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School Staff Perceptions of a Trauma Informed Program on Improving Knowledge, Competence, and School Climate

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SCHOOL STAFF PERCEPTIONS OF A TRAUMA INFORMED PROGRAM ON IMPROVING KNOWLEDGE, COMPETENCE, AND SCHOOL CLIMATE

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Dissertation Approval

This is to certify that the thesis presented to us by _____

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Abstract

This study sought to examine school staff perceptions of knowledge, competence, school climate and program effectiveness during and after participation in a trauma informed care professional development. The majority of the sample consisted of special areas (art, music, library) teachers and paraprofessionals from all district schools, which consisted of three elementary schools, one middle school and one high school in in a school district located in Southeast Pennsylvania approximately 20 miles from a major metropolitan city. Most of the participants were female. Participants completed a pretest survey and an identical survey following each phase. Questions on the survey pertained to each of the research questions exploring whether school staff felt they were knowledgeable about trauma and its prevalence, whether they felt they were competent to work with students who have a trauma history, whether they perceived their school culture and climate as being supportive in becoming trauma informed, and if they believed the TIPS program was effective and useful. It was hypothesized that the participants would respond positively in each case, perceiving themselves to have learned about trauma, gained competence in dealing with traumatized students, positively perceive the school culture and climate as supportive in their endeavor to become trauma informed, and would rate the TIPS program as effective and useful. Although none of the hypotheses was supported, each of the hypotheses illustrated an increase from pretest to posttest, however slight. Also, it is important to view these results with caution and considering several limitations. Clinical implications and directions for future research are discussed.

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Chapter 1: Introduction

Introduction

In California, a homeless high school student felt he had nowhere else to go after being kicked out of his home, so he slept on the roof of his school. When administration found out, instead of supporting him and connecting him with services, they threatened him with legal action if he was caught trespassing again (Peter P. et al. vs Compton Unified School District, 2015). This is one example of how many school districts are ill-informed regarding how to handle students with a history of trauma. In the following paragraphs it will become clear that the prevalence of childhood trauma is far greater than was previously thought. Children are more likely to access mental health services through their schools or their primary health care providers, making schools a crucial participant in screening and treatment. Thus, it is critical that educators become familiar with the symptoms and impact of traumatic stress and help to create supportive environments for all students (Simonich, et al., 2015). It is crucial that school staff are given the tools to work with traumatized students. One does not need to have experience in therapy to help students with trauma histories. One simply needs to provide a safe environment, connections, and to be supportive and guiding in emotion and impulse management. Trauma prevention is always the goal, but for students who have already experienced trauma, the manner in which school staff respond can potentially impact these students, positively or negatively (Bath, 2008).

Statement of the Problem

Although children have always endured trauma, the true prevalence of childhood trauma has been severely underestimated in the past. In his book, *The Body*

Keeps the Score, Bessel Van der Kolk, a leading trauma expert, explained how a widely used psychiatric textbook from the 1970's asserted that incest was extremely rare; occurring about only once in every million women (2014). At that time there were approximately one hundred million women living in the United States. Given that figure, approximately only 100 women nationwide should have had a history of trauma from incest; therefore, Dr. Van der Kolk was quite surprised when nearly half, forty-seven of them, showed up in his office seeking treatment.

The lack of accurate information continued for decades. Fortunately, in the mid-1990s, Dr. Vincent Felitti of Kaiser Permanente, in conjunction with Dr. Robert Anda of The Center for Disease Control (CDC) sent the clients of Kaiser Permanente a questionnaire about adverse childhood experiences. In 1998, they published a study based on the survey data, which indicated increased exposures to childhood trauma could predict a dramatic increase in 7 of 10 of the leading causes of death in this country. This seminal study was called, the Adverse Childhood Experiences Study (ACES) (Felitti et al., 1998). Although trauma is not a new concept, it had previously been viewed as limited to a small population, as Dr. Van der Kolk observed, and relegated to mental health and social services. With the publication of the ACES data, trauma began receiving attention as a medical issue. Since then, numerous studies have been published worldwide that examine the effects of trauma throughout the lifespan and examine the crossover among physical, neurological, cognitive, emotional and psychosocial effects. In response to the information from ACES, Dr. Robert Block, the former president of the American Academy of Pediatrics said in a testimony to the Senate, "Based on this study,

childhood trauma, including abuse and neglect, may be the leading cause of poor health among adults in the United States" (2011).

This information begged the question concerning what kind of effects these experiences have on children, in their everyday life and in school, and how those with direct contact with children, such as therapists or school staff, could and should alleviate the symptoms and prevent the negative lasting effects. This has led to a steady stream of research into what is known as "trauma informed care" (Hodas, 2007). Although trauma informed care (TIC) is still in its infancy, the volume of research has increased dramatically over the last two decades.

With more research being published daily, an increasing number of state departments of education and also school districts are recognizing the severity of the problem, understanding the importance of early identification and intervention, and are making efforts to include trauma competency as part of their staff trainings. The San Francisco Unified School District adopted a Safe and Supportive Schools Policy in 2014 (San Francisco Unified School District, 2014). In 2005, Massachusetts Advocates for Children, in partnership with Lesley University's Center for Special Education, published Helping Traumatized Children Learn (Cole, et al., 2005). This flexible framework has been utilized throughout Massachusetts and the country as a model for building trauma sensitive schools. For instance, Ferguson, Missouri used Helping Traumatized Children Learn as a model for their Forward Through Ferguson: A Path Toward Racial Equity Report (Ferguson Commission, 2015).

Even though trauma has been examined for decades, trauma informed care (TIC), particularly as it pertains to application in schools is relatively new. Multiple theoretical

frameworks have been designed to help create more trauma sensitive and informed schools and districts such as Helping Traumatized Children Learn (Cole et al., 2005) and the subsequent Creating and Advocating for Trauma-Sensitive Schools (Cole, et al., 2013), as well as The Heart of Teaching and Learning (Wolpow, Johnson, Hertel, & Kincaid, 2009) and Attachment, Self-Regulation, and Competency (Kinniburgh, Blaustein, Spinazzola & Van der Kolk, 2005). There are a limited yet increasing number of books in publication to provide guidance regarding how to apply these frameworks in schools, such as *Supporting and Educating Traumatized Students* (Rossen & Hull, 2012) and *Lost at School* by Ross Greene (2008). Resources with information regarding the application of trauma knowledge in the classroom are very difficult to find. Further, although some districts are proactively addressing trauma, many are not, which may leave teachers and staff feeling overwhelmed and incompetent, affecting the climate in the schools, which in turn may affect teaching performance, burnout, and turnover. States regularly publish information regarding turnover; however, little information is given regarding the lack of trauma training and the effects it may have on staff perceptions of a supportive school climate. A study that assesses the effectiveness of a TIC program in schools, and how that program affects the perceptions of school staff may help to increase awareness and improve the use of trauma competency programs in schools and districts.

Purpose of the Study

Teachers and paraprofessionals, who are otherwise known as teacher's aides or classroom assistants, face a great deal of pressure in their work that is a result of increasing student numbers in class, changing curriculums and testing expectations. They

are expected to teach each student in their classes, regardless of academic, emotional, social or behavioral issues. Many of the more challenging students have behavior issues because they have experienced trauma and may have a difficult time coping with it (Rossen & Hull, 2013). Perfect, Turley, Carlson, Yohanna, and Saint Gilles (2016) estimated that two-thirds of students have experienced at least one traumatic experience by age 17. Few teacher training programs include trauma informed care in the curriculum, so teachers may be left feeling unprepared to handle the added stress of dealing with traumatized students (Wong, 2008). Further, there is a dearth of literature investigating the effect of trauma informed care programs provided to school staff and how it may change the staff's perception of school climate. The purpose of this study is to investigate staff perceptions of their own knowledge about trauma and their competence working with traumatized students pre-and post-training, using a pilot program that will provide school staff with knowledge about trauma, strategies to enable them work effectively with students who may have experienced trauma, and to measure staff perceptions of school climate and administrative support. Staff perceptions of the effectiveness of the program will also be explored. Findings from this study may provide insight into stressors experienced by teachers regarding their perceptions of competence in working with traumatized students as well the relationship between training and perceptions of effectiveness and a supportive school community. Because feelings of incompetence, ineffectiveness and unpreparedness can lead to prolonged stress and possibly burnout among teachers (Alisic, 2012), this is an important field of study.

Summary

Trauma is not a new concept, but thanks in large part to a medical study conducted in the mid-nineties, there is a wellspring of data regarding trauma and outcomes from early childhood exposure to it. This information provided correlations between adverse childhood experiences and negative life outcomes. With the ability to predict these outcomes, the next logical step has been to explore ways to avoid these outcomes. School staff, who work with students for a significant part of their day, have a unique opportunity to intervene and possibly ameliorate the effects of trauma.

The following literature review will include a brief history of research into trauma, discussing the factors that influence trauma and the effects of trauma. The impact that untreated trauma has on school performance will be examined. Theoretical and conceptual models of trauma informed care and the current models and toolkits in use currently in schools and districts will be explored. These areas will give context to the subsequent study, in which the following research questions were addressed:

1. Do school staff believe they are knowledgeable about trauma and its prevalence?
2. Do school staff perceive themselves as being competent to handle working with students who may have a history of trauma before and/or following this professional development?
3. Do school staff perceive their school culture as being supportive in becoming trauma informed after being provided with this professional development?
4. Do school staff feel that the professional development presentations they were given during the TIPS program were effective in helping them become trauma

informed and did they provide useful information they can use in their position?

Chapter 2: Review of the Literature

Introduction

There is no one globally accepted definition of trauma. The most comprehensive, and the one used in this project, was developed by the Substance Abuse and Mental Health Services Administration (SAMHSA, 2014), who defines individual trauma using the "3E's;" event, experience, and effects. According to SAMHSA, "Individual trauma results from an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being." The first element, events, was accepted as part of the Diagnostic and Statistical Manual, fifth edition (American Psychiatric Association, 2013) in all trauma and stressor-related disorders as a diagnostic criterion. This may include actual or threatened physical or psychological harm. The second element, experience, refers to the individual's perception of the event, or how the individual experiences the event. An event that is felt as traumatic for one individual may not be traumatic for another. The meaning of the event to the individual is just as important as the event itself. For example, an automobile accident may be easily dismissed by one individual but psychologically paralyzing to another. Similarly, two children from the same family may experience their parent's divorce very differently. The final element of the SAMHSA definition is effects. The onset of adverse effects may occur immediately or may have delayed onset. The effects may be short term or long term. Examples of adverse effects include difficulty coping with normal stressors, reduced cognitive ability such as memory, attention, thinking and regulation of behavior or emotions, as well as many

unseen and lasting effects such as the chronic health issues as described by ACES (Felitti et al., 1998).

Other definitions vary but it is generally agreed upon that traumatic experiences are overwhelming, produce strong negative emotions, and there is harm, or the threat of harm to self (Rossen, 2013). The experience of trauma depends in part upon the developmental capacity of the individual, so variables such as age may affect whether or not it becomes traumatic. Other variables may include available support systems, previous experiences, the individual's perception of his or her own ability to cope, interpersonal skills, and cognitive ability.

