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Imact of complex childhood trauma: knowledge and understanding of Vermont educators

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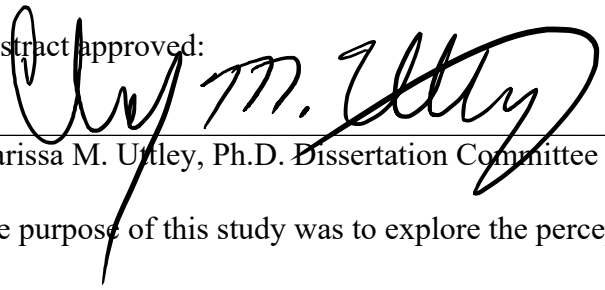

Clarissa M. Uttley, Ph.D. Dissertation Committee Chair

The purpose of this study was to explore the perceptions of licensed and non-licensed Vermont educators with regard to their perceived knowledge and understanding of the impact of complex childhood trauma. This partial replication study was based on the 2017 study by Goodwin-Click who examined the impact trauma-informed care professional development had on school personnel's perception of knowledge of complex childhood trauma. For this quantitative study, Vermont licensed and non-licensed educators were recruited via email invitation to participate in the study. Participants were asked to respond to a fifty-two item survey and were also asked to provide demographic information. Responses indicated that the majority of respondents had participated in trauma-informed professional development. The data analysis identified some significant differences in educators' knowledge of the impact of complex childhood trauma. Further research needs in this area are discussed along with the limitations of this research.

Keywords: Complex Childhood Trauma, Licensed Educator, Non-Licensed Educator, Professional Development

Impact of Complex Childhood Trauma: Knowledge and Understanding of Vermont Educators

By

Debra L. Fishwick

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I understand that my dissertation will become part of the permanent collection of Plymouth State University, Lamson Learning Commons. My signature below authorizes release of my dissertation to any reader upon request.

Debra L. Fishwick, Author

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Chapter 1

Introduction

> "Fire can warm or consume, water can quench or drown, wind can caress or cut. And so, it is with human relationships: we can both create and destroy, nurture and terrorize, traumatize and heal each other." (Perry & Szalavitz, 2017, p.16).

Conservative estimates indicate about 40 percent of American children will have at least one potentially traumatizing experience by the age of eighteen (Perry Szalavitz,, 2017). Complex childhood trauma is often the result of maltreatment including abuse and neglect (Oehlber, 2012; van der Kolk 2017). Research shows that complex childhood trauma among school-age students has become a public health epidemic (Oehlber, 2012). Researchers including Cook et al. (2017) and Oehlber (2012) have found complex childhood trauma has an effect on cognition and negatively impacts a student's ability to access learning in school. Nationally, mental health researchers have examined the prevalence and the detrimental impact of complex childhood trauma on students (Ko et al., 2008). While mental health and social services rely on the use of trauma-informed practices, the use of trauma-informed practices are less common in public schools (Cavanaugh, 2016).

It has been estimated that between half of school-aged children and two-thirds of school-aged students in the United States have been exposed to addiction, violence, abuse, and neglect, consequently exposing them to trauma (McInerney & McKlindon, 2014). While a large body of mental health research exists on childhood complex

trauma very few studies exist that examine educators' knowledge of complex trauma and the impact trauma may have on students in a school setting (Blaustein, 2013).

Students entering the public education system come with a vast array of experiences, positive and negative. Negative experiences may include poverty, abuse, neglect, and emotional or behavioral challenges. These negative experiences impact a student's ability to access the academic curriculum and learning standards (O'Neill, Guenette, & Kitchenham, 2010). Students who have backgrounds that include exposure to complex trauma are often misdiagnosed or labeled with disorders like Attention Deficit Hyperactivity Disorder (ADHD), Oppositional Defiant Disorder (ODD), Emotional Disturbance Disorder (EDD), and speech and language disorders (Gabowitz, Zucker, & Cook, 2008; Sitler, 2008; van der Kolk, 2014).

Many educators believe dealing with trauma is the responsibility of the mental health workers (Moon, Williford, & Mendenhall, 2017). Alisic (2012) discovered teachers were unclear about their role in addressing the needs of students with trauma histories. However, educators and school staff play a key role in supporting students who have experienced complex trauma (Alisic, 2012). For educators, dealing with complex childhood trauma has been identified as a major contributor to frustration, low job satisfaction, and burnout (Blodgett, 2016). Educators may spend approximately thirty-five hours per week with a traumatized student while mental health providers may only spend one or two hours a week, hence it is important for educators to have knowledge and understand the impact of trauma.

