure that research is updated and integrated over time.

Bethell et al. (2014) acknowledged integrated care models that address health in relation to social determinants such as ACEs and recognize a variety of emergent trauma-informed care models. They identify building child resilience, improving family dynamics, community, and school environments as promising models to measure and assess childhood trauma.

Crouch et al. (2018) examined the protective factor of the presence of positive adult relationships in a child's life, drawing on the research previously conducted on the role of safe, stable, and nurturing relationships (SSNRs). SSNRs have been linked to other protective factors, such as the ability to promote the development of healthy social and emotional competencies and their role in creating a safe, protective, and equitable environment. Crouch et al. (2018) asserted that protective factors can build resilience and potentially moderate the long-term impact of ACEs.

Bethell et al. (2014) used a state database that included a variety of ACE questions to examine the relationship between ACEs, protective factors, and self-reported health outcomes in adults. Data came from the 2016 South Carolina Behavioral Risk Factor Surveillance System (SC BRFSS). The survey utilized cell phones and land lines to collect data from noninstitutionalized adults age 18+. There were 7,079 respondents who answered the ACE

module and included complete demographic information. The 2016 ACE module included two questions that addressed protective factors as they relate to SSNRs:

1. "For how much of your childhood was there an adult who tried to make you feel safe and protected?" (p. 167)
2. "For how much of your childhood was there and adults who tried hard to make sure your basic needs were met?" (p. 167)

The response options were: "little to never of the time," "some to most of the time," and "all of the time" (p. 167).

Crouch et al.'s (2018) study included two dependent variables: (1) self-reported health, and (2) mental distress. The control variables included: sex, age, race/ethnicity, educational attainment and income. Descriptive and bivariate analyses were performed using chi-square tests. Separate multi-variate regression models were used to examine the impact of exposure to four or more ACEs and the interaction of exposure to four or more ACEs, and level of each protective factor on overall health and mental distress conducted using Statistical Analysis Software (SAS).

Study demographics of consisted of 51.9% females, 59.9% non-Hispanic White persons, and 59.9% participants with some college education. Slightly less than 97% of respondents indicated that they grew up with an adult who made them feel safe and protected and 98.4% had an adult who made sure their basic needs were met.

Of the study population, 18.1% participants reported four or more ACEs which corresponded to reports of being less likely to having an adult who makes them feel safe and protected all of the time and less likely to have had their basic needs met all of the time. Analysis

shows that participants who had an adult who them feel safe all of the time were more likely to report good health than poor health and to report low to moderate metal distress versus frequent mental distress.

Multivariable analyses examined the relationship between four of more ACEs by level of each protective factor and overall health. The odds of poor health for those with four or more ACEs was lower if the respondents grew up with an adult who made them feel safe and protected some to most of the time, and for those who felt safe and protected all of the time. Thusly, Crouch et al. (2018) determined that the moderating effects of SSNRs were present.

Their results stated that fewer participants with four or more ACEs reported not having an adult who made them feel safe and protected nor felt that their basic needs were being met when compared to participants with less than four ACEs. The "presence of protective factors may have a role in moderating the number of ACEs a child may experience or the long-term impact of those ACEs." (p. 169). Crouch et al. (2018) also asserted that the presence of an adult who made the participant feel safe and protected as a child seems to be a stronger influence on adult health than having someone who solely met basic needs.

Crouch et al. (2018) concluded that the implications of this study are relevant since factors that may prevent ACE exposure from occurring can help build resilience to overcome the mitigating effects of exposure to ACEs. They identify the importance of implementing resilience practices alongside trauma-informed practice to create an effective framework to create efficient statewide policies and programs that address adult outcomes associated with ACEs.

Implementation Outcomes

In 2012, Macdonald and Millen reviewed literature on behalf of the Social Care Institute for Excellence (SCIE) following a regional review of childcare in Northern Ireland. Five Health and Social Care (HSC) Trusts in Northern Ireland introduced different therapeutic approaches in a selection of their children's homes and regional secure units as a way to improve resident outcomes. The evaluation compared and contrasted the resulting resident outcomes of each HSCs chosen model.