Adverse Childhood Experiences

In the mid-nineties, surveys were sent to clients of Kaiser Permanente in two waves, with nearly 20,000 respondents (Felitti, et al., 1998). The ten-question survey asked the participants questions pertaining to their adverse childhood experiences during the first 18 years of life that could be defined as traumatic. The ten areas assessed were physical, sexual, or psychological abuse, physical or emotional neglect, mental illness, incarceration of a parent, substance abuse or separation of a parent through divorce, and witnessing domestic violence. Respondents received one point for each positive response. They received only one point, regardless of the frequency, duration or intensity of the event. The results were then correlated to several health outcomes. This became the Adverse Childhood Experience Study (ACES), which was a seminal paper published in 1998 by Dr. Vincent Felitti of Kaiser Permanente, and Dr. Robert Anda of the Center for Disease Control (CDC). The results from the first wave alone indicated a surprisingly high prevalence of childhood trauma; over half (52%) of the respondents experienced at

least one adverse childhood experience, and 6.2% reported experiencing 4 or more. Further, they found a dose-response relationship between the number of adverse childhood experiences the patient had been exposed to and the health outcomes they examined, with outcomes becoming more negative as the score increased. Compared with clients with no score, clients with a score of four or more were 2.5 times more likely to have had a sexually transmitted disease; 4.6 times more likely to have depression; 4.7 times more likely to be an illicit drug user; 7.4 times more likely to consider themselves an alcoholic; 10.3 times more likely to have used intravenous drugs, and 12.2 times more likely to have ever attempted suicide. Among the common causes of death in the United States, the study indicated that clients with 4 or more adverse childhood experiences were 1.9 times more likely to have had cancer; 2.6 times more likely to have had a stroke; 3.8 times more likely to have ischemic heart disease; 4 times more likely to have chronic bronchitis or emphysema, and 4.3 times more likely to have diabetes (Felitti, et al., 1998). The second wave indicated even more grim results. After combining both waves, 63.9% of respondents reported at least one adverse childhood experience; 25.4 reported two to three, and 12.5% reported four or more (Centers for Disease Control and Prevention, 2016).

There are several limitations to this study. First, the sample population were clients of Kaiser Permanente, indicating that the majority had jobs and therefore the ability to have private health insurance. Respondents were also relatively well educated, with an average of 14 years of schooling. The sample was also 83.9% Caucasian; therefore, the sample may not be an accurate representation of the general population. For example, a cohort study using data from the Chicago Longitudinal Study (CLS) used a

sample in which 1,142 racial and ethnic minorities who attended full day kindergarten programs during the 1985-1986 school year, and who were in underprivileged urban-dwelling families, were given surveys and asked to report their adverse childhood experiences and current outcomes (Mersky, Topitzes, and Reynolds, 2013). The researchers found that nearly four of five CLS participants answered positively for at least one adverse childhood experience, and nearly half had experienced multiple adverse childhood experiences. The survey outcome results indicated lower overall life satisfaction, which was measured using a 5-point Likert scale. Participants with five or more adverse childhood experiences reported overall life satisfaction at a quarter of the rate of the respondents with a score of zero. Those with a score of two reported overall life satisfaction at nearly half the rate as respondents with a score of zero. Other results indicated that respondents with a score of five or more were eight times as likely as those with no ACEs to experience frequent depressive symptoms, four times as likely to experience frequent anxiety, and reported frequent tobacco and/or marijuana use.

Second, The ACE study asked only if the event was experienced at all. There was no accounting for severity, frequency, or duration, and included only very specific types of trauma likely to happen in the home. Natural disasters, community trauma (i.e. terrorist attack or war), and other types of trauma were not accounted for. Data gathered from the Developmental Victimization Survey (DVS), developed by Hamby and Finkelhor (2004), included information about 34 different forms of offenses against youth, covering the five areas of conventional crime, child maltreatment, peer and sibling victimization, sexual assault, witnessing the abuse of a family member or other crime, and indirect victimization, in which the child experienced (but did not witness) the

murder of a close family member or whose house had been burglarized (Finkelhor, Ormrod, Turner, & Hamby, 2005). This study included areas not examined by the original ACES study from Anda and Felitti, such as bullying or harassment. The statistics for initial experiences did not differ significantly from the ACES study; however, the numbers for repeated victimization are strikingly higher. Although 71% of respondents reported at least one experience with direct or indirect victimization over the course of the previous year, the average number of different types of incidents was three. This means that these students were victimized three different ways over the course of the year. Some types of victimizations also predicted a higher rate of different kinds of future victimization. Dating violence with injury, being flashed by a peer or adult, sex assault by a stranger, bias attack, attempted or completed rape, witnessing a murder, exposure to war, statutory sex offences and attempted or completed kidnapping, all averaged between seven and eight incidents over the previous year. Children and youth with a history of sexual victimization were 97% more likely to have additional victimizations, particularly assault and witnessing or indirect victimization. They were also the children most likely to experience child maltreatment (43%).

Third, the survey asked only if these events occurred before the age of 18, but not at what age they occurred, thus not taking into consideration the developmental stage or maturity of the individual when the trauma took place. Finally, the data are self-reported and retrospective; therefore, information was contingent on memory, which may or may not be accurate.

In a follow up study, Dube, Felitti, Dong, Giles, and Anda (2003) examined adverse childhood experiences over 78 years, using four birth cohorts between 1900 and

1978 to see if health problems increased in a graded manner, without respect to social, political, economic and secular (such as changing social attitudes and dissemination of health information) influences. They found that the relationship between adverse childhood experiences and health problems were resistant to the changing of the times and had the same graded, or dose-response, relationship throughout and between the cohorts as they did in the original study in 1998, indicating a consistent dose-response relationship across decades.

Earlier Attempts to Address Trauma

Although ACES brought the effects of childhood trauma in adulthood much more attention, strategies to address the problem in children had already begun to be explored. In the mid-eighties, Gertrude Morrow wrote *The Compassionate School: A Practical Guide to Educating Abused and Traumatized Children* (1987). This book focused on defining the different types of childhood trauma, how these affect children in school, and gave suggestions about how educators can mitigate some of the effects. Although this book is somewhat outdated with an entire chapter focusing on "Latchkey Kids," Morrow offered educators insight regarding the damaging effects of poverty, physical and sexual abuse, neglect, psychological abuse, and divorce. However, her book focused mainly on the psychological effects such as language delays and deficits, poor relationships, depression, and because this book was written in the 1980s, pseudo-retardation. In the final chapter, Morrow challenged educators to use this knowledge to offer support and a sense of safety to students, using a staff support team through a Teacher Assistance Team (TAT), whose goals included emotional renewal, problem solving, maintaining confidence and promoting self-esteem, and providing a sense of belonging.

Morrow's book provided a direction and plan for educators who did not know how to handle students with a history of trauma. In the 1980's divorce was becoming more prevalent, inspiring the popularity of the Latchkey Kid phenomenon, and although trauma was not readily discussed or studied as extensively as it has been since ACES, Morrow's estimates are consistent with current statistics. Morrow estimated that one million children are abused each year, with half to two-thirds being school aged, and at least two thousand die each year from abuse or neglect. In their report, Child Maltreatment, 2015, the Department of Health and Human Services (2015) reported that the national estimate of child abuse and neglect victims was 683,000, and the estimated number of children who died from abuse and neglect totaled 1, 670 children, which is a rate of 2.25 children per 100,000. Morrow touched on the problems, and she clearly described symptoms that teachers may be able to recognize in the classroom, but she focused on how to handle students for whom teachers knew the history. This is problematic because many students do not, will not, or are specifically told not to, discuss "private business" with anyone outside of the family. Further, the TAT may be useful, but it is a short term, isolated solution to a more widespread problem than it was understood to be at that time. More current models of trauma informed care in schools focus on strategies that do not require knowledge of traumatic history, include strategies that can be used with all students, and provide suggestions to make trauma informed care a school-wide endeavor. Some states are making trauma informed care a district-wide goal and often include suggestions to include the community.

Dr. Bessel Van der Kolk is one of the foremost experts on trauma and the psychological damage it can create, having researched it in his psychiatric practice since

the 1970s when he treated soldiers who had served in Vietnam, and displayed symptoms of what is now known as Post Traumatic Stress Disorder (PTSD). In the book, *The Body Keeps the Score* (2014), Dr. Van Der Kolk broadly discusses trauma and its outcomes, and includes both trauma endured in childhood and in experiences later in adulthood, as well as outcomes such as Post Traumatic Stress Disorder (PTSD), resulting from serving in the Vietnam War, Korea, and World War II. Dr. Van Der Kolk's theoretical model explores trauma through a psychoanalytic lens. His observations regarding prevalence are more in line with the current knowledge provided by the ACEs study, indicating that more than half of the people who eventually seek help from a mental health professional care have experienced abandonment, neglect, physical or sexual assault, or have witnessed violence. His model focuses on dealing with the imprints of the experienced trauma on the body and the mind because one cannot truly "treat" a trauma that happened in the past. To begin restructuring the client's reactions and responses, he states that the first order of business is to train the mind how to cope with feeling overwhelmed by the emotions that are brought on by thinking about the past. Clients need to feel safe before eventually revisiting and processing trauma in therapy. His point can be generalized to schools. Students need to feel safe in class to be able to learn and process information.

Dr. Van Der Kolk asserts that to resolve traumatic stress, one needs to create a balance between the "emotional and rational brains." Although his target population is adults, the strategies he recommends can be used with children in the classroom and can be guided by educators. For example, to calm the hyperarousal reaction that may accompany flashbacks or unwelcome memories or sensations, he recommends training the arousal system by using breath control, yoga, mindfulness, chanting or movement. All

of these, to some degree can be implemented within the classroom at any grade. Dr. Van Der Kolk discusses how to select a therapist that is appropriate for the clients' needs. Although this is outside the skillset of teachers, schools can connect with organizations in the community that provide mental health services to children. Further, Cognitive Behavioral Therapy (CBT) can be provided in schools both in individual and group formats. Trauma Focused Cognitive Behavioral Therapy (TF-CBT) is an evidence-based treatment for individuals who have been impacted by trauma, and for parents and caregivers of traumatized children (Cohen & Mannarino, 2015). TF-CBT is a short-term (8-25 weeks) treatment that is provided in an individual or family counseling format. Cognitive Behavioral Intervention for Trauma in Schools, or CBITS (Jaycox, 2003) can be used within the school in an individual or group format. Both TF-CBT and CBITS are designed to reduce symptoms related to trauma, including depression and behavioral problems; it can also be used to increase the ability to use coping skills.

The number of publications and studies regarding trauma have virtually exploded and have provided a steady stream of information following the publication of ACES in 1998. A search for "childhood trauma" on EBSCOhost Web yielded 4,585 results between the years 1980 and 1998 but yielded 33,805 results between the years 1999 and 2017. A similar search on Google Scholar yielded 105,000 results between 1980 and 1998, and 890,000 results between 1999 and 2017. The reason why the ACES study, and not the earlier efforts to investigate trauma, may have imparted the lighting match to the study of trauma may be that ACES was a medical study focusing on public health risks; risks that also impart a significant financial burden to the public. According to the National Council for Behavioral Health, "An individual's experience of trauma impacts

every area of human functioning — physical, mental, behavioral, social, and spiritual. The ACE study revealed the economic costs of untreated trauma-related alcohol and drug abuse alone were estimated at $161 billion in 2000. The human costs are incalculable."