Educator Responsibility

Public schools in the United States have been charged with implementing rigorous academic standards and high stakes testing established by the Federal Government's Department of Education, Every Student Succeeds Act (ESSA, 2015). The intent of these measures is to ensure high academic achievement for students, thus closing the achievement gap (ESSA, 2015). The Every Student Succeeds Act (2015) was the reauthorization of the 2002-2015, No Child Left Behind Act (NCLB). This educational act requires states to establish learning standards in reading, writing, and mathematics in order to access federal funding for education (NCLB, 2009; ESSA, 2015)). Both NCLB and ESSA increased the accountability for schools to meet expected outcomes. States are required by ESSA to administer standardized assessments as well as at least one other local measurement to ensure that students are demonstrating academic proficiency in reading and mathematics. If schools fail to meet the expected benchmarks measured by standardized test scores, penalties are imposed, impacting federal funding. In an effort to the requirements, school districts and teachers began teaching to the test.

Children entering public schools may come to school ready to learn while other children may struggle to access learning from the day they walk through the doors. Early school success can lead to future school success; therefore, it is important for children to experience early school success (Stipek, 2001). Children entering the public education system come from a vast array of experiences, including poverty, abuse, neglect, and emotional or behavioral challenges, which can impact their ability

to access the academic curriculum and learning standards (O'Neill et al, 2010). For these reasons, many children entering the public education system may not have the ability to access learning successfully.

When school staff receives trauma-informed professional development, use trauma-informed practices, and create caring, supportive classrooms, students thrive (Souers & Hall, 2016). Educators trained in trauma-informed practices are better able to remain objective about students' behavior and have more positive relationships with students (Craig, 2016). Research has indicated the prevalence of complex childhood trauma is impacting our schools and educational systems, creating the need for professional development in the area of trauma-informed practice and trauma theory (Craig, 2016).

Hattie's (2012) research found the role educators play in student learning is critical and educators are the most significant factor in schools influencing the outcome for students. Craig (2016) and Hattie (2012) advocate for educators' practices in which educators believe that change is possible for all students. The practices of establishing high expectations for all students and building trusting relationships with students are the foundation of trauma-informed practices.

Teacher preparation programs and professional development focus primarily on academic content and instructional practice related to academic learning, and frequently lack training related to working with students who have experienced adversity (Mader, 2015). Educators and school staff work with traumatized students daily yet based on their education and professional development opportunities most

teachers know little about how to manage the effects of trauma in a classroom (Overstreet & Chafouleas, 2016; Sitler, 2008). The traditional role of schools and educators are shifting, and educators' responses to students who have experienced complex trauma can have either a positive or negative impact on those students (Terrasi & Crain de Galare, 2017).

Research by O'Neill, Guenette, & Kitchenham, (2010), Perry, (2006) and Cook et. al., (2005) has shown that students who have experienced trauma may be at risk for multiple academic and behavioral challenges in school settings, limiting a student's ability to access learning in schools. Complex childhood trauma results in delays in the development of expressive and receptive language, deficits in overall IQ, and less flexibility and creativity in problem-solving (O'Neill et al., 2010). Educators must know and understand the implications complex trauma may have on the students to optimize learning conditions in the classroom (Cook et al., 2005; O'Neill et al., 2010).

Kinniburgh, Blaustein, Spinazzola, & Van der Kolk, (2017) found many educators lack the training to identify and address the challenges of complex trauma in their schools and classrooms, and yet they face the impact of complex trauma daily. Classroom teachers and school staff are increasingly responsible for implementing interventions and support for students displaying cognitive, psychological, and social effects of complex trauma (Souers & Hall, 2016). Franklin, Kim, Ryan, Kelly, & Montgomery (2012) found that teachers are actively involved in providing nearly 41% of formal mental health interventions. Therefore, educators must understand the

impact of complex trauma and create school environments that support students who have been exposed to complex trauma (Simonich et al., 2015).

The Reinke, Stormont, Herman, Puri, & Goel, (2011) study of teachers' perspectives of the needs, roles, and barriers to supporting student's mental health needs found only twenty-eight percent of teachers believed they had the knowledge necessary to meet the mental health needs of their students. In the same study, teachers identified the need for further training and professional development in the areas of working with externalizing behaviors, recognizing mental health issues, and classroom management, behavioral interventions (Reinke et al., 2011). Externalizing behaviors like poor impulse control, aggression towards others, and oppositional behaviors and mental health issues have been associated with exposure to complex trauma (Cook et al., 2005)