Macdonald and Millen (2012) defined therapeutic approaches as (1) how to understand how trauma effects residents, and (2) why their ways of coping with trauma might be maladaptive. They also stated these therapeutic approaches can complement specialist therapeutic interventions, such as trauma-focused and cognitive-behavioral therapy, but do not replace them. The project built on existing work in each HSC trust which led to different therapeutic models being implemented by each trust. A range of models was considered and senior managers then made a decision about which model to adopt. The five models implemented by the trusts were:

- Attachment, Regulation and Competency (ARC)
- Children and Residential Experiences (CARE)
- Model of Attachment Practice (MAP) (developed in the Western Health and Social Care Trust)
- Social pedagogy (used in several other European countries)
- Sanctuary Model

The models share many features, including a focus on:

- Attachment–drawing on attachment theory
- Biopsychosocial nature of development: the impact of social experiences on the body, particularly the brain
- Competency: helping looked-after children develop life skills, such as problem-solving
- Trauma: recognizing that young people in care have often experienced trauma

Macdonald and Millen's (2012) evaluation was conducted in three parts: (1) literature reviews, (2) outcome studies that provide evidence of the effect of each model, and (3) qualitative research-based implementation experiences of the study. The qualitative research consisted of interviews with 18 home managers and 38 residential care workers in 18 homes. The selected staff participants represented various career bands, gender, as well as length of experience. There were 29 residents sampled from the homes that focused their responses to their general experiences living in a residential home.

Questions provided to residents included opinions on staff, attitudes toward the home, and changes they would like to see implemented. The researchers wanted to determine the level of change in resident experiences as a result of using a specific approach and how it compared or contrasted to those of staff observations.

Staff participants were asked to complete an online survey that tested whether themes from the interviews were able to be generalized. There was a total population of 392 workers, the survey was sent to a random sample of 205 employee, with 116 staff completing the survey. The

survey explored what training staff had received, asked for quality ratings in regard to the usefulness of the training, and their perception of the impact of the training on their position. Qualitative data collected from the staff sample revealed that staff believed introducing a therapeutic approach had a positive effect on the amount and intensity of incidents in residential homes. The use of sanctions to deal with bad behavior was reported to have decreased. The majority agreed that the new approach, based on rewards, was more effective. This was a strong point of agreement between staff and resident participants. General improvements in the atmosphere at the residential homes and centers were reported by most of the resident participants who had been in the same home for more than a year

Resident participants also emphasized what aspects of residential care were important to them. Relationships with staff were highly valued, as was the fact that they had been supported to deal with emotions and past issues during their time in the home. According to researchers, awareness of therapeutic approaches was not high among the resident. Macdonald and Millen (2012) clarified that it was not standard procedure to let residents know of any changes to staff training or approaches used.

Evaluating the impact of the approaches on objective measures of staff and resident wellbeing was reported to be difficult. Researchers determined that many homes had started their implementation before the evaluation began, making it difficult to obtain a holistic account of the individual home approach. Macdonald and Millen (2012) identified one source of longitudinal data, the monthly monitoring reports of incidents that occur within homes. Sample data from 18 homes was reviewed, including those who utilized both pre and post intervention training, as well as homes which had not received any therapeutic approaches training.

Results suggested that staff participant response patterns to certain incidents changed after the introduction of an approach. Homes with staff trained in a therapeutic approach were more disposed to manage incidents such as substance abuse within the home, rather than calling on other agencies. Assaults on staff also appeared to be less frequent than before training took place. Staff participants reported improvements in their knowledge, skills, competence, and confidence. Those staff who initially identified as skeptical of using the designated approaches documented a difference that their training and implementation practices made in regard to how staff felt, their morale, and their practices.

Macdonald and Millen (2012) claimed theirs was the first study to look at residents' views on experiences living in residential homes where a specific therapeutic approach was implemented. Due to the transitory nature of residents in HSC Trusts, there were few who lived in a home during a sustained period and experienced the direct change in the individual therapeutic approaches. However, residents' responses to the survey did indicate that they felt that staff were more relaxed and there were improvements in the atmosphere of the home. Residents also opined that there seemed to be less use of punishment by staff, something the researchers perceived to be significant conclusions on the part of residents.

According to the study, staff participants from all 18 homes believed implementation significantly improved their work experiences regardless of which of each of the five models selected as well as create both learning and teaching moments from formerly punishable behaviors. Macdonald and Millen (2012) asserted that implementation of theoretical practices developed by the various approaches allowed staff to:

- Gain insight into the potential damage that ACEs incur during early development
- The ability to respond more constructively
- To avoid conflict whenever possible
- To depersonalize challenging behavior to reduce the need for traditional punishments.