Previous efforts were based on psychological theories and treatments, as described in Sandra Bloom's books, *Creating Sanctuary* (2013) and *Destroying Sanctuary* (2011). Bloom, along with Dr. Joseph Foderaro and Ruth Ann Ryan, a nurse manager, created an acute care psychiatric unit in Philadelphia in 1980. The team realized most of the patients had survived trauma, usually beginning in childhood. Out of this epiphany, the Sanctuary Program was developed and ran from 1985-1991 in a general hospital setting. In 1991, the program moved to a private psychiatric facility, where it remained for only five years, when the team had to move yet again and split their faculty into two teams which operated in separate facilities. Bloom writes that each move put more strain on the staff and on the program because there were fewer resources and more demands, and the program was finally discontinued in 2001 due to what Bloom called a "hostile economic environment". Her program, as mental healthcare often tends to be, was not profitable. Bloom concluded that when human services are evaluated in the same way as commercial companies, and based on profit instead of performance and results, or are not independently sustainable, the system will inevitably become dysfunctional. Public schools also fall into the human services category and are not profitable institutions. School climates often reflect the awareness of a hostile economic environment, and very likely experience many of the same pressures that the Sanctuary Program endured. When the Sanctuary Program was viewed as a financial drain, the program was simply whittled away or discontinued. Although the public school system is

not likely to be discontinued, services to students can be reduced or eliminated, making helping those with higher needs significantly more problematic. Therefore, viewing trauma as a psychological problem acknowledges the impact on the level of functioning and quality of life; however, ACES (Felitti et al. 1998) brought to light the more concrete concerns of life and death along with staggering financial consequences stemming from the poor physical health outcomes of continuing to ignore these issues, making research a priority and interventions more imperative.

Recent ACES Studies

More recent studies regarding adverse childhood experiences have been conducted nationwide and within states. The Child and Adolescent Health Measurement Initiative released data from a study completed by the National Survey of Children's Health in October 2017, which included national and state data from 2016 (Bethell, Davis, Gombojov, Stumbo & Powers, 2017). The sample included 50,212 children nationwide aged 0-17. This data indicated that nationally, more than 46% of all children experienced at least one adverse childhood experience. Of these, 35% of children ages 0-5 had one adverse childhood experience, and this increased to 55.7% between the ages of 12 and 17. More than 21% overall had two or more adverse childhood experiences. More than 25% had financial challenges, and 25% had divorced or separated parents. The impact of drugs and mental illness is striking. The number of children impacted by either of these remained consistently between nearly 8 and 12% for all ages. Also concerning is the overrepresentation in certain ethnicities and income levels. Although white, non-Hispanic children represented 51.9% of the sample, 40.9% had one type of adverse childhood experience; however, black non-Hispanic children represented 12.75% of the

sample, yet over 63% had experienced at least one type of adverse childhood experience. Similarly, Hispanic children composed 24.5% of the surveyed sample, yet 51.4% experienced at least one type of adverse childhood experience. Although adverse childhood experiences are present in all income groups, 58% of children with these experiences live in households with less than 200% of the federal poverty level, which is a family income of approximately $24,000 per year. Interestingly, there is substantial variability in the regional rate of adverse childhood experiences; Delaware and Pennsylvania both are above the national average for children who have experienced one or more adverse childhood experience, but Maryland and New Jersey are below the average (Child & Adolescent Measurement Initiative, 2014; Child & Adolescent Measurement Initiative, 2016; Institute for Safe Families, 2013).

Differences Between Demographic Groups

Several other studies are also breaking down the data to examine the prevalence of adverse childhood experiences in urban versus suburban or rural areas and differences between socioeconomic status (SES). Lopez et al. (2016) examined the relationship between trauma and racial/ethnic differences in depression and PTSD. They found that black non-Hispanic and Hispanic youth experienced greater victimization than non-Hispanic white youth, and although the differences in mental health diagnoses were slight, Hispanics were diagnosed with depression and Post-Traumatic Stress Disorder (PTSD) more frequently and were more likely to become lifetime substance users. This may also be affected by culture because the willingness to seek help for mental health varies by ethnicity. Regardless, the frequency with which each ethnicity experienced victimization was striking. Of the overall sample, 69.7% experienced any trauma. The

portion of sample that was non-Hispanic white reported less trauma than the average, at 66.2%, but the Hispanic and non-Hispanic black samples each reported well above the average, with 73.8% and 81.1%, respectively.

In 2013, The Institute for Safe Families published the results of a survey in which 1784 Philadelphia adults were interviewed (Institute for Safe Families, 2013). The results indicated that Philadelphians experienced physical abuse at a much higher rate than other types of abuse (35%), and at a higher rate than the Kaiser ACE study (28.3%). In fact, of the five types of abuse examined, Philadelphians experienced abuse at a higher rate than the Kaiser study in three types, including emotional abuse, physical abuse, and physical neglect, but less in the areas of sexual abuse and emotional neglect. In the categories of household dysfunction, Philadelphians experienced more of each of these, including substance abuse of a household member, having a mentally ill household member, witnessing domestic violence, or having a household member in prison, than those in the Kaiser study. The Philadelphia Urban ACE Study measured additional areas not examined by the original ACES survey. Differences in experiences by race were compared. African American adults in urban areas were far more likely to report adverse childhood experiences than white adults. Only one of four white adults reported witnessing violence, compared with one of two African Americans. More than three times as many African Americans than whites reported experiencing discrimination. Four times as many African Americans than whites reported living in foster care. Bullying was the single area in which African American adults reported less experiences than white adults, 6.4% and 9.0%, respectively.

Urban, inner city areas are not the only populations with higher incidents of trauma, and subsequent poor outcomes. A study completed by Shamblin, Graham, and Bianco (2016) examined the prevalence of trauma in rural Appalachia. In counties in Southeastern Ohio, 29% of children live in poverty and rates for mental illness vary between 24 to 41%, compared with the national average of 16%. Rates of substance abuse among adults is 30% greater than non-rural areas of Appalachia. The authors hypothesized the reasons for this may include lack of access to resources such as mental health providers, unreliable transportation, lack of childcare options, or lack of insurance or money for co-payments, as well as a cultural attitude toward self-reliance and a stigma about mental health.

Clearly, since the publication of ACES, many follow up studies have been published that support and expand upon the findings in the original study. There is now a clearer picture of the prevalence and lasting effects of adverse childhood experiences. Ideally, this information will lead to solid interventions that will ameliorate the effects of these experiences and so avoid the negative outcomes suggested by Felitti and Anda (1998) and the many subsequent studies.

Physical, Neuropsychological, and Psychosocial Outcomes of Trauma

ACES (Felitti et al., 1998) originally focused mainly on physical health risks. Since then, the data have been disaggregated to examine several physical, neurological, and psychosocial outcomes more closely. Physical outcomes in adulthood that have been examined include immune and autoimmune diseases (Wilson, Van der Kolk, Burbridge, Fisler & Kradin, 1999; Altemus, Cloitre, & Dhabhar, 2003; Dube et al. 2009; Neigh & Ali, 2016), chronic headaches (Anda, Tietjen, Shulman, Felitti & Croft, 2010), liver

disease (Dong, Dube, Felitti, Giles, & Anda, 2003), ischemic heart disease (Dong, et al., 2011), and cancer (Brown, et al., 2010; Alcala, Tomiyama & Ehrenstein, 2017).

Other studies indicate that trauma contributes to enduring changes in the nervous, endocrine, and immune systems (Danese & McEwen, 2011) and a 20-year decrease in the life span (Brown et al., 2009). Long before trauma begins to affect physical health in the ways described previously, chronic and toxic stress from trauma begins to change the brain in both physical and chemical ways, and most of them strongly correlated to the Hypothalamic-Pituitary-Adrenal (HPA) axis, which is the body's stress response system (Lupien, McEwen, Gunnar & Heim, 2009). When a threat is perceived, the amygdala signals the hypothalamus to release corticotropin-releasing hormone (CRH) and arginine vasopressin (AVP), which signals the pituitary gland to release adrenocorticotropic hormone (ACTH) and the production of glucocorticoids by the adrenal cortex and the catecholamines adrenaline and noradrenaline by the adrenal medulla. After the threat has passed, the feedback loops are triggered at the adrenal gland to the hypothalamus, hippocampus and frontal cortex to stop the HPA axis activation and return to homeostasis.

The effects of chronic stress and trauma can begin even before birth. Lupien et al. (2009) examined the effects of stress on the brain, including behavior and cognition, throughout the lifespan. They assert that prenatal stress has been linked to increased HPA axis activity in the child, when measured at ages of 6 months (Lyons-Ruth, Wolfe, & Lyubchik, 2000) to 10 years (O'Connor et al., 2005). This may present as Attention-Deficit Hyperactivity Disorder (ADHD), sleep disturbances, and various psychiatric disorders such as depression, drug abuse, and mood or anxiety disorders. Lupien et al.

(2009) reported that postnatal stress in early childhood may also adversely affect development. For instance, if the mother had depression, this may interfere with care of the infant, and this compromised support may result in frequent or prolonged activation of the HPA axis, leading to alterations in frontal lobe activity in early childhood that is correlated with a diminished capacity for empathy. Increased HPA activity in early childhood is also correlated with depression in adolescence. The frontal cortex, which experiences an increase in the rate of development between the ages of 8 and 14, is particularly sensitive to increased HPA axis activity in adolescence, and neuronal integrity may be affected in this area. Because the frontal lobe is key in executive functions, this has obvious and serious implications for students.

Further research indicates that several other areas of the brain are affected by maltreatment in childhood. Teicher, Anderson, Ohashi & Polcari (2014) compared MRI results of individuals between the ages of 18 and 25 who were classified either as maltreated or as unexposed controls. They found higher activity in the areas of the brain involved in emotional regulation, attention, and social cognition, such as the anterior cingulate, temporal pole, occipital poles, and the middle frontal gyrus in unexposed individuals. Conversely, the maltreated group showed higher activity in areas involved in self-awareness, such as the anterior insula and anterior cingulate. Thus, the organization of the cortical network may result in a diminished capacity to control impulses, regulate emotions, exhibit theory of mind, and be aware of their own social behavior, while increasing their internal emotions and self-centered thinking. These deficits may have serious implications inside and outside the classroom.

Research regarding how trauma affects children during childhood is growing. Beers and Debellis (2002) compared 14 children who had experienced maltreatment related PTSD with 15 socioeconomically similar children. The participants were administered several tests assessing language, attention, abstract reasoning/executive functions, learning and memory, visual spatial functioning, and psychomotor speed, including the Wechsler Intelligence Scales for Children, Third Edition (WISC-III), the Clinical Evaluation of Language Fundamentals (CELF), Stroop color and word test, Digit vigilance test, Wisconsin Card Sorting Test, Rey-Osterrieth Complex Figure Copy and Recall, California Verbal Learning Test (CLVT)and Trail Making. The data showed that children with maltreatment related PTSD performed worse on measures in four of the six domains, with significant deficits in attention and abstract reasoning/executive functions. Willis (2006) discussed how stress impacts short-term memory and work efficiency, and extended periods of stress reduce long-term memory storage and retrieval, motivation, and higher order thinking such as creativity in problem solving. It seems that students who have brains wired for survival instead of for learning are left with few tools to function in school.