Trauma-Informed Educational Practices

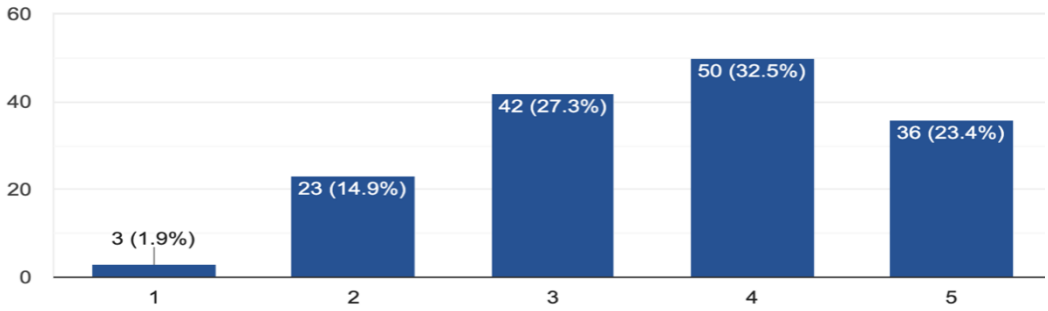
A fundamental principle of trauma-informed educational practices includes the development of an environment that is caring and predictable and in which students feel safe (Craig, 2016). Positive student perspectives of safety and feeling cared for have been linked to school success and higher assessment scores (Ratner et al., 2006). Educators establishing positive relationships with students creates the foundation necessary for students to be able to begin to be available for learning (Craig, 2016). Educators lacking an understanding of trauma-informed practices may lead to a misunderstanding and punishment of students (Phifer & Hull, 2016).

In a recent study conducted by Goodwin-Glick (2017), the researcher identified key dispositions necessary to support trauma-informed practices. These dispositions include Empathic Concern, Perspective Taking, Interpersonal Relationships, Trusting and Respectful Relationships, Student-Centeredness, and Caring Educator Behaviors. The approaches and educators' responses to students who have experienced complex trauma are critical, however, the understanding of teachers' knowledge and confidence in supporting students who have experienced complex trauma is limited (Alisic, 2012). Building awareness of educators' knowledge and understanding of how to support students impacted by complex trauma will help school and district level administration support the necessary professional development necessary to establish trauma-informed schools and classrooms.

In a 2019 survey by the Vermont Principals' Association (VPA), principals were asked to rank their need, 1 being "no need" and 5 being "strong need" to a variety of survey items related to the need for professional development. One survey item asked principals, "What is your or your school's level of need for professional learning around building a trauma resilient school community?" Figure 1.1 shows 55.9% of Vermont principals identified the need for professional learning in the area of building trauma resilient school communities. In the same survey, Vermont principals also indicated a need for professional learning around working with students who have depression and/or anxiety and working with students who are using substances and/or come from home lives with substance abuse issues, both of which can be a manifestation of complex trauma.

Figure 1.1

VPA Responses, "What is your or your school's level of need for professional learning around building a trauma resilient school community



Note: Scale 1-5 with 1 indicating no need and 5 indicating a strong need. Reprinted from VPA Annual School Leadership Survey (Sept. 2019). Retrieved from private Google Doc.

There is a significant body of mental health research related to the impact of childhood complex trauma, yet only a small body of research exists on teacher knowledge and understanding of the impact of complex trauma. A search on ProQuest and Google Scholar found two other studies that examined teachers' knowledge and understanding of complex trauma. The first study identified was Trauma in the Classroom: Teachers' Perspectives on Supporting Students Experiencing Child Traumatic Stress, by Reker (2016). Reker's (2016) study examined teachers' perceptions of the need for trauma intervention in the classroom, teachers' role in providing support to students experiencing traumatic stress, and teachers' self-efficacy in supporting students who had experienced traumatic stress. The second study was conducted by Goodwin-Glick (2017), Impact of Trauma-Informed Care Professional Development on School Personnel Perceptions of Knowledge, Dispositions, and

Behaviors Toward Traumatized Students was conducted in Ohio. Goodwin-Glick's (2017) study examined both licensed and non-licensed educators that work with students on a regular basis. Both of these studies influenced the researcher in designing this study.

Purpose of the Study

The purpose of this study was to examine Vermont's educators' knowledge and understanding of complex childhood trauma. This study also examined the Vermont educators' knowledge and understanding of trauma-informed practices based on the dispositions that contribute to building positive relationships with students including Empathic Concern, Perspective Taking, Interpersonal Relationships, Sense of Respect and Trust, Student-Centeredness, and Behavior. Additionally, the study identified a learning subconstruct to examine how Vermont educators report their knowledge of the impact of trauma on a student's ability to access learning. Finally, this study examined the relationship between knowledge and understanding of complex trauma and demographic data of the respondents.

Research Questions

This research study was guided by the following questions:

1. What are Vermont educators' knowledge and understanding of the impact of complex trauma on students?
2. How do Vermont educators report their knowledge of trauma-informed practices?

3. To what extent do Vermont educators report their knowledge of the impact of trauma on a student's ability to access learning?
4. Are there significant differences in the knowledge and understanding of licensed educators versus non-licensed educators regarding their perceived knowledge of complex trauma experienced by students?
5. What, if any, are the differences in knowledge and understanding of the impact of complex trauma, based on demographic data?