Staff participants also perceived that the unified therapeutic approaches created more consistency which changed the way work was internalized, developed stronger morale, increased confidence, and created greater job satisfaction. The evidence from the implementation of the models strongly supports the value and importance of providing staff with the necessary tools to do their jobs as well as an organizational context that promoted a positive framework for residents. Upon review of the five frameworks, four core requirements to effectively prepare staff to better understand residents emerged:

1. The role of maltreatment and its impact on youth
2. Attachment and the impact of attachment disorders
3. The importance of self-regulation and how it does/does not develop
4. Identity, self-esteem, and competence

Ultimately, Macdonald and Millen's (2012) research determined that using a therapeutic approach in residential settings made a difference in both staff and resident participant outcomes. Staff participants described improvements in their knowledge, skills, competence, and confidence. Residents reported changes that reflected staff claims that life was less confrontational, they felt better understood, perceived improvement in staff/resident relationships, and revealed fewer serious incidents occurring.

In 2015, research based in Walla Walla, Washington, by Longhi demonstrated how implementing trauma-informed practices can transform a school's culture. Common elements of change were shifts in mindsets, collaborative relationships, and organizational values/structures. Researchers identified that these changes enabled the adoption of scaffolded, equity-based, innovative interventions that may potentially decrease economic and racial/ethnic disparities by preventing the progression of ACEs into adult adversities, poverty, and discrimination.

In Longhi's (2015) Walla Walla study, data collected prior to the trauma-informed implementation practices found that on average, participating students accumulated five out of ten ACEs, four times the average number of ACEs of students in the entirety of Washington state. The goal of adopting trauma-informed practices within the school was "in order to become sensitive and supportive of such heavily traumatized youth, and to increase their resilience and their capacity to learn" (p. 1).

The 2013-2014 study was conducted at Lincoln High School (LHS), an alternative school in Walla Walla, Washington, and data collected between 2009-2013 during middle school was reviewed. Data studied focused on a review of trauma-informed practices LHS had implemented in response to community conversations on ACEs, brain development, and resilience. Longhi (2015) described four reinforcing cycles that represented the systematic changes in school practice to represent trauma-informed practices:

- The safety cycle
- The values cycle
- The conversations-normative cycle
- The learning cycle

The first three cycles build upon each other culminating in the learning cycle which is based on the premise that "higher academic achievement will derive from increased safety, different values and teacher-student relations, reinforced by the newly established student behavioral norms" (p. 9).

Longhi (2015) claimed that in order to achieve the organizational capacity needed to implement and maintain the four cycles, schools must recognize that changing the curriculum or training of teachers will not facilitate effective trauma-informed school practices that support effective outcomes. It was predicted that the challenge in implementing trauma-informed practices centered on changing the values and mindsets of school staff, engaging in conversations that matter, supportive relationships, as well as modifying they ways in which teachers instruct. Longhi (2015) described 'conversations that matter' as:

- The more 'conversations that matter' take place
- The more articulations (descriptions) occur of behaviors of compassion and tolerance
- The more behavioral norms are set and enforced
- Leading to an increased sense of safety
- Leading to increased transfer of skills that make 'conversations that matter' more likely

Schools need to support "ways in which students themselves set and enforce new behavioral norms that lead to more safety, resilience, learning, and academic achievements" (Longhi, 2015, p. 10).

There were four main research questions driving this study. I reviewed Question 1 and Question 3:

1. Has resilience increased among students since coming to Lincoln High, even among those with initially low resilience and those with high Adverse Childhood Experiences?
2. Is there evidence that students felt that school experiences resulting from the changes at Lincoln were important to them, and that these experiences were associated with their achieving higher resilience?
3. Is higher resilience associated with better attendance, test performance and grades?
4. Does higher resilience moderate the predicted negative impact of traumatic experiences (ACEs) on academic performance?

The first question asked if resilience had increased among students since coming to Lincoln High School, even among those with initially low resilience and those with high ACEs? The data was broken down into overall resilience scores, as well as three resilience subscales consisting of: (1) supportive relationships, (2) problem-solving, and (3) optimism. Results indicated that resilience improved among students at LHS, almost equally at all ACE levels, even among high ACE students who had initially low or just average resilience.