The hippocampus is critical for memory formation and learning. Interestingly, several studies indicate that although MRI scans show the hippocampus is visibly adversely affected in adulthood, childhood maltreatment does not adversely affect the hippocampus in childhood (Teicher, Anderson, Polcari, 2012; Woon & Hedges, 2008). This does not mean that the hippocampus is not adversely affected by trauma, only that hippocampal volume deficits from maltreatment in childhood may not be apparent via MRI until adulthood.

Overall, findings from ACES and subsequent studies indicate that adverse childhood experiences have profound effects many decades later, and the stressful incident experienced originally as a psychosocial event may later be expressed by the body and the brain by physical disease and mental disorders and illness. The effect of trauma is so great, according to Felitti (2003), that adverse childhood experiences are the "main determinant of the health and social well-being of the nation." The former president of the American Academy of Pediatrics, Dr. Robert Block stated that, "Children's exposure to Adverse Childhood Experiences is the greatest unaddressed public health threat of our time" (TED, 2015).

Implications in schools and districts

Schools have an ethical obligation to intervene on behalf of students struggling to deal with the effects of trauma. In the article, "Recognizing Trauma in the Classroom", Bell, Limberg, & Robinson (2013) assert that educators are in an ideal position to intervene, and that without recognition and intervention by an adult, the child is at risk for problems personally and academically. According to ethical standards of The American School Counselor Association (2010), educators "have both an ethical and professional responsibility to promote a safe and culturally sensitive school climate [and] be an advocate for children who have experienced trauma." However, ethical obligations may not always be enough of a motivator for districts to focus on this problem. Some districts, however, are finding that there may be a financial cost to ignoring it. In 2015, a lawsuit was filed by a group of students, Peter P. et al. along with two teachers in a class action suit against Compton Unified School Districts in Los Angeles (Peter P. et al. vs. Compton Unified School District, 2015). Peter experienced a staggering amount of

trauma in his young life, witnessing and experiencing emotional, physical and sexual abuse, witnessing drug abuse, placement in foster care, and finally being adopted at age eleven years into a seemingly stable home. Still, significant damage had been done, and Peter acted out and got into trouble. He continued to witness violence and lost friends to gang violence and shootings. He was eventually kicked out of his home, and with school the only stable place he knew, he began sleeping on the roof. When administration discovered him on the roof, they threatened to have him arrested for trespassing. Peter, along with his peers and teachers, are suing to mandate Compton to create trauma sensitive school district policies. According to Ahlers, et al. (2016), this lawsuit may have the benefit of providing increased awareness to the importance of screening as well as of trauma resilient and trauma sensitive practices in schools, which are long overdue.

Fortunately, not all districts need to be prompted to make these changes. In the 2009-2010 school year, Lincoln High School in Walla Walla, Washington was a “last chance” school for “toughest” students who had already been kicked out of other schools, but the zero tolerance policies were not working (Stevens, 2012). Zero tolerance is a policy that emerged out of the Regan/Bush era from a perceived need for increased drug enforcement and the Gun-Free School Act of 1994 (Skiba, 2000). This policy treats all infractions similarly and severely, relying on punitive responses, assuming students will learn from being excluded either through suspension or expulsion. The American Psychological Association created a Zero Tolerance Task Force to evaluate whether or not zero tolerance was an effective policy for increasing safety in schools (American Psychological Association Zero Tolerance Task Force, 2008). Findings from the resulting

report indicate that "In general, data tended to contradict the presumptions made in applying a zero-tolerance approach to maintaining school discipline and order."

The students at Lincoln were over representing the statistics reported in ACES; 25% were homeless; 84% had lost a loved one; 66% felt abandoned by their parents; 65% had a family member in jail; 80% suffered from depression, and 50% lived with a drug or alcohol abuser. Principal Jim Sporleder implemented a new, trauma informed approach during the 2010-11 school year incorporating restorative justice, an alternative to zero tolerance (Costello, Wachtel & Wachtel, 2009). This approach focuses on students taking responsibility for their actions and repairing any harm that has been done. Services such as mental and physical health care were also installed at the school, meaning that students had access to free physicals and were treated for sickness and injuries. They are also able to be screened for adverse childhood experiences and provided a counselor if needed.

Moving from a punitive model to a more supportive approach and including psychoeducation for the students meant an 83% decrease in Out of School Suspensions per year, from 798 in 2009-10 to 135 in 2010-11. Expulsions dropped 40% per year from 50 to 30, and written referrals for behavior code violations dropped over 46% from 600 to 320. They changed In School Suspension from a place of punishment to a place to regroup and talk to someone about whatever was bothering them. These results inspired Director James Redford to film *Paper Tigers,* which documented a year in the lives of several Lincoln High School students (Redford & Pritzker, 2015). These students described the traumas they had experienced, and the chronic stress they continued to experience day to day. The school supported them emotionally and academically, with most going on to college. Sporleder explained that the school did not "fix" them, nor did

their problems go away. But when the students had an outburst, teachers changed their response style to a "what happened to you" response instead of a "what's wrong with you" reaction. This allows the student to express the problem and calm down instead of escalating the incident. As Van der Kolk (2014) asserted, every student needs to feel safe to be able to learn. To achieve this goal, schools need a more ecological approach.

Trauma awareness and competency in using trauma informed strategies is not only important for students; teachers deal with pressures of not being able to reach and help their students. In their study, Blitz, Anderson, and Saastamoinen (2016) explore the perceptions of teachers regarding culture and trauma in an urban elementary school. Teachers reported feeling frustration toward families with whom they had difficulty engaging to ensure success for their students. Often the perceptions of the teachers did not account for trauma, either of the student or intergenerational trauma of the family, which can also impact the student. The perceptions of the teachers centered around a lack of guidance and structure and a low prioritization of education in the home. Although they were aware of trauma and toxic stress, they felt at a loss about how they could help, and often referred the student to the social worker. As a result, teachers may be left with secondary trauma and stress.

Educators receive little professional development regarding trauma, its impact on themselves and their students, and on ways they can help (Ko et al., 2008), yet are given the difficult challenge of closing the achievement gap regardless of diverse demographics, abilities, and cultures (Futrell, Gomez, & Bedden, 2003). Wong (2008) suggests that not only does exposure to violence and chronic traumatic stressors impact memory and cognition, but it also may explain the achievement gap for minorities and

economically disadvantaged students. If educators are expected to rise to the challenge of closing the gap in academic achievement, they must be educated themselves regarding the prevalence and impact of trauma and be fluent in strategies to counteract it (Ko, et al., 2008).

Every school employee may benefit from trauma informed training. Any staff member, regardless of job or function, can be a trusted adult for a student in need, and needs to understand how to support those students without retraumatizing them. Staff who do not typically encounter students may be working with adults who do, and it would benefit them to understand vicarious trauma and compassion fatigue (Dorado, Martinez, McArthur, & Leibovitz, 2016). When school staff lack understanding about the symptoms of trauma, and do not have a trauma informed lens to inform their decisions, they may react to a student's acting out behavior with consequences and punishment instead of thoughtfully and effectively responding, which may cause retraumatization (Phifer & Hull, 2016). Without a trauma lens, well-meaning adults may misinterpret behavior, believing it to be directed at them and take it personally. Those who can detach but have no strategies to work with may feel overwhelmed. In both cases, they are unable to help and support the student in need. Adults with trauma lenses can objectively examine the behavior and its underlying causes, then respond with thoughtful, compassionate, and appropriate consequences (Souers & Hall, 2016).

Interventions

The Attachment, Self-Regulation, and Competency (ARC) framework (Kinniburgh, Blaustein, & Spazzinola, 2005) emphasizes an ecological model by recommending that interventions should target the child and its surrounding caregiving

system, including immediate caregivers, family, and the school environment. The ARC model recommends interventions at the individual, familial, and systemic levels for each of the three domains of attachment, self-regulation, and competency. Attachment focuses on strengthening the systems around the child by providing support, building skills, and providing support to the caregivers. Students who have experienced trauma have difficulty regulating their bodies and minds and may have difficulty controlling their impulses and emotions. The (self) regulation component of ARC focuses on teaching the child to identify, understand, tolerate and manage their internal reactions. To build resilience, the ARC model includes competency goals that empower the child and encourage introspection and exploration of their narratives. The goal of each of these is to support the traumatized child through skill building, helping them stabilize and cope with internal stress, and strengthen the security of the caregiving system through four principles; creating structure and a predictable environment using routine, increasing caregiver competency to manage intense reactions, improving parent-child interactions, and increasing the use of praise and reinforcement to focus on the child's strengths rather than deficits. The ARC model has impressive data to support its effectiveness. Most of these tasks, however, are appropriate to be implemented by either a parent or a therapist, and there is little that a teacher could implement. This is problematic because teachers are the individuals with the student for the majority of their time at school.

A comprehensive and detailed framework was published by the Massachusetts Advocates for Children in collaboration with the Hale and Dorr Legal Services Center of Harvard Law School and the Task Force on Children Affected by Domestic Violence. The "Flexible Framework," entitled, "Helping Traumatized Children Learn" (HTCL,

Cole, et al., 2005), includes in depth descriptions of the effects of trauma on the student, suggestions for making schools trauma-sensitive on many levels, from the classroom to schoolwide infrastructure such as working closely with mental health professionals, and recommendations for policy changes. Utilizing the principles of the ARC model, flexible framework also provides key elements that are adapted into school policy in the areas of schoolwide infrastructure and culture, staff training, creating connections with outside resources for mental health, specialized instruction for students with histories of trauma, nonacademic strategies, and school policies, procedures and protocols.

HTCL gives several broad technique suggestions for teachers that could be very useful in classroom policy planning, such as timing of lessons and activities and transition warnings, and getting information across, such as multimodal instruction. However, there are not many that teachers can do alone, and little is recommended for handling escalated situations. Still, this framework is a good starting point for any school or district intending to become trauma sensitive.

The Heart of Teaching and Learning: Compassion, Resiliency and *Academic Success* (Wolpow, Johnson, Hertel & Kinkaid, 2009) is a handbook for teachers developed and published by Western Washington University in a partnership with the Washington State Office of Superintendent of Public Instruction. The six chapters of a curriculum entitled Compassionate Schools initially inform educators about the effects of trauma and how it affects their brains, their families and the communities in which they live. A seven-step model for teachers is provided to broadly guide teachers how to help students who may be triggered by traumatic memories in class that begins with acknowledging and respecting that the behavior that is being observed may be a trauma

response and acknowledging and respecting the boundaries and privacy of the student. The staff member is then asked to accept the assumption that there is some stimulus in the environment that is triggering the student, and to endeavor to discover and remove the link between the environment and the reaction, and finally to monitor the student for further reactions.

Chapter two provides information about secondary (vicarious) trauma and compassion fatigue. Compassion fatigue is the emotional distress that results from caring for others and the weariness that comes from the demand it creates. Vicarious trauma occurs when a caregiver internalizes a traumatizing event experienced by another, to the point where he or she begins to exhibit Post Traumatic Stress symptoms. The authors emphasize the fact that the personal and professional effects of neglecting self-care can impact areas from physical and emotional health to professional performance. Resources to self-assess the impact that trauma is having on the educator's life are provided, such as the Professional Quality of Life (ProQOL) (Stamm, 2010), along with a guide to creating a personal self-care plan.