To answer these questions, a quantitative study of Vermont Licensed and Non-Licensed Educators was conducted using the VPA List Serve email list. Principals were asked to forward an email with a link to a survey. The survey was developed based on the initial study from Goodwin-Glick (2017). The original survey administered a pre and post assessment following professional development on trauma-informed practices (Goodwin-Glick, 2017). Goodwin-Glick had permitted the use of her survey for this study. For this present study, the survey items were modified from a pre and post-self-assessment to a singular set of items that were used as self-assessment examining educators' perceived knowledge and understanding of the impact of complex trauma. The survey also collected demographic data of educators' who participated in the study. Educators in this study differed from the educators in the original study. Participants in the original study (Goodwin-Glick) had been required to participate in trauma-informed professional development, in this study participants may or may not have participated in professional development on trauma-informed practices.

A review of the literature explored adverse childhood experiences, the domains of complex trauma, the components of trauma-informed practices, and the current educational exceptions for learning in public schools in the United States and Vermont.

Operational Definitions

Access to learning - A child's ability to pay attention or attend to the teacher and other students, to follow directions, self-regulate, and to engage in a variety of settings within the classroom, playground, and the greater school community; the ability to use executive function (Semple, Droutman, & Reid, 2017).

Acute trauma or simple trauma - An experience or event that is stressful and involves a single traumatic event like an accident, house fire, or a natural disaster and is usually accompanied by a supportive response by the parents or primary caregiver (Australian Childhood Foundation, 2010).

Adverse Childhood Experiences (ACE) - One of ten experiences that are grouped into three overarching categories that include abuse, neglect, and household dysfunction; the term used to describe all types of abuse, neglect, and other potentially traumatic experiences that occur to people under the age of 18 (Felitti and Anda, 1998; CDC).

Attachment - An emotional bond that is formed as a result of a person attaining or maintaining proximity to some other clearly identified an individual who is conceived as better able to cope with the world (Bowlby, 1982).

Attunement - One's ability to be aware of and responsive to another's needs (Perry, 2006).

Complex Childhood Trauma - Simultaneous or sequential occurrences of child maltreatment that is chronic and begins in early childhood; the cumulative effect of trauma experiences that are repeated or prolonged over time (van der Kolk, 2014; Terrasi et al., 2017).

Educator - Anyone who works directly with students in a school setting.

Emotional Intelligence - The ability to identify and manage one's own emotions as well as the ability to identify the emotions of others.

Licensed educator - Anyone working in a public school who is required to have an educational license to provide education and educational services.

Multi-tiered system of supports (MTSS) - A comprehensive, evidence-based and systemic approach to teaching and learning that unifies general and special education in a deliberate, intentional, ongoing collaboration designed to meet academic and non-academic needs and improve learning for all students (VT MTSS Field Guide).

Non-licensed educator - Anyone employed by a school or district that is not required to hold an educational license to fulfill the job his/her job responsibilities and works directly or indirectly with students in a school setting.

Positive Behavior Interventions and Support or PBIS - A system used in schools to promote positive behaviors by rewarding and reinforcing students for exhibiting positive behaviors within the school setting. This is a tiered system that also

provides additional support and instruction to help those students who struggle with meeting behavioral expectations.

Professional Development - A wide variety of specialized training, formal education, or advanced professional learning intended to help administrators, teachers, and other educators improve their professional knowledge, competence, skill, and effectiveness (https://www.edglossary.org)

Teacher - Anyone working in a school or district that is responsible for teaching students in a classroom; small group or 1:1 and is required to hold an education license to fulfill his/her job responsibilities.

Trauma - An exceptional experience in which powerful and dangerous events overwhelm a person's capacity to cope (Rice & Groves, 2005).

Trauma-Informed Practices - A strengths-based framework grounded in an understanding of and responsiveness to the impact of trauma, that emphasizes physical, psychological, and emotional safety for everyone, and that creates opportunities to rebuild a sense of control and empowerment (Hopper, Bassuk, & Olivet, 2010).

Trauma-sensitive schools and classrooms - Schools and classrooms that have a common understanding of how adverse experiences, like trauma, impact learning and create an environment for all students in which they feel safe physically, socially, emotionally and academically.

Chapter 2

Literature Review

Students in the United States have been expected to meet rigorous academic standards and perform on high stakes test (Young, Winn, & Reedy, 2017). The hope has been that these rigorous academic standards will ensure high achievement for students and close the achievement gap (Frye, 2015). Public schools have been faced with the reality of implementing and assessing the academic standards and have been subjected to corrective actions when students fail to meet these expectations (Klein, 2018). Research has indicated that early school success has led to future school success (Bassett, 1995; Bassett, 2011; Stipek, 2001). However, many students who have entered the public education system may not have had the ability to access learning, which resulted in limited school success for these students to be successful (Dockett & Perry, 2002).

Trauma and School-Aged Students

Students who have entered public schools have been expected to come to school ready to learn. Students who have a background in complex trauma may not have the skills necessary to access the learning in school. Childhood trauma has become prevalent in the United States and has created a public health epidemic (Oehlberg, 2012). In recent years, the opioid epidemic has also contributed to the prevalence of complex childhood trauma (Dasgupta, Beletsky, & Ciccarone, 2018).