A typology of students emerged from these findings that provided identification for further study: those who were still trauma victims, those who had become trauma survivors, and those who were thriving. Longhi (2015) related that students had differing experiences exhibited three primary disparate levels of resilience: (1) none or little resilience among victims, (2) moderate resilience among survivors, and (3) high resilience among thrivers.

Quantitative data from the 111 respondents revealed that average resilience scores increased significantly from attendance when compared after attending Lincoln High School for

the overall resilience scale and for each of the three sub-scales. Resilience increased for students with previous low and average resilience and stayed high for students with previous high resilience. Before LHS, only 37% of the students had high resilience, and 28% had average resilience; after LHS, 64% of the students had high resilience, and 24% of the students had average resilience. The average improvement in resilience occurred regardless of student ACEs, even for those students who had many traumatic experiences before entering LHS. The correlation between ACEs level and improvement in resilience was found to be close to 0 (r=.03) and nonsignificant (p. 401).

Qualitative research categorized levels of resilience among students by differing uses of language and types of experiences students recounted when responding to 12 open-ended survey questions. Longhi's (2015) three typologies of students and their corresponding response patterns all differed upon comparison. Type 1 'Trauma Victims with Little/No Resilience' indicated "a lack of resilience and an inability to accept or cope with their traumas and feeling hopeless about their future" (p. 5). Their responses were dramatically different both in form and content when compares with students who identified as more resilient.

The second student typography was described as 'Survivors with Moderate Resilience.' Data revealed a similar pattern of experiences that produced resilience and helped students survive. Students referenced the feeling of safety and support at LHS, an ability to better cope with anger and depression, feeling accepted, experienced trusting relationships, achieved school success, as well as the ability to develop future goals. Students who were in the low moderate classification of this typology gave shorter, less detailed answers. Whereas those in the high moderate range provided evidence of more insight, logic, and reasoning.

The third type of students were described as ‘Thrivers with High Resilience.’ This group achieved high levels of resilience which was exemplified by writing in unique ways about their strengths, achievements, and personal experiences. Their survey answers were longer, demonstrated clear understanding of their experiences, broad definitions of their feelings, and cognizance regarding the impact of the outcomes of their actions. They notated an appreciation for the safety of places and caring adults, felt supported in many ways, had pride in their achievements, felt more in personal control, and had developed life goals and plans.

The second question I selected to review from the study quantitatively addresses whether resilience has moderated the predicted negative impact of traumatic experiences on school performance. Longhi (2015) selected grade point average (GPA) as the best measure of school performance because there was available data that spanned eighth grade performance as well as acquired LHS data. This measure selection allowed for statistical analysis that included a large sample size in which to synthesize findings. Longhi also stated that grades are a good general summary of school performance, as grades at LHS were often associated with less truancy and better performance on standardized tests scores.

Longhi’s (2015) study established that prior to attending Lincoln High School, student school performance was negatively correlated with estimated ACE levels. To determine whether resilience was a moderating effect on school performance after attending Lincoln High School, current GPAs were independently calculated by ACE level for students who had gained high resilience and those who still experienced low resilience. The results established that resilience does moderate the impact of ACEs as the GPAs of student’s with high resilience were high but begin to be lower as ACE levels increased for students who maintained low resilience.

Longhi (2015) determined that 70% of the student participants had attained high levels of resilience and among those participants, as determined by the LHS average GPA of 2.65 being much higher than the eighth grade GPA of 2.13. Furthermore, the study found that the GPA's did not differ significantly by ACE level. The remaining 30% of the student participants who had low levels of resilience at LHS, had GPAs averaging at about 2.29, much lower than their higher LHS resilient counterparts. The students with lower resilience's GPAs did decrease significantly the higher the student ACE level, similar to the pattern found in review of the eighth grade GPAs.

Longhi (2015) implemented regression analysis in order to calculate the degree to which ACEs impacted grades between the low and high resilience groups of students. Regression lines for the students with high resilience were flat, which indicates no statistically significant relationship between ACEs and grades. The regression line for students with low resilience was negative and steep which indicates significantly lower grades with higher ACEs. The final step of the analysis was to run four multivariate regression models to test the effects of ACEs and resilience on high school grades before entering LHS. These analyses were implemented to provide further evidence of the effects of resilience and ACES on improvement on grades since starting LHS.