The third chapter comprehensively applies the six principles of compassionate instruction to each of the three domains. The principles are designed to increase resiliency and empower students, thus the first principle, Always Empower, Never Disempower, is a strategy to allow the student a feeling of control over his or her environment so the student may feel safe. The second principle, Provide Unconditional Positive Regard explains the importance of building relationships through sustained kindness and empathy, so that students may feel respected and begin to trust. Principle three addresses the concerns many educators have about setting limits without

disempowering students by advising teachers to Maintain High Expectations. The authors suggest that lowering expectations and not providing clear boundaries will send a message that teachers are giving up on the student; that students are not worth the effort to put in the work. Setting clear expectations and routines provides the clear and reliable rules and boundaries they may not have had at home and provides a sense of predictability and safety. The fourth principle asks educators to become introspective and Check Assumptions, Observe and Question. Educators are encouraged to examine their assumptions and observe any of their own behavioral habits that may be triggers for a student, such as raising their voices. The authors suggest that educators ask a question (and carefully listen to the response) when they feel compelled to assume. When a trauma occurs in a child's life, that child may question the relationships in his or her life and have difficulty making connections with adults and peers. Thus, principle five calls educators to Be a Relationship Coach. By being a model and coach for students, students will begin to develop the social skills that may have been stunted during their traumatic experiences. Finally, because trauma can be isolating, educators should endeavor to help students feel as if they belong and are a part of something. Principle six is Provide Guided Opportunities for Helpful Participation. The authors suggest that helping others strengthens resiliency; however, they warn that this is not simply peer mentoring. These are guided and monitored interactions that encourage emotional and academic growth.

Compassionate Schools provides three domains of curriculum through which the six principles are interwoven. One domain, Safety, Connection and Assurance, provides strategies for daily routine that create an environment which is intended to encourage the sense of security needed to allow the mind to be open to learning, and gives suggestions

for removing triggers and dealing with them when they arise. Domain two, Improving Emotional and Behavioral Self-Regulation provides activities with which educators can begin to help traumatized students understand and manage overwhelming emotions. The third and final domain centers around teaching assertiveness as an alternative to passivity or aggression; added to this are the appropriate social skills, academic skills, and developing executive functions.

The fourth chapter discusses the importance of, and resources for, creating partnerships with the community to better support the needs of the whole child, including mental and physical health, mentoring and getting the family and community involved. Also provided are suggestions for adjusting the school infrastructure to assess and show effectiveness, support staff in direct contact with students, and adjust policies and procedures to become more aligned with the principles of Compassionate Schools.

The Compassionate School framework is one of the most comprehensive frameworks reviewed, over 200 pages; it provides some broad strategies for teachers to adjust their perspectives, becoming more trauma sensitive. Although Compassionate Schools provides more specific strategies for educators than Helping Traumatized Children Learn (Cole, et al., 2005), and is free online, teachers may not know about it without a district's sponsorship or may not feel empowered to begin implementation on their own. Further, without training from the district, implementation from simply reading the manual may seem a daunting task.

Conclusion

After reviewing the available frameworks and literature, the remaining concern is that the information about trauma informed practices is not getting to teachers. These

frameworks are comprehensive but are district or school focused, and many of the recommendations are not teacher-friendly. Teachers are expected to have an arsenal of strategies to avoid triggers and to be ready when one of their students begins escalating into a trauma response in their classrooms. Although these frameworks are useful at a district and building level, many of the strategies do not translate into a classroom. These frameworks give great philosophies about changing lenses to a more trauma sensitive perspective, but teachers may get frustrated with the lack of specific recommendations for students who have experienced trauma, particularly those who easily escalate. They may not be able to generalize the information independently into applicable classroom strategies. Not only are teachers not getting the material of the frameworks, and not getting actionable suggestions, but they are also not paying attention to their self-care. This may cost the district quality staff members if they reach a point where they feel burned out. A search for literature regarding outcomes for trauma informed professional development for school employees produced very few results.

Trauma Informed Practices in Schools (TIPS) is a program designed to impart knowledge about trauma and its prevalence, help teachers change their perspectives from an accusatory, “What’s wrong with you” attitude to an empathetic, “What happened to you” attitude, and to provide strategies that teachers can use immediately in their classrooms. One purpose was to bring the information to teachers in smaller, practical amounts with information they can use immediately. Another purpose was to encourage better self-care for the caregivers to ameliorate feelings of vicarious trauma and burnout.

Hypotheses:

This study aimed to examine and assess changes in staffs' perceptions of their own knowledge and competence, school culture and climate, and effectiveness of a trauma informed training program throughout trainings in Trauma Informed Practices in Schools.

1. This research aims to investigate whether a training program in trauma informed practices in school will have a positive effect on the perceptions of staff regarding their own levels of knowledge pertaining to the impact of trauma on a students' behavior, ability to learn, types and outcomes of trauma, and resources for self-care.
2. Staff who attended trauma informed school training are expected to report a positive change in their perceptions of their own competencies in the areas of explaining trauma and its outcomes to staff and students, recognizing and effectively responding to trauma symptoms.
3. Following a school sponsored training in trauma informed school strategies, staff are expected to report increased positive perceptions regarding the school culture and policies, including appropriate disciplinary policies.
4. It is expected that staff will rate a trauma informed program positively for its effectiveness, relevance and usefulness.

Chapter 3: Method

Overview

This chapter discusses the methodology used to explore whether a series of professional developments significantly improved a school district's personnel's perceptions of their own knowledge of trauma, competence in working with traumatized students, school culture in supporting trauma informed care, and attendee's perceptions of the effectiveness of the presentations. A quasi-experimental pretest-posttest design was utilized. The participants were mandated by the district to attend, so a convenient non-random sample was studied to examine the impact of a trauma informed program on staff perceptions by comparing pretest and posttest survey results. The participants, measures and procedures are described in detail in the following sections.

Participants

The participants in this study consisted of staff from all grade levels in a school district located in Southeast Pennsylvania approximately 20 miles from a major metropolitan city. The district includes three elementary schools (one including grades K-2, one serving grades 1-5, and one serving grades 3-5), one middle (6-8) and one high school. It is a relatively small district, serving approximately 5000 students and is in a middle to upper class suburban community, with less than 10% classified as economically disadvantaged.

The district approved the trainings, which were to take place on each of four separate professional development days. Any district staff members having direct contact with students were invited to participate in the trainings and complete the surveys. However, teachers were required to participate in a curriculum professional development

on these same days. The remaining staff consisted of Special Areas (Art, Music, and Library), bus drivers, counselors, psychologists, and paraprofessionals, with paraprofessionals making up most of the audience. The number of participants in each session ranged from approximately 50 to 150 staff members. Participants received credit through the district for professional development hours.

Presentations were given during four phases, during two-hour blocks on assigned professional development days. The material was broken into phases. The Missouri Model: A Developmental Framework for Trauma Informed (Missouri Model, 2014) was used as a guide to break the material into logical pieces. Phase 1, trauma aware, focused on imparting knowledge about trauma prevalence and how it impacts students, emotionally, cognitively and physically. A portion of the film Paper Tigers (Redford & Pritzker, 2015) was also shown. Participants learned about what defines trauma, the prevalence of trauma and results of the ACES study, how trauma affects cognition, thought patterns, and belief systems. Participants were also given instruction and examples of the wide range of responses that may be associated with trauma in order to be aware of these in their classrooms. Finally, participants were given a list of possible positive changes they could reasonably expect to see in their classrooms as they become more trauma informed.

During phase 2, trauma sensitive, participants were given more specific information about trauma and how it appears in the classroom. Levels of brain states during different amounts of arousal were discussed, including the part of the brain activated, types of thinking available in that state (abstract/creative, concrete, emotional, reactive or reflexive), and the sense of time that the student is experiencing (Wagenhals,

2016). For example, during heightened arousal, a student may not be able to think about future events, and his or her ability to sense the passing of time may be limited to minutes or seconds. Attendees were asked to consider their own "trauma lenses" or how they understand the reactions of students, school policies and how they could be more trauma sensitive; they were also asked to reflect on effective but confidential ways of communicating concerns about a student when it is suspected the student has been through a potentially traumatic incident. The principles of Compassionate Schools were also discussed (Wolpow, Johnson, Hertel, & Kincaid, 2009), and specific strategies were provided for classroom use. The goals of this phase were to emphasize building relationships, encouraging communication, and to begin considering school policies that may or may not be trauma sensitive.

In phase three, trauma responsive, attention shifted to caring for the participants instead of the students, and the importance of self-care was discussed. Signs of compassion fatigue and compassion satisfaction were provided, and attendees completed the ProQOL (Stamm, 2010). Differences between healthy vs. unhealthy caregiving were explored. Attendees were given time to consider their personal self-care plans, and to discuss ways staff could support each other.

Phase four, trauma informed, focused on discussions about application of the principles and strategies to make the program sustainable. Participants were provided strategies they could use daily in the classroom with all students, with reminders that students' behavior is not about the adult, and the importance of using their trauma lenses with all students was reiterated. Resources for further training and research were provided.

Measures and Materials

Instrumentation for this study included a survey, co-developed by the author, designed to measure the participants' perceptions concerning their knowledge about the prevalence of trauma, the participants' perceptions of their competence in working with traumatized children, the participants' perceptions of school climate and administrative support, and participants' knowledge about and willingness to use self-care, as well as the effectiveness and relevance of the information provided in TIPS (See Appendix A). Additional demographic information, such as years of experience, position, and trauma response experience was gathered at the end the survey. To make certain that the survey was appropriate for the original project, two experts in the field read the survey to ensure appropriateness and face validity. The survey questionnaire contained one multiple choice question and 40 five-point Likert-scale questions. The first, multiple choice question was to measure the respondents' knowledge about he prevalence of trauma during childhood. The remaining items consisted of Likert-style questions regarding the respondents' perceptions of their own level of knowledge about trauma, perceptions about administrative and staff support, self-care, and effectiveness of the TIPS program. Many of the questions were original and specific to the presentation; however, some were modified from existing questionnaires, including the ARTIC scale (Baker, Brown, Wilcox, Overstreet, & Arora, 2016), The Trauma Sensitive Schools Checklist (Lesley University and Massachusetts Advocates for Children, 2012), and Is Your Work Trauma-Informed? A Self-Assessment Tool (Mental Health & Addiction Services of Ohio, 2013).

Questions on the scale were selected, based on their relevance to the research question. For the first research question, whether school staff believe themselves to be

knowledgeable about trauma and its prevalence, questions pertained to whether or not the training program in trauma informed practices in school will have an effect on the perceptions of staff regarding their own level of knowledge pertaining to the impact of trauma on a students' behavior, ability to learn, types and outcomes of trauma, and resources for self-care. The questions pertaining to these included 3, 4, and 5, which were original questions; question 6 which was modified from the Trauma Informed Tool; question 11 which was taken from the Trauma Sensitive School Checklist, and questions 19, 27, and 28 which were modified from the ARTIC scale.