The United States has seen an increase in the number of children being identified as being victims of maltreatment (U.S. Department of Health & Human

Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. 2019). The National Child Abuse and Neglect Data System (NCANDS) collected and analyzed data annually. In 2017, child protective services received over four million reports involving over seven million children, and nearly sixty percent of reports led to an investigation of maltreatment, abuse, or neglect (NCANDS, 2017).

It has been estimated that between half and two-thirds of school-aged children have been exposed to addiction, violence, abuse, and neglect; consequently, these children were exposed to complex trauma (McInerney & McKlindon, 2014). Complex trauma has been found to have a severe impact on student learning as well as behavior, social-emotional well-being, physical health, and brain development (Anda et al., 2006; Perry, 2006). Teachers and other educators who have worked with students of trauma may have observed problem behaviors like arguing, yelling, and aggression towards others, or might also have observed student behaviors of withdrawing from the group, the appearance of daydreaming, or giving a blank look or stare. (Souers & Hall, 2016). According to van der Kolk (2005), complex childhood trauma had frequently not been recognized by teachers, which resulted in classroom environments that might not have been supportive of those students.

Educators and Trauma in the Classroom

Craig (2016) stressed the importance for educators to recognize and understand the signs and the impact trauma may have on students. Students who have experienced complex trauma may have a difficult time modulating their levels of arousal or

emotional regulation (O'Neill, et al.,2010). Students who have experienced trauma need the school, the classroom, and the teachers and staff to provide a safe, caring environment (Cavanaugh, 2016; Reinke et al., 2011). It has been argued that the responsibility of working with students of trauma falls on mental health workers, yet students spend the majority of their time each week in schools and classrooms. Many teachers felt the pressure of top-down initiatives to teach a specific curriculum and assure students have met the expected learning outcomes while increasing the scores of annual high-stakes and have felt as if they cannot take on one more thing (Herman, Hickmon-Rosa, & Reinke, W. 2018).

Meeting the academic needs of students has been the primary goal of public education. Schools have been confronted with the growing challenge to be responsive to the needs of all students, including those who have experienced complex trauma (Blodgett, 2012). Teachers and educational staff working in public schools have not been trained to identify and address the challenges of complex trauma yet have faced the impact of complex trauma in their schools and classrooms daily. Educators have often been unaware of the manifestations of complex trauma, therefore mistaking these acts as willful defiance, disobedience, or inattention as misbehaviors rather than the manifestations of complex trauma (Sitler, 2008; Terrasi et al.2017). Student exposure to complex trauma has put schools in the position of addressing not only the academic needs of students but also the social and emotional needs of students. Educators must understand the impact of complex trauma and create school

environments that support students who have been exposed to complex trauma (Simonich et al., 2015).

Teacher preparation programs have focused primarily on teaching pedagogy in instructional practices related to academic learning yet have often lacked training related to working with students who have experienced adversity (Sitler, 2008; Fecser, 2015). Professional development opportunities beyond teacher preparation programs have focused primarily on content such as reading, mathematics, and science (Koren, 2019). Students who have experienced trauma may be at risk of academic challenges as well as behavioral and health challenges in the school hence making it imperative for districts and schools to shift professional development opportunities to include trauma-informed practices (O'Neill, et al., 2010). Professional development opportunities must also be provided for all educators that work within our public-school systems, especially non-licensed educators who interact and work with students regularly.

Understanding Trauma

Adverse Childhood Experiences

The term Adverse Childhood Experiences (ACEs) has referred to a range of events that a child experiences, which led to stress and resulted in trauma and chronic stress responses (Johns Hopkins Health Academy, CAHMI, 2018). Felitti and Anda led a collaborative project with the Center for Disease Control along with the Department of Preventive Medicine at Kaiser Permanente that explored the relationship between childhood emotional experiences and their subsequent mental

and physical health in adulthood (Feliti et al., 1998). In this study, the researchers identified ten experiences that were divided into the following three categories: abuse, neglect, and household dysfunction (Feliti et al., 1998). The ACEs study included these indicators when measuring childhood trauma; however other sources of childhood trauma like exposure to community violence and food insecurity were not included in the ACEs scoring tool (Soures & Hill, 2016). Exposure to complex trauma and chronic stress has been linked to negatively impacting a child's brain development. It has also been linked to a variety of high-risk behaviors, adult physical health, as well as mental health issues (Felitti et al., 1998).

Blodgett (2012; 2014) and a research team from the University of Washington at Area Health Education Center replicated the ACEs study and investigated the effects of the ten ACE indicators on educational outcomes of elementary school students in Spokane County, Washington. They found that forty-five percent of students had at least one ACEs, twenty-two percent of students had multiple ACE, and six percent of students had an ACE score of 4 or higher (Blodgett, 2012). Blodgett's team also found a direct link between childhood trauma and physical health. It documented higher rates of frequent illness, obesity, asthma, as well as academic and speech problems in the students who participated in the study (Blodgett, 2012). Neuroscience demonstrated complex trauma disrupts brain development, leading to functional differences in learning and behavior as well as negatively impacting physical health (CAHMI, 2015-2016).