Upon Longhi's (2015) final review of the four regression models, results indicate that resilience led to significantly higher grades for most students, above and beyond the effects of level of ACEs and prior grades in eighth grade. They also suggested that once a high level of resilience was achieved, the impact of ACEs on grades was no longer significant. Longhi concluded that "resilience among these students moderated the expected negative impact of

ACEs on school performance to the points where grades were no longer significantly different" (p. 22).

Longhi's (2015) study determined that school practices developed to be sensitive to student ACEs and involving the four reinforcing cycles, created beneficial effects by increasing student resilience for a majority of students and significantly improving school performance, even among student's with disproportionately high ACEs. Two limitations described by Longhi were the absence of baseline resilience scale data before Lincoln High School and the lack of complete information on student ACEs.

Table 1

Summary of Chapter 2 Research Studies Examined

SOURCE	TYPE OF STUDY	PARTICIPANTS	PROCEDURE	FINDINGS
Macdonald & Millen (2012)	Qualitative	18 home managers, 38 residential staff, 29 residents. Northern Ireland	Interviews and surveys of Trust staff and residents.	Common to each trust home after implementing trauma informed frameworks: recognition that children in residential care have suffered trauma and disadvantages. The belief that staff need to understand and address the needs and emotions underlying challenging behavior, rather than simply responding to the behavior. A belief that staff and/or children need techniques for being aware of, and regulating, their responses to stressful situations.
Bethell, Newacheck, Hawes, & Halfon (2014)	Quantitative	95,677 children, (approximately 1,800 per state) ages 0 to 17.	Data from National Survey of Children's Health 2011/2012 data.	Resilience mitigated the impact of adverse childhood experiences on grade repetition and school engagement.
Longhi (2015)	Mixed Method	111 Lincoln High School students 2009-2013	Prior and post Statistical analysis of resilience at Lincoln High; ACE's, attendance, standardized tests, grades.	The study provided generalizable findings on the relationships among resilience, school performance, and ACEs as well as insights on the processes involved in producing these relationships.

Table 1 (continued)

SOURCE	TYPE OF STUDY	PARTICIPANTS	PROCEDURE	FINDINGS
Crouch, Radcliff, Strompolis, & Srivastav (2018)	Mixed Method	7079 adults aged 18 and older. South Carolina.	2016 South Carolina Behavioral Risk Factor Surveillance System dataset review.	Protective factor of SSNRs in relation to ACEs
Thomas, Crosby, & Vanderhaar. (2019)	Qualitative	4,056 articles, resulting in 33 education based	Review of 20 years (2001-2018) of literature regarding trauma-informed practices in schools.	Need for multi-disciplinary collaboration to discuss a focus on prevention and recovery from trauma.
Blitz, Yull, & Clauhs (2016)	Mixed Method	105 initial study (May, 2014), 100 follow up (June, 2014), 39 staff interviews (June, 2014). Northeastern USA.	Sanctuary Model as a culturally responsive trauma informed approach to enhancing school climate.	Trauma- informed approaches emphasize strengths-based and systems-focused interventions that can challenge stereotyping and deficit thinking while directing supportive responses that teach prosocial behavior and build resiliency.
Goldenson, Kitollari, & Lehman (2020)	Mixed Method	40 adolescents, ages 12-17. California	Resilience was assessed using the Child and Youth Resilience Measure-12 (CYRM)to see whether higher resilience scores would moderate the relationship between the number of ACEs and scores on the selected psychological measures.	The more resilient the sample, the less the symptomatology. as ACE distress increased, those high on resilience reported less somatization and depression than those low on resilience. The opposite was found for those low in resilience; i.e., as ACE distress increased, those low in resilience reported more depression and somatization.

Chapter 3: Conclusions and Recommendations

The primary purpose of this literature review was to examine the impact trauma-informed practices have on resiliency outcomes when implemented for school aged children and adolescents. Chapter 3 is organized into three subsections based on literature review from Chapter 2: Conclusions, Recommendations for Future Practice, and Implications for Practice. Conclusions summarizes literature reviews that link relationships between trauma-informed practices and the role of resiliency on implementation outcomes when trauma-informed frameworks are utilized. Recommendations for future practice include proposals from within the reviewed literature based on the implementation outcomes from Longhi's (2015) study in Walla Walla, Washington, and the SCIE's 2015 implementation of multi-framework practices within children's homes in Northern Ireland as well as other supporting research.