The second research question that addressed whether or not school staff perceive themselves as being competent in working with students with a possible history of trauma, questions explored whether or not staff who attended trauma informed school training report a change in their perceptions of their own competency in the areas of explaining trauma and its outcomes to staff and students, recognizing and effectively responding to trauma symptoms, utilizing strategies daily to establish trust and safety, and providing instruction using multiple modalities. Question items that pertained to this research question included questions 7, 8, 17, & 31, which were modified from the Trauma Informed Tool. Questions 18 and 26 were modified from the ARTIC scale, and questions 29 & 30 were taken from the Trauma Sensitive School Checklist. Questions 32, 34, 40, 41, and 42 were original questions.

For research question three, whether or not school staff perceive their school as being supportive in becoming trauma informed after being provided with the TIPS program, several questions related to perceptions regarding the school culture and policies including appropriate disciplinary policies, predictable and safe environments,

protection of students' privacy, open and safe communication between staff and administration, and administrative support for self-care following a school sponsored training. Questions 9, 10, 12, 13, 14, 15, and 16 were modified from the Trauma Sensitive School Checklist. Questions 20, 21, 22, 23, 24, & 25 were modified from the ARTIC scale. Questions 33 and 38 were original questions.

Research question four explores whether staff believed the TIPS program to be effective in helping them gain knowledge and to be useful in providing them with strategies. Some questions investigated how staff rated the Trauma Informed Practices in Schools Program regarding its effectiveness, relevance and usefulness, and whether or not students responded well to the program strategies. These questions included numbers 35, 36, 37, and 38 on the scale and all were original questions.

Procedure

The survey was provided to each attendee to complete after each phase's presentation, except for an identical pre-test, which was given before the first presentation and collected before the first presentation began. The staff were assured that their responses would be kept confidential and that their individual responses could not be identified. To track progress but keep responses anonymous, respondents were asked to choose a five-digit number and write it on the top of their survey each time they turned one in.

The folders provided to staff included the survey, a copy of the PowerPoint notes, and other materials specific to the phase. During phase one, attendees received an article about the traumatized child's brain along with the previously noted items, and one extra copy of the survey to be completed and returned before the presentation. In phase two,

attendees received only the PowerPoint and the survey. Phase 3 folders included the notes and survey and a copy of the ProQOL survey (Stamm, 2010), which attendees were given time to complete and score during the presentation; these were not collected. Attendees were told to use the results to inform their own self-care goals. Three example self-care plans and a blank self-care plan were also included for the attendees to complete, based on the ProQOL results. Phase four included no additional items.

Chapter 4: Results

Descriptive Statistics

The data were collected from school staff employed in a school district in Southeast Pennsylvania who participated in the TIPS program. Staff included special area teachers (art, music, etc.), support staff, including counselors, nurses, school psychologists, etc., paraprofessionals, and administrators. Most participants in all phases were paraprofessionals, who ranged between 72.9% of participants in the first phase to 83.9% of the total participants in phase 4. Special areas teachers accounted for the next largest group, consisting of 21% of phase 1, ranging to 8.9% in phase 4. Counselors, psychologists and bus drivers accounted for between 3.5% (phase 4) and 5.7% (phase 1) of participants.

Participants were both male and female, with the percentage of males-to-females varying among the phases; however, females were in the majority. The percentage of female staff ranged from 77.3% in phase 3 to 84.04% in phase 2. Some of the demographic section was not completed in all surveys, and so were not able to be counted.

Surveys included in the data set were those with complete information. Surveys with multiple codes, all zero codes, or 12345 codes were not included. Surveys with no demographic data were also excluded, as were surveys with partially completed answers.

Usable surveys were collected from 171 people in the pretest and 163 people in phase 1, despite those being given on the same day. Phase 2 included 93 useable surveys. In phase 3 the participants returned 73 useable surveys, and in phase 4 only 55 useable surveys were returned. Five participants could be tracked through all four phases, and 11

participants were in three phases. Some staff opted to utilize personal or sick days during professional development. It is also possible that some groups were given other options for activities on these days. It should be noted that there were more participants who attended the phases than surveys received.

A pretest was given at the beginning of phase one, and an identical survey was collected after each phase. The questions focused on each of the research questions: staff perception of their own knowledge regarding trauma, staff perception of their own competence regarding trauma informed practices, staff perception of their school's culture following training in trauma informed schools, and staff perception of their own effectiveness in using the TIPS program and strategies in their jobs. The survey consisted of questions targeting each of the research questions in a Likert scale format with scores between 1 and 5 (1 = *Strongly Disagree* and 5 = *Strongly Agree*). The data was processed using the Statistical Package for Social Sciences (SPSS) software.

Hypothesis Number 1

Hypothesis one. This study aimed to investigate whether a training program in trauma informed practices in school would have a positive effect on the perceptions of staff regarding their own level of knowledge pertaining to the impact of trauma on a students' behavior, ability to learn, types and outcomes of trauma, and resources for self-care. The respondents' answers indicated there was a slight but steady increase in positive responses throughout the phases, except for phase 3, which showed a small decrease. Using the scores of the Likert scale (1-5), Table 1 shows the mean of the pretest was 3.21, and the mean of the posttest was 3.89, leaving a difference of 0.68. Although the difference between the pretest and final survey was the second highest of all research

questions, it did not demonstrate a noteworthy increase in the staff's perception of their own knowledge throughout the program. The responses had a standard deviation of between .43 and .49 on the questions pertaining to knowledge for each of the five administrations of the survey.

Table 1

Staff Perceptions of Own Knowledge Base of Trauma

		Pretest	Phase 1	Phase 2	Phase 3	Phase 4
N	Valid	171	162	93	74	55
	Missing	828	837	906	925	944
Mean		3.21	3.89	3.75	3.64	3.88
Std. Deviation		0.49	0.41	0.44	0.48	0.44
Skewness		-0.64	0.22	-0.20	-0.16	-.016
Std. Error of Skewness		0.19	0.19	0.25	0.28	.322
Kurtosis		1.0	0.48	1.27	-0.20	-.520
Std. Error of Kurtosis		0.37	0.38	.50	0.55	.634

Hypothesis Number 2

Hypothesis two. Staff who attended trauma informed school training were expected to report a positive change in their perceptions of their own competency in the areas of explaining trauma and its outcomes to staff and students, recognizing and effectively responding to trauma symptoms. Staff perception of their own competence in working with traumatized students showed little change across the phases. Table 2 shows the mean of the pretest was 3.91 and the mean of the posttest was 4.05., showing a difference of 0.14. The standard deviation had a range between 0.40 and 0.49 for the five administrations of the survey. The staff's perceptions of their own competence changed very little, and the results of the final posttest survey was nearly identical to the pretest. The lowest mean score was observed in phase 3, which had a mean of 3.87. The highest mean, observed in phase four, was 4.05, meaning there was a change in mean of only

0.18 of a point on the Likert scale. In fact, the participants rated themselves to be slightly more competent before implementation of the program and in the first two phases than they did in the third phase.

Table 2

Staff Perceptions of Own Competence

		Pretest	Phase 1	Phase 2	Phase 3	Phase 4
N	Valid	171	162	93	74	55
	Missing	828	837	906	925	944
Mean		3.91	3.89	3.98	3.87	4.05
Std. Deviation		0.49	0.41	0.45	0.48	0.40
Skewness		-1.06	0.22	0.27	-0.11	0.11
Std. Error of Skewness		0.19	0.19	0.25	0.28	0.32
Kurtosis		6.66	0.48	0.03	0.50	0.19
Std. Error of Kurtosis		0.37	0.38	0.50	0.55	0.63

Hypothesis Number 3

Hypothesis three. Following a school sponsored training in trauma informed school strategies, staff were expected to report increased positive perceptions regarding the school culture and policies, including appropriate disciplinary policies. In Table 3, the mean of the pretest was 3.52 and the mean of the posttest was 3.82. This indicates there was a difference of only 0.30. The SD ranged between 0.47 and 0.56. The staff's perceptions of their school's culture did not show a large difference between the pretest and final administration of the survey. As with the results in the first hypothesis, the results of these questions showed a very slight, but steady increase through each phase, except phase three, which showed a slight drop as it did in the first hypothesis.

Table 3

Staff Perceptions of School Culture

		Pretest	Phase 1	Phase 2	Phase 3	Phase 4
N	Valid	171	162	93	74	55
	Missing	828	837	906	925	944
Mean		3.52	3.72	3.77	3.72	3.82
Std. Deviation		0.47	0.54	0.56	0.53	0.56
Skewness		-0.45	-0.63	-0.31	-0.63	-0.73
Std. Error of Skewness		0.19	0.19	0.25	0.28	0.32
Kurtosis		1.24	1.24	.064	1.38	2.76
Std. Error of Kurtosis		0.37	0.38	0.50	0.522	0.63

Hypothesis Number 4

Hypothesis four. Finally, it was expected that staff will rate a trauma informed program positively for its effectiveness, relevance and usefulness. This hypothesis demonstrated the largest change in positive responses. Table 4 illustrates the mean of the pretest was 3.14, and the mean of the posttest was 3.97, leaving a difference of 0.82. The SD ranged between 0.43 and 0.65.

Table 4

Staff Perceptions of the Effectiveness of the TIPS Program

		Pretest	Phase 1	Phase 2	Phase 3	Phase 4
N	Valid	171	162	93	74	55
	Missing	828	837	906	925	944
Mean		3.14	3.78	3.75	3.67	3.97
Std. Deviation		0.43	0.53	0.61	0.65	0.57
Skewness		1.41	0.11	0.51	0.52	-0.02
Std. Error of Skewness		0.19	0.20	0.25	0.28	0.33
Kurtosis		9.80	-0.01	-0.53	-0.31	-0.16
Std. Error of Kurtosis		0.39	0.39	0.50	0.56	0.64

The histogram in Figure 1 illustrates the change in mean throughout each phase. This illustration shows that, although little change was observed across phases, the greatest amount of change occurred for research question one (staff perceptions of their own

knowledge about trauma) and research question four (staff perceptions of the effectiveness of TIPS). It is noteworthy that, although slight, nearly each of the phases demonstrated an increase between the pretest and phase one, indicating that the audience believed the program to be potentially effective, and even minimally increased their positive perceptions of school culture and their own knowledge. This was not the case with the staff's perceptions of their own competence, and little change was observed even between the pretest and phase 1, which were given on the same day before and after the presentation. This is concerning because staff who do not feel competent to handle students with histories of trauma effectively may not feel comfortable attempting the strategies provided in the TIPS program, and schools attempting to become trauma informed will have difficulty moving beyond the talking phase. This may be an area for examination in future research.

It is also noteworthy that there was a slight decrease in positive responses across all research questions in phase 3. This may be due to the structure of the program. In phases one, two, and four, participants are given factual knowledge about trauma and its impact on students and also, strategies for working with all students, particularly those with a possible history of trauma. Phase three focusses on self-care and encourages introspection on the part of the attendees, including examining their own histories, triggers, and ways to mitigate the effects of their own histories so this does not affect their responses to their students. Although this is an important component of any trauma informed program, it does not necessarily relate directly to knowledge, competence, school culture, or the effectiveness of the program. It may be that the participants felt that these specific questions were not addressed in phase three. This may be a consideration

for future programs; they may find it more effective to weave this information in through each of the phases instead of reserving the entire topic of self-care for one presentation as was the case in this study.