Blodgett (2014) found that the negative consequences of ACEs on students began before students enter kindergarten. The ACEs in Head Start Study conducted by Blodgett (2014), determined that the numbers of ACEs were directly correlated to delays in social-emotional development, literacy, language, math development, and cognitive development that lead to school readiness problems. Blodgett (2014) also found that boys may be more susceptible to the adverse outcomes of experiencing trauma than girls. Blodgett's studies reinforced the impact complex trauma has on students in the public-school setting.

Table 2.1

Correlation Between Number of ACEs and Struggles with School and Health

ACE Score	Attendance	Behavior	Coursework	Health
3+ ACEs	4.9	5.1	2.9	3.9
2 ACEs	2.6	4.3	2.5	2.4
1 ACE	2.2	2.4	1.5	2.3
No Known ACE	1.0	1.0	1.0	1.0

Note: Table 2.1 indicates the number of times more likely students with ACEs scores will experience difficulties in the identified areas. For example, a student with 3+ ACEs are 4.9 times more likely to experience attendance issues in school. (Souers & Hill, 2016. p.21)

Complex Trauma

In 2009, an effort to more accurately diagnosis and to offer a more effective treatment for children and adolescences, van der Kolk , along with the Complex Trauma Task Force of the National Child Traumatic Stress Network (NCTSN), proposed a child-specific trauma diagnosis termed developmental trauma disorder (DTD) (van der Kolk et al, 2009; van der Kolk, 2014). The DTD diagnosis would have addressed the multidimensional impact of complex trauma on a child's functioning and would have targeted emotional, physical, behavioral, cognitive, and relational symptoms (Van der Kolk 2014). Van. der Kolk (2014) and the National Child Traumatic Stress Network indicated that based on their research, the diagnosis of PTSD would not be applicable to children and adolescents with exposure to multiple, repeated forms of trauma. Based on van der Kolk's work with NCTSN, they identified that children with complex trauma histories had a pervasive pattern of dysregulation, problems with attention and concentration, and had difficulties getting along with themselves and others (van der Kolk, 2014, p160). Children in van der Kolk's study (2014) also exhibited multiple somatic problems, a lack of awareness of danger, self-injurious behaviors, self-hatred, self-blame; and the chronic feeling of ineffectiveness.

Traumatization has occurred when a child has experienced an alarm reaction to a situation that triggered a stress response (Coade, Downey, MacClung & Downey, 2008). Trauma has been defined as a powerful, dangerous experience that overwhelms a person's ability to cope (Rice & Groves, 2015). Souers & Hill (2016) have

categorized trauma in two ways: simple trauma and complex trauma. Simple trauma often involved a single traumatic event like an accident, house fire, or a natural disaster. Complex trauma has resulted when an event, series of events, or set of circumstances have been experienced by a person and are physically harmful, emotionally harmful, or threatening.

The National Traumatic Stress Network (NCTSN) first examined complex trauma in 2003. Complex childhood trauma has been defined as simultaneous or sequential occurrences of child maltreatment (Cook, Blaustein, Spinazzola, & van der Kolk, 2003). Childhood trauma has been viewed on a continuum. One end of the continuum has normative, developmentally appropriate stress that helps a child build resiliency and appropriate coping skills (Walkley & Cox, 2013). The opposite end of the continuum has non-normative, developmentally inappropriate stress that is unpredictability and creates feelings of fear and helplessness (Walkley & Cox, 2013).

Everyone experiences stress. Stress has been a normal response to challenging events. When stress has become excessive, it has can negatively affected brain development. Harvard's Center for the Developing Child has categorized the following three levels of stress responses:

> First is a positive stress response characterized by a child experiencing a brief increase in heart rate and slight elevation of the release of stress hormones, which quickly return to normal. Next is tolerable stress response, which results from a more serious event and activates the child's alert system, yet with support of trusted adults or caregivers, the child recovers from the effects. Last

> is a toxic stress response in which occurs when a child has been exposed to frequent, severe, and prolonged trauma without adequate support from a trusted adult (https://developingchild.harvard.edu/2019).

Brief periods of moderate and predictable stress prepared children to cope with the world and helped children learn and become problem solvers (Cook et al. 2005). When a child has experienced a traumatic event, the response of the parent or caregiver played a critical role in a child's ability to regulate that child's emotions and stress response (van der Kolk, 2015). When the response of the parents or caregivers was supportive, it fostered resiliency, and helped the child build coping skills (van der Kolk, 2015). Stressors that have been considered to be predictable, escapable, controllable, and those in which a parent or caregiver has been responsive provided a child safe opportunities for exploration and enhanced the child's stress response building neurobiological integrity (NAIC, 2001; Cook et al, 2005).