Conclusions

Seven studies were reviewed in Chapter 2. Three themes emerged when analyzing the findings: lack of a universal definition of trauma-informed practices, the role of resilience to mitigate the impact of trauma, and the increase in positive outcomes for students affected by trauma when a trauma-informed framework was implemented.

Lack of a universal definition of trauma-informed practices: Trauma-informed practices are referenced repeatedly in the studies in Chapter 2. Thomas et al.'s (2019) meta-analysis covering 30 years of research based on trauma-informed practices concluded that there is currently no formally agreed upon framework for trauma-informed practices, as well as no consistent determination of effectiveness. They go on to question the empirical basis of the studies that were reviewed. Attention to childhood trauma and the need for trauma-informed care

has contributed to the emerging discussions within schools related to trauma-informed teaching practices, school climate, and the delivery of trauma-related in-service and preservice teacher education (Longhi, 2015). Thomas et al.'s (2019) broad review of educational research on trauma-informed practices highlights the importance of creating multidisciplinary trauma informed definitions and practices to facilitate positive outcomes of students impacted by trauma (Blitz et al., 2016).

The specific trauma-informed frameworks cited in Chapter 2 (Blitz et al., 2016; Macdonald & Millen, 2012) all demonstrated that there is capacity for positive developmental and academic outcomes when a trauma informed framework is implements. Longhi's (2020) study allows for educators to observe positive academic outcomes in terms of increasing GPA, as well as the role that resilience plays in moderating the impact of ACEs on student achievement.

Resilience: The power of resilience is twofold; it can be a mitigating factor to offset the effects of childhood trauma and resilience can be taught (Bethell et al., 2014). As an educator, I have the ability to implement trauma informed practices in my lessons and relationship building when working with students. Longhi's (2015) research provided relevant, well-established criteria that focuses on relationships among resilience, schools, and ACEs. The Bethell et al. (2014) study recognized the role of resilience in students regarding grade repetition and school engagement, both of which are potential liabilities to a student's academic path.

The Crouch et al. (2018) study provided data that relates to how resilience is related to individual strengths and skills that are reinforced via learning. In their 2019 study, Couch et al. derived the importance of SSNRs when analyzing what factors mitigate the effects of ACEs. By implementing a trauma informed framework that includes all school employees, the opportunity

to teach resiliency skills to all students intimates the potential to offset the negative developmental effects of ACEs.

Increase in positive outcomes for students affected by trauma when a trauma-informed framework was implemented. Research conducted by MacDonald and Millen (2012) was based on the experiences staff and adolescent residents group homes in Ireland, their research provides insight into the importance of organization wide implementation of trauma-informed frameworks. The very nature of the environment in which the study took place had a very high probability of being a traumatic experience for the residents. The positive outcomes revealed by both residents and staff after implementing trauma informed frameworks, regardless of which framework was selected, leads to an understanding of the power that intentional trauma informed practices provide to an entire organizational entity.

Longhi's (2015) Walla Walla, Washington, study is a powerful example of how students who have high ACE scores are able to find academic success by implementing trauma informed practices that focus on resiliency outcomes. This study shows direct correlation between higher academic achievement being associated with increased resiliency scores.

Recommendations for Future Research

Creating a multi-disciplinary definition of trauma-informed practices will allow for a more holistic and comprehensive opportunity to serve the needs of students impacted by trauma. In the seven studies included in this review, each had a different definition of what constituted trauma-informed practices. The NTCSN definition occurred in the research most consistently, and many studies adapted the findings to suit the purpose of their study. However, this does not allow for continuity or clarity of service to students and their families that would promote a

cohesive treatment or intervention plan (Blitz et al., 2016; Longhi, 2015; Macdonald & Millen, 2012).

Thomas et al.'s (2019) meta-analysis highlighted the need for more research to be focused in the field of education. In my opinion, the educational environment is an ideal situation in which to create and nurture SSNRs that have been proven to mitigate many negative effects of trauma (Crouch et al., 2018). Implementation results show that statistically significant outcomes have positive effects on students who were provided trauma-informed care. Much of this research was conducted in restrictive, unfamiliar situations, this alone may be considered a traumatic experience (Macdonald & Millen 2012). School systems have the benefit of being a familiar environment that provide both emotional and academic supports in which to address trauma and to teach resilience (Longhi, 2015). Schools already have working relationships with multidisciplinary organizations including community organizations, health care providers, and family supports. It seems a natural opportunity to maintain supportive dialogue for members of a care team in a safe and nurturing place of community. If, as research shows, an SSNR instills a stronger sense of resilience in children, then it is our obligation to our students to work as a team to best support growth, development, and positive future outcomes for students impacted by trauma (Crouch et al., 2018).