Although support staff were required to be at the presentations, several opted out via sick, vacation or personal days on one or more phases. Further, the paper and pencil method allowed for participants to complete surveys without adding their five-digit codes. Therefore, a T-test was not able to be run because not enough participants were able to be tracked consistently through all phases. Five participants were marked as present throughout the program, and 11 participants attended three of four phases, despite at least 50 attendees who completed surveys at each phase presentation.

Figure 1.

Score Means for Each Research Question Across Staff Perceptions of Knowledge, Competence, Culture, and Program Effectiveness

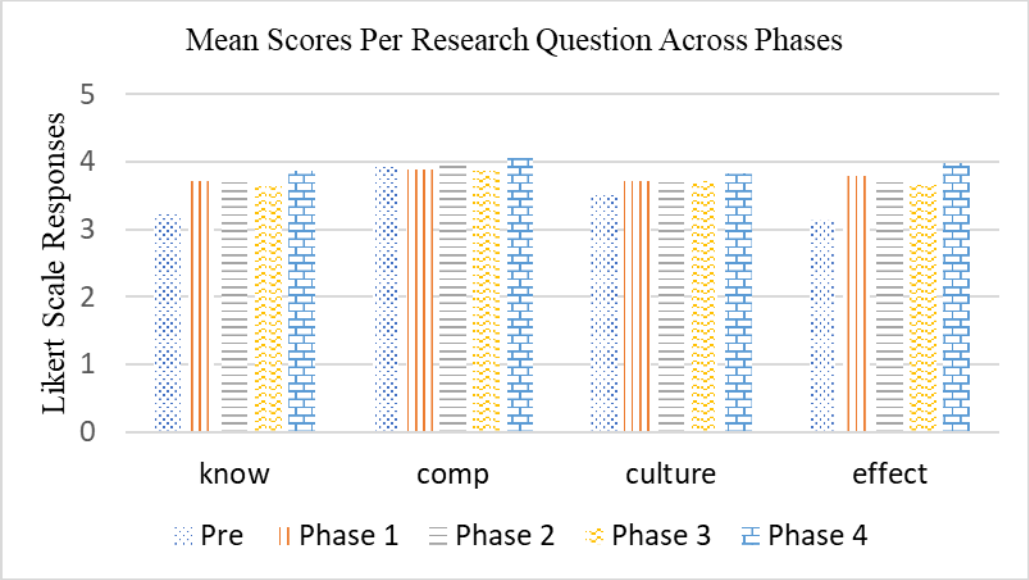

Figure 1. Histogram illustrating the means of each research question in each of the phases. Know = research question pertaining to the staff perception of their own trauma knowledge base. Comp = staff perception of their own competence in dealing with traumatized students. Culture = staff perceptions of school culture. Effect = Staff perceptions of the effectiveness of the TIPS program.

Chapter 5: Discussion

Summary of the Findings

The purpose of this study was to evaluate the change in staff perceptions following the presentation of a trauma informed school program. Each of the research questions will be discussed individually, and the results will be assessed using descriptive statistics to evaluate the initial research question. Following the findings, clinical implications, limitations, and directions for future research will be discussed. Although the results did not support program effectiveness, findings should be interpreted with caution due to the limitations of the program presentation and evaluation.

Knowledge. It was expected that this multi-phased trauma informed program would increase the staff's perceptions of their knowledge of trauma, including prevalence, presentation, effects, and remediation. This was not supported. Although this research question showed the second largest difference between the pre-and post-test scores, little difference was observed. There was a notable increase between the pretest and phase one posttest, then a slight decrease in phase 3. This may be due to the organization of the program, with more information being presented up front. In the first phase, the ACES study was discussed, including prevalence and statistics for physical and mental health outcomes. By the third phase, the focus shifted to self-care, and most of the strategies to work with traumatized students were presented in phase four, which may explain the decrease in the participants' perceptions that they were gaining knowledge in phase 3. Other studies have reported evidence that professional development is a useful vehicle for increasing staff knowledge of trauma informed care (Dorado et al., 2016) and creating a common vision.

Competency. The second research question stated the expectation that staff would report a positive change in their perceptions of their own competency in the areas of explaining trauma and its outcomes to staff and students, recognizing and effectively responding to trauma symptoms. This was also not supported. There was very little difference between the pre-test and posttest scores, indicating little change across all four phases. Changing staff perceptions of their own competence in working with traumatized students is an important, but difficult task. Washington panelists, including several educators, government officials and teacher trainers discussed the lack of preparation that teachers receive in their training to handle students dealing with the effects of trauma, and shared concern that teachers are not given the tools with which to identify trauma or provide a sense of safety for traumatized students (Mader, 2015). Sitler (2009) warns that care should be taken to ensure that teachers do not misunderstand their task as trying to diagnose traumatized students, then use different methods with those students. "The task [in which teachers need to become competent] is to teach with a pedagogy of awareness that provides ongoing support for the needs of all learners" while keeping in mind the whole child and his or her physical, academic, and psychosocial needs.

School Culture. Following a school sponsored training in trauma informed school strategies, staff were expected to report increased positive perceptions regarding the school culture, such as administrative support, and policies including appropriate disciplinary codes of conduct. Again, little difference was observed between the pre-and post-tests scores, with slight increases from the pretest through phases 1 and 2. As with the other phases, there was a slight decrease in phase 3. There was a very slight increase between phases 3 and 4. Research indicates that it takes more than a professional

development program to change school culture, long-term. Even if the program has support and "buy-in" from the staff, and evidence is provided of positive student outcomes, trauma informed programs and practices need school and district level support to be sustainable (Overstreet & Chafouleas, 2016). Administrative support is imperative to making lasting change at all levels. "Organizational theorists have long reported that paying attention to culture is the most important action that a leader can perform" (Macneil, Prater, & Busch, 2009). In this study, administration provided the space to present and some staff were allowed to attend; however, the prioritization of a curriculum over trauma informed training may have the potential to send the message to staff members that trauma informed care was less important.

Effectiveness. Staff were expected to rate a trauma informed program positively for its effectiveness, relevance and usefulness. Although the results of this research question illustrated the largest positive change between pre-and posttest, the difference of the means of the scores between pretest and posttest were less than 1 point. Still, there was a notable increase in perceptions of effectiveness between phase 3 and phase 4. This may be due to the organization of the material. Phase 3 focused more closely on the self-care of the participant and was more introspective, which may not have added to the staff perceptions of the effectiveness of the program in isolation, although it was an important part of the whole program. However, phase four included most of the strategies to improve classroom management, which may have improved the staff's perception of the program's effectiveness and usefulness in the posttest. Professional development is vital to improvement in education because of its support, collaboration and training to educators (Beavers, 2009). Meaningful, high-quality professional development can

improve teachers' attitudes and skillfulness in the classroom. However, many teachers already feel as though they are overwhelmed with responsibilities. Therefore, Beavers (2009) asserts that finding effective and applicable professional development may include components such as self-directed and independent learning, use of media-like podcasts or webinars, and transformative learning and critical reflection, both of which lend themselves to trauma informed care. Although effectiveness is an essential component of professional development, a study by Avalos (2011) regarding the history of teacher professional developments between 2000 and 2010 found that there were only five published articles nationwide examining the effectiveness of professional developments regarding teacher cognitions, practices, and beliefs. This is an essential area for further research.

This study sought to examine school staff perceptions of knowledge, competence, school climate and program effectiveness during and after participation in a trauma informed care professional development. The majority of the sample consisted of special areas (art, music, library) teachers and paraprofessionals from all district schools, which consisted of three elementary schools, one middle school and one high school. Most of the respondents were female. Participants completed a pretest survey and an identical survey following each phase. Questions on the survey pertained to each of the research questions exploring whether school staff felt they were knowledgeable about trauma and its prevalence, whether or not they felt they were competent to work with students who have a trauma history, whether or not they perceived their school culture and climate as being supportive in becoming trauma informed, and if they believed the TIPS program was effective and useful. It was hypothesized that the participants would respond

positively in each case, perceiving themselves to have learned about trauma, gained competence in dealing with traumatized students, positively perceive the school culture and climate as supportive in their endeavor to become trauma informed, and would rate the TIPS program as effective and useful. Although none of the hypotheses was supported, each of the hypotheses illustrated an increase from pretest to posttest, however slight. Also, it is important to view these results with caution and also in light of the following several limitations.

Limitations

These findings may be useful in future efforts to develop and present trainings to school employees regarding trauma informed care; however, the study was marked by several limitations and lessons learned as the program progressed. Before the program was approved, the phases were presented to the administration of the district and to several schools. Interest was expressed in having the program at one of the schools and providing the program to those teachers. Based on this meeting, the program was designed to be presented to the teachers of one school, with the expectation that the group would be relatively small, and those teachers would be required to attend all phases. When the school year began, teachers were mandated to begin a curriculum training, leaving them unavailable for the TIPS presentations. As a result, the remaining participants included staff from all grades levels from Kindergarten to 12. Staff members were teachers in what is referred to as special areas, such as art, music and library, as well as school counselors, school psychologists, bus drivers, and paraprofessionals from the entire district.

It was also decided that the phases were to be presented on four professional development days spaced throughout the year, with 2-3 months between each phase; this may have influenced retention of information and affected the staff perception of knowledge. Although the decision was made to make attendance mandatory for special areas teachers, etc., staff often use their personal or sick days on professional development days. Although these limitations were out of the control of the researcher, they affected several aspects of the study, including the researcher's ability to track individual data and growth throughout the phases. Inconsistent attendance may also have influenced the staff's perceptions in all areas of research in this project because each phase was intended to build on the previous phase.

One of the greatest limitations influencing data collection for this study was related to survey administration. At the beginning of Phase 1, the audience was asked to pick a five-digit number that they would be able to remember throughout the phases. The surveys that were collected showed several codes that were unable to be tracked, such as a series of zeros or 12345, both of which were chosen by several attendees. Several participants wrote down multiple codes because they could not remember what they had used at the previous phase, and some did not write any code down. Only five unique numbers could be tracked through all four phases. In retrospect, it may have been more effective to provide them with a unique code, such as instructing them to use the last five digits of their phone number. Similarly, several participants did not include demographic data in the spaces provided on the paper survey, making demographic information difficult to measure and track. Further, both the pretest and the posttest for phase 1 were given on the same day. It may have been more effective to send the pretest out before the

beginning of Phase 1 if the attendees could have been identified; this would have saved time during the presentation and would have reduced frustration with filling out the same form twice in one day. In hindsight, the most useful change to the administration of the TIPS program may be an electronic survey requiring each participant to use his or her unique code and complete each item on the survey before submitting. Further, this approach would have eliminated any middle, or half answers, such as 3.5 on the Likert scale. This approach would also streamline the data input and eliminate any concerns about paper copies, including a physical storage space.

District feedback surveys also indicated that the participants felt the survey was too long. This may account for the number of surveys that were incomplete. In retrospect, a shorter survey may have increased the response. Further, several of the surveys were completed with all of one number circled, including the few validity questions included, indicating the participants may not have fully comprehended the questions or have fully read the questions. Using simpler language and adding more validity questions may have increased the usefulness of the survey.