The opposite end of the continuum has non-normative, developmentally inappropriate stress or complex trauma. Complex trauma typically involved repeated exposure to incidents of abuse, neglect, and exposure to violence. The parents or primary caregivers have almost always been responsible for this type of trauma (van der Kolk, 2014; Australian Childhood Foundation, 2010). Stressors that have been considered to be unpredictable, inescapable, and uncontrollable, and those in which a parent or caregiver has not been responsive to a child's needs, did not provide appropriate opportunities for exploration and worsened the child's stress response diminishing neurobiological integrity (NAIC, 2001; Cook et al, 2005).

Figure 2.1

Domains of Impairment in Children Exposed to Complex Trauma

<table>
<tr><th>I. Attachment</th><th>II. Biology</th><th>III. Affect Regulation</th></tr>
<tr><td>• Problems with boundaries
• Distrust
• Suspiciousness
• Social isolation
• Difficulty attuning to other
• people's emotional states
• Difficulty in perspective taking</td><td>• Sensorimotor development
• Analgesia
• Problems with coordination, balance, body tone
• Somatization
• Increased medical problems across a wide span (pelvic pain, asthma, skin problems, autoimmune disorders, pseudoseisures)</td><td>• Difficulty with emotional self-regulation
• Difficulty labeling and expressing feelings
• Problems knowing and describing internal states
• Difficulty communicating wishes and needs</td></tr>
<tr><th>IV. Dissociation</th><th>V. Behavioral Control</th><th>VI. Cognition</th></tr>
<tr><td>• Distinct alterations in states of consciousness
• Amnesia
• Depersonalization and derealization
• Two or more distinct states of consciousness
• Impaired memory for state-based events</td><td>• Poor modulation of impulses
• Self-destructive behavior
• Aggression toward others
• Pathological self-soothing
• Sleep disturbances
• Eating disorders
• Substance abuse
• Excessive compliance
• Oppositional behavior
• Difficulty understanding and complying with rules
• Reenactment of trauma in behavior or play</td><td>• Difficult planning and anticipating
• Problems understanding responsibility
• Learning difficulties
• Problems with language development
• Problems with orientation in time and space
• Two or more distinct states of consciousness
• Impaired memory for state-based events
• Difficulties in attention regulation and executive function
• Lack of sustained curiosity
• Problems with processing novel information
• Problems with object constancy</td></tr>
<tr><th colspan="3">VII. Self-Concept</th></tr>
<tr><td colspan="3">• Lack of a continuous, predictable sense of sense
• Poor sense of separateness
• Disturbances of body image
• Low self esteem
• Shame and guilt</td></tr>
</table>

Note: The figure shows the domains of impairment in children exposed to complex trauma and provides examples (Cook et al. 2005).

Children who have been exposed to complex trauma operate from the reptilian part of their brains (Souers & Hall, 2016). The reptilian system responds to danger or

stressful situations through the activation of a flight, fight, or freeze response (Souers & Hall, 2016). The flight, fight, or freeze response to danger has improved the likelihood of survival by escaping, fighting, or avoidance behaviors (Souers & Hall, 2016). Humans have instinctually fled from danger, whether real or perceived. Before resorting to fighting, and when the biological responses failed to activate, the thinking part of the brain shuts down, and humans freeze. Stress, in a school setting, has caused students to utilize these coping behaviors (Souers & Hall, 2016). Souers and Hall (2016) categorized classroom behaviors that have been observed when a student's response has been a result of flight, fight, or freeze. In a classroom setting, an educator might observe a student acting out or merely giving aggressive behavior, daydream or withdrawn during activities and lessons; or only having a blank look or stare (Souers & Hall, 2016; Cook et al., 2006). Figure 2.2 has identified these flight, fight, and freeze classroom behaviors.

Figure 2.2

What Fight, Flight, or Freeze Looks Like in the Classroom

Fight	Flight	Freeze
Withdrawing	Acting out	Exhibiting numbness
Fleeing the classroom	Behaving aggressively	Refusing to answer
Skipping Class	Acting silly	Refusing to get needs met
Daydreaming	Exhibiting defiance	Giving a blank look
Seeming to sleep	Being hyperactive	Feeling unable to move or act
Avoiding others	Arguing	
Hiding or wandering	Screaming/yelling	
Becoming disengaged		

Note: From Fostering Resilient Learners, Souers & Hill, 2016, p.29

Many students, who have experienced complex trauma, entering public schools may struggle with social, emotional, behavioral skill and need to develop these skills before they can access essential academic learning. Complex trauma such as child abuse and neglect can result in differences structurally and physiology of the brain (Anda et al., 2006). Students who have experienced complex trauma demonstrate less flexibility in problem-solving and can show delays in receptive and expressive language (O'Neill et al.,2010; Walkley & Cox, 2013). Research has also shown that students who have experienced complex trauma may be at risk for multiple academic and behavioral challenges in school (O'Neill et al., 2010).