The Sanctuary Model implemented in both the Macdonald and Millen (2012) and Longhi (2015) studies provides a framework that includes training all employees in the importance and implementation of trauma informed care. Outcomes of studies using Sanctuary as a model reported statistically significant outcomes for participants of the study. Further longitudinal data

is need in educational environments to provide more evidence-based measurements to support this model in schools (Blitz et al., 2016).

Current research leads me to suggest a deeper study into educators teaching resiliency practices for all students. The SCIE and Walla Walla studies show that resilience can be taught and be successfully internalized to assist students in mitigating the devastating long-term effects of trauma.

Recommendations for Practice

- Social Emotional Learning: Crouch et al. (2018) described the importance of safe, secure, nurturing relationships when creating connections with students impacted by ACEs. By implementing structured, relevant social emotional practices at the beginning of instruction time, I am able to assess the emotional mood of my students. Until students are in the appropriate emotional mindset there is very little chance that any quality learning will take place. This is vital instructional data that will set the tone for the remainder of the instruction time as well as create competence and connection between the educator and the student.
- Organization Wide Implementation: Without the support of administration any trauma informed practices and/or frameworks may not be as effective research indicates (Longhi, 2015). The Sanctuary Model is an example of a trauma-informed framework that is organization wide and has been successfully implemented in educational organizations in many countries (Blitz et al., 2016; Macdonald & Millen, 2012).

- Multi-disciplinary Cooperation: The ability to create a more synergetic relationship between the various aspects of a student's supports system is vital to their success. It is important that the student's collective support systems have the ability to work together to best support and integrate the individual needs and goals of students (Thomas et al., 2019).

Summary

As I began to research the impact of trauma on learning, I realized that the impact of trauma is diverse and far reaching. As an educator, the impact that trauma has on learning cannot be ignored. It is imperative that all educators and persons working directly with students learn to recognize the value of trauma-informed practices.

As I kept learning about the positive learning and developmental impact that safe, secure, and nurturing relationships (SSNRs) have toward mitigating the impact of trauma in children my educational philosophy evolved. I wanted to quantify my own personal potential opportunity to create SSNRs in my daily work schedule. I calculated that I had direct contact, or an opportunity to interact, with a minimum of 90 individual students each school day. In Minnesota there is a requirement of a minimum of 165 student contact days per school year (MINN. STAT. ANN. 120A.414, 2020), resulting in the potential for me to personally engage in 14,850 student interactions each school year. Upon calculating the impact of the entire 190 school building employees there are potentially 2,821,500 opportunities to foster SSNRs with our students. Incorporation of trauma-informed practices in an organization is a mammoth undertaking both financially and strategically (Macdonald & Millen, 2012). However, research has shown that both students and staff have predominantly positive outlooks on their experiences once a trauma-

informed framework has been implemented (Couch et al., 2019; Longhi, 2015; Macdonald & Millen, 2012).

It is my firm belief that educators have a dominant role in the ability to create not only strong academic outcomes, but more importantly can structure their lessons within a trauma informed framework that will benefit all students. Research has shown that trauma has tremendous impact on learning and development (Bethell et al., 2014; Chamberlain et al., 2016; Felitti et al., 1998; Longhi, 2015; Macdonald & Millen, 2012). More importantly, it has been demonstrated that resilience is the primary mitigating circumstance to offset the inherent malevolence of trauma (Bethell et al., 2014; Chamberlain et al., 2016; Goldenson et al., 2020).

References

American Association of Pediatrics. (2014). AAP.org. https://www.aap.org/en-us/Documents/ttb_aces_consequences.pdf

American Psychological Association. (n.d.). *The road to resilience.* https://www.apa.org/helpcenter/road-resilience

Bethell, C. D., Newacheck, P., Hawes, E., & Halfon, N. (2014). Adverse childhood experiences: Assessing the impact on health and school engagement and the mitigating role of resilience. *Health Affairs*, *33*(12), 2106–2115.

Blitz, L. V., Yull, D., & Clauhs, M. (2016). Bringing sanctuary to school: Assessing school climate as a foundation for culturally responsive trauma-informed approaches for urban schools. *Urban Education*, *55*(1), 95–124.