It may have been beneficial to limit the number of participants. The intention for the program was to encourage participation and conversation with the audience, eliciting ideas that were not presented, or brainstorming strategies that may have been unique to the district or school. The size of the audience consisted of between approximately 50-150 attendees in each phase. The presentation of the phases to groups this large from a stage in the school auditorium may have suppressed the audience's participation, giving the program the look and feel of a lecture rather than a collaboration. Ideally, it would have been preferable to have a more manageable group size that could be broken down

further into smaller groups for small group discussions in a setting that allowed for easier group conversations concerning ideas about how to tailor the program to the unique characteristics and needs of the district, school, or individual setting. In phase one, prevalence and statistics were introduced to the audience. It may have increased buy-in from staff had they been able to contribute their own reasons why trauma informed care in schools was important to them. In phase two, the audience was introduced to possible school policy changes that can be adapted to become more trauma sensitive. Specifically, when a student has been identified as having had a potentially traumatic experience, school staff need to be able to communicate, in order to alert each other of a possible issue and encourage sensitivity with that student. Although suggestions for a structure were provided, each school and district are different and have slightly different procedures, thus a discussion regarding the unique needs and possibilities in this district would have been useful. However, when a discussion was prompted, very few responded. Phase three focused on self-care, which is a topic that is extremely suitable for group discussion because everyone perceives self-care differently and has varying needs. The participants were presented with several options, but little discussion ensued regarding personal opinions or experiences with self-care. The last phase also is very appropriate for group discussion. Phase four focused on policies and procedures to examine and consider for change to make the district more trauma informed. As in phase two, these are unique to each district, and a collaborative conversation would be more useful to participants than a lecture.

A smaller group and setting may also have allowed more frequent and possibly more useful feedback regarding the TIPS program. For instance, the data showed that the

staff perceptions of their own knowledge base of trauma and its impact on a students' behavior, ability to learn, types and outcomes of trauma, and resources for self-care was higher than expected. On a Likert scale between 1 and 5, staff perceived their knowledge base to be at a mean of 3.21 before the first phase and increased only to a mean of 3.89 on the phase 1 posttest. It is possible that a smaller group with a more intimate setting that allowed for conversation and collaboration would have informed the later phases. If the audience felt they had a solid knowledge base of the effects of trauma, the program could have been better tailored to the participants' needs, filling in only the gaps in knowledge and focusing on the areas the audience felt were more useful.

The first three phases included a partial showing the film, *Paper Tigers*. It was decided to break the movie into three pieces because the professional development sessions were two hours. Showing the entire film on the first day would not have left time for phase one. In hindsight, however, the audience members who were not in attendance in all three phases missed a substantial portion of the film, which may have limited its impact. In the future, it may be more beneficial to divide the movie into no more than two sections at most.

Finally, phase three focused mainly on self-care, and most of the useful strategies for working with traumatized students were provided in phase four. It may be more effective either to combine the phases or to share the topics across both phases. Although self-care is an important part of working with students who have experienced trauma and should be included to alert participants to the possibility of compassion fatigue, the audience may have been more interested in hearing about how to help their students. This

may account for the decline in positive responses in each of the research questions after phase three.

Clinical Implications and Directions for Future Research

Despite the lack of significant findings, this study provides some implications that may be valuable for future research endeavors in school-based trauma informed care. The current study illustrates the need for a careful examination of school-based trauma informed programs. Those creating trauma informed programs would benefit from having a better understanding of the knowledge base needed by teachers to provide trauma informed strategies and attitudes in the classroom. According to Bandura (1989), learning new skills and knowledge requires perseverance when one is faced with challenges, as teachers may be presented with when working with traumatized students. Still, teachers are faced with increasing expectations and responsibilities. Further research may explore how much information is enough when training teachers to be trauma informed.

Bandura (1989) also wrote, “It is partly on the basis of self-beliefs of efficacy that people choose what challenges to undertake, how much effort to expend in the endeavor, and how long to persevere in the face of difficulties. The stronger the belief in their capabilities, the greater and more persistent are their efforts.” Ironically, teachers need to believe in their own capabilities in the handling of traumatized students in order to meet the challenge of helping them. Future endeavors to explore trauma informed professional development should examine how teachers’ self-beliefs of efficacy influence their willingness and ability to utilize the concepts and strategies provided.

Superficially, it may appear that professional development strategies are effective, Hill (2009) states that participation does not mean results. Teachers participate in the minimum amount of professional development required by state or district parameters and are not guaranteed to be high quality offerings. In fact, when asked about the impact the professional development has had, less than 25% reported that it had an effect on their teaching (Horizon, 2002). According to Hill (2009), further research should explore the demand for professional development as defined by the educators themselves, the quality of the information that is being produced and disseminated, and the efficiency with which information able to be accessed. Chafouleas et al. (2016) asserts that data are imperative to producing intended outcomes successfully, and advocates for the development and further research of instruments to assess the outcomes of professional development and the utilization of a trauma informed approach designed to improve school climate, teachers' knowledge, school safety, and improvements in academic and behavioral performance.

Although several trauma-informed school frameworks exist, there was a dearth of research available regarding both the effectiveness of school-based trauma informed programs on teachers' knowledge and competence, and the impact they have on school culture. With trauma informed care quickly gaining attention, future research should examine these components to find the most practical, useful, and effective elements of school-based programs and to contribute to the nascent literature.

Additionally, it is recommended that schools implement mandatory and on-going professional developments for all employees. On-going coaching and collaborative PD regarding the use of trauma informed practices is crucial for generalizing trauma

informed strategies and skills (Phifer & Hull, 2016). Children are often in school for most of the day with teachers who may feel powerless to handle reactions to trauma. School employee turnover also necessitates on-going training. This recommendation is supported by the desire to avoid litigation, as in the lawsuit against Compton Unified School District. It is further supported by the lack of pre-service instruction provided to educators on how to identify and support traumatized students (Wong, 2008). Teacher buy-in is crucial because teachers spend the greatest portion of the school day with students and would therefore likely be able to identify students in need (Baweja et al., 2016).

Finally, district leaders and school administration must engender and reinforce a culture in which school staff feel confident in changing their own behavior. Professional development provides the knowledge, but without action in the form of behavior change from school staff, trauma informed supports are neither created nor generalized. Administrators must model the importance of trauma informed care by making it a priority, using trauma informed practices, and ensuring on-going training.

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Appendix A

Position:

- ❑ General Education Teacher
- ❑ Special Education Teacher
- ❑ Special Areas Teacher
- ❑ Support Staff (i.e. counselor, school psychologist, school nurse, etc)
- ❑ Paraprofessional
- ❑ Administrator
- ❑ Other: _____

Grade Level _____ Number of years working in a school _____

School Name _____

Gender _____Male _____Female

Have you ever had training in crisis response or trauma? _____

If yes, what type? (i.e. PREPaRE training, college courses, in-service trainings)
_____

1. Define trauma in your own words.

2. What percent of individuals report experienced at least one traumatic event during childhood

a. 10%
b. 50%
c. 3%
d. 75%

Please answer the following questions:

1	2	3	4	5
Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree

3. I feel I am knowledgeable about the impact trauma can have on a child or adolescent's academic success

1 2 3 4 5

4. I feel I am knowledgeable about the impact trauma can have on a child or

adolescent's behavior
1 2 3 4 5

5. I feel I am knowledgeable about different types of trauma (original question)
   1 2 3 4 5

6. I feel I am knowledgeable about the ways that violence and traumatic experiences can often lead to mental health and co-occurring disorders (e.g., chronic health, substance abuse, eating disorders, STI/HIV/AIDS, etc.)
   1 2 3 4 5

7. I can explain to students what trauma is, including effects of an event
   1 2 3 4 5

8. I can recognize the signs of trauma, even if the student does not verbally tell me
   1 2 3 4 5

9. My school contains predictable and safe environments (including classrooms, hallways, playgrounds, and school bus) that are attentive to transitions and sensory needs.
   1 2 3 4 5

10. Leadership (including principal and/or superintendent) develops and implements a trauma-sensitive action plan, identifies barriers to progress, and evaluates success.
    1 2 3 4 5

11. School staff consider the role that trauma may be playing in learning difficulties at school.
    1 2 3 4 5

12. Discipline policies balance an understanding of trauma while also ensuring students are held accountable for their behavior.
    1 2 3 4 5

13. Support for staff is available on a regular basis, including supervision and/or consultation, classroom observations, and opportunities for teamwork.
    1 2 3 4 5

14. Opportunities exist for confidential discussion about students.
    1 2 3 4 5

15. Our school participates in safety planning, including enforcement of court orders,

transferring records safely, restricting access to student-record information, and sensitive handling of reports of suspected incidents of abuse or neglect.

1 2 3 4 5

16. On-going professional development opportunities occur as determined by staff needs assessments.

1 2 3 4 5

17. I establish trust and safety as a priority in my work with students

1 2 3 4 5

18. I believe I can impact a student's behavior in a positive way regardless of how they are raised.

1 2 3 4 5

19. Students who demonstrate negative/unexpected behaviors choose to behave that way

1 2 3 4 5

20. I feel comfortable discussing issues or concerns with my fellow staff members and administrators.

1 2 3 4 5

21. I feel supported by my fellow staff members.

1 2 3 4 5

22. I feel comfortable discussing issues or concerns with my administrator.

1 2 3 4 5

23. I feel supported by my administrators.

1 2 3 4 5

24. I feel as though I often take my work home with me

1 2 3 4 5

25. I need to take care of myself in order to be effective in my professional role

1 2 3 4 5

26. I am most effective as a teacher/paraprofessional when I focus on student strengths.

1 2 3 4 5

27. When I feel myself taking my work home I feel comfortable talking to my colleagues or supervisors about it

1 2 3 4 5

28. If my personal life begins to impact me in my work I know where to go for help and am comfortable doing so.

1 2 3 4 5

29. Students' strengths and interests are encouraged and incorporated.
1 2 3 4 5

30. Information is presented and learning is assessed using multiple modes.
1 2 3 4 5

31. I would be comfortable discussing or explaining trauma to others.
1 2 3 4 5

32. In the past week I have given my students more praise than correction.
1 2 3 4 5

33. Teachers and administrators in my building are committed to incorporating trauma informed practices into our daily work
1 2 3 4 5

34. I know what to do if there is a crisis in my district (injury, fire, intruder, student/teacher death, etc.)
1 2 3 4 5

35. Students react positively to the trauma informed care (TIPS) approach
1 2 3 4 5

36. The TIPS approach is effective
1 2 3 4 5

37. The TIPS approach is relevant to my work as a teacher/administrator
1 2 3 4 5

38. I have the support I need to work in a way that is trauma informed
1 2 3 4 5

39. The TIPS approach provides information and support that will be useful when working with my students
1 2 3 4 5

40. I feel like I can manage all that the TIPS approach requires, including recognizing the signs/symptoms of trauma, providing positive feedback, to students on a daily basis, and approaching behavioral problems in a trauma sensitive manner.
1 2 3 4 5

41. I have used a specific tip or strategy presented during the TIPS trainings on at least one occasion.
1 2 3 4 5

42. I have incorporated what I learned during the TIPS trainings into my daily work as a teacher/paraprofessional.

1 2 3 4 5