Bloom, S. L., & Farragher, B. (2013). *Restoring sanctuary: A new operating system for trauma-informed systems of care*. New York, NY: Oxford University Press.

Brunzell, T., Waters, L., & Stokes, H. (2015). Teaching with strengths in trauma-affected students: A new approach to healing and growth in the classroom. *American Journal of Orthopsychiatry*, *85*(1), 3–9.

Chamberlain, D., Williams, A., Stanley, D., Mellor, P., Cross, W., & Siegloff, L. (2016). Dispositional mindfulness and employment status as predictors of resilience in third year nursing students: A quantitative study. *Nursing Open*, *3*(4), 212–221.

Collaborative for Academic, Social, and Emotional Learning. (n.d.). *What is SEL?* https://casel.org/what-is-sel/

Crouch, E., Radcliff, E., Strompolis, M., & Srivastav, A. (2018). Safe, stable, and nurtured: Protective factors against poor physical and mental health outcomes following exposure to adverse childhood experiences (ACEs). *Journal of Child & Adolescent Trauma, 12*(2), 165–173.

Felitti, V. J., Anda, R. F., Nordenberg, D., 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. *American Journal of Preventive Medicine*, *14*(4), 245–258.

Goldenson, J., Kitollari, I., & Lehman, F. (2020). The relationship between ACEs, trauma-related psychopathology and resilience in vulnerable youth: Implications for screening and treatment. *Journal of Child & Adolescent Trauma*, pp. 1–8. https://doi.org/10.1007/s40653-020-00308-y

Hoover, S. (2019). Policy and practice for trauma-informed schools. *National Association of State Boards of Education*, *19*(1), 25–29.

Jennings, P. A. (2018). *The trauma-sensitive classroom: Building resilience with compassionate teaching*. https://www.aft.org/ae/summer2019/jennings

Longhi, D. (2015, February). *Higher resilience and school performance among students with disproportionately high adverse childhood experiences (ACEs) at Lincoln High, in Walla Walla, Washington, 2009 to 2013*. https://www.acesconnection.com/fileSendAction/fcType/0/fcOid/466307103279770868/filePointer/466307103281285022/fodoid/466307103281285018/LH%20report%20final%20%281%29.pdf

Macdonald, G., & Millen, S. (2012, May). *Therapeutic approaches to social work in residential childcare settings: Literature review*. Social Care Institute for Excellence. https://.scie.org.uk

Maynard, B. R., Farina, A., Dell, N. A., & Kelly, M. S. (2019). Effects of trauma-informed approaches in schools: A systematic review. *Campbell Systematic Reviews*, *15*(1–2).

MINN.STAT.ANN.120A.414. (2020). www.revisor.mn.gov

National Child Traumatic Stress Network. (2017). Creating, supporting, and sustaining trauma-informed schools: A system framework. Los Angeles, CA and Durham, NC: National Center for Child Traumatic Stress.

Substance Abuse and Mental Health Services Administration (SAMHSA). (n.d.). https://www.samhsa.gov/child-trauma/undertanding-child-trauma

Substance Abuse and Mental Health Services Administration (SAMHSA). (2014). *SAMHSA's concept of trauma and guidance for a trauma-informed approach.* HHS Publication No. (SMA) 14-4884. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Teaching tolerance. (n.d.). https://www.learningorjustice.org/magazine/publications/reframing-classroom-management-a-toolkit-for-educators

Thomas, M. S., Crosby, S., & Vanderhaar, J. (2019). Trauma-informed practices in schools across two decades: An interdisciplinary review of research. *Review of Research in Education*, *43*(1), 422–452.

Verbrugge, B. (2016, August 22). *Best practice, model, framework, method, guidance, standard: Towards a consistent use of terminology–revised.* https://www.vanharen.net/blog/best-practice-model-framework-method-guidance-standard-towards-consistent-use-terminology/

Waters, L., & Brunzell, T. (2018, August 13). *Five ways to support students affected by trauma.* https://greatergood.berkeley.edu/article/item/five_ways_to_support_students_affected_by_trauma

Weathers, F. W., & Keane, T. M. (2007). The criterion A problem revisited: Controversies and challenges in defining and measuring psychological trauma. *Journal of Traumatic Stress, 20*(2), 107–121.