Students exposed to complex trauma have frequently been referred for educational and psychological evaluations and interventions (Alisic, 2012; Terrasi et al., 2017). Referrals have been made for a variety of reasons, including academic, social, and emotional challenges. Evaluations have been challenging due to the developmental differences in behavioral manifestations of complex trauma, and students of complex trauma have often been misdiagnosed or labeled (Gabowitz et al., 2008; Child Welfare Information Gateway, 2015). Students who have experienced complex trauma may have exhibited behavioral and academic challenges. These students have been diagnosed with attention deficit hyperactivity disorder, oppositional defiant disorder, emotional disturbance disorder, and speech and language disorders (van der Kolk, 2014; Sitler, 2008; Gabowitz et al., 2008). Some diagnoses have been managed with medication, and it has been estimated that nearly half a million children in the United States have been taking antipsychotic drugs (van der Kolk, 2014). Antipsychotic drugs may or may not be sufficient and, in many situations, have masked the underlying effect of trauma.

Attachment

Attachment has been defined as the close emotional bond formed between an infant or child based on the infant's need for nurturing and protection (van der Kolk, 2014; Bowlby, 1982). Secure attachment supports a child's development in many areas, including the capacity to regulate physical and emotional states, sense of safety, new knowledge of how to exert influence, and early capacity for communication (Cook et al.,2007). When a baby is born, they are dependent on a parent or caregiver

to meet their needs. It is these early interactions that create a primary attachment bond (Bowlby, 1982).

Children formed attachments to whoever functioned as their primary caregiver and sought out a primary attachment figure in times of distress (van der Kolk, 2014). When secure attachments have been formed, infants and children obtain safety through the reactions and responses of the parent or caregiver. The parent or caregiver response, both nonverbal and verbal, helped infants and children understand the world around them (Ziliberstein, 2014).

Secure attachments have been developed when the parent or caretaker has been attuned to the needs of the baby, and those needs have been met (Bowlby, 1982 as cited by van der Kolk, 2014). Over time, parents or caregivers have taught a child to self-soothe, self-regulate, and tolerate high levels of arousal. Attunement begins with subtle levels of interactions between infants and parents or caregivers, giving the infant the feeling that their needs are being met and that they are understood (van der Kolk, 2014). When parents or caregivers are attuned and available, they have provided a secure base to allow for learning and exploration (Bowlby, 1982). Sensitivity, attunement, and communication of understanding an infant's or young child's needs has been crucial to the development of secure attachment and have helped children build an internal locus of control (Fonagry & Target, 2002; van der Kolk, 2014).

Attachment has impacted brain development, cognition, and information processing (Zilberstein, 2014). In the first year of life, secure attachment enhanced an infant's ability to understand emotions, relationships as well as the ability to learn how

to self-regulate. Secure attachments also have an impact on language development, and language development is necessary for making sense of emotions (Zilberstein, 2014). Fonagy and Target (2002) found that secure attachments also help young children form the metacognitive skill needed to begin reflecting on their experiences. When secure attachment patterns have become neurologically wired, these patterns have helped the infant develop the appropriate sensorimotor and emotional responses to threats or danger (Crittenden, 1999; Vondra, Barnett, Waters, Crowell; Society for Research in Child Development 1999).

Biologically, infants have the instinct to attach to a parent or caregiver. When a parent or caregiver has failed to meet the needs and provided adequate safety of an infant, it creates an interruption in developmental and cognitive growth (van der Kolk, 2014). In order to get their needs met, infants have developed a coping style (van der Kolk, 2014). Research has shown that infants will either have exaggerated or suppressed responses, which impacts the ability to understand their own emotions and reactions (Lyons-Ruth, 2003). Unlike secure attachment, insecure and disorganized, attachments have been formed when a parent or caregiver has been unavailable or intermittently responsive to an infant's or child's and as a result, experiences suffering from neglect, deprivation, and maltreatment (Cook et al; Zilberstein, 2014). Infants exposed to repeated neglect, deprivation, and maltreatment have been considered to have experienced complex trauma (Zilberstein, 2014).

Infants and children who have not developed secure attachments, cannot form organized strategies necessary to get their needs met, or regulate their emotions. When

infants and children do not have organized strategies to self-regulate, this has led to a state of hyperarousal, wavering between craving closeness and being frightened of the parent or caregiver (Cook et al., 2005). In the first year of life, the brain develops the areas that process emotions and regulation, and insecure attachments can hinder this development, making it difficult for an infant to process others' emotions and understand relationships (Perry, 2006). As the infant grows into childhood, the lack of ability to form attachment leads to the difficulty in attuning to other's emotional states (Cook et al., 2005).

Insecure and disorganized attachment patterns in children have resulted in erratic behaviors (van der Kolk, 2014). Children who have insecure and disorganized attachments have had difficulties with boundaries and might appear to be overly clingy dismissive and aloof (van der Kolk, 2014). In older children and adolescents, insecure and disorganized attachment patterns have manifested into survival behaviors, which can either be helpless or coercive control (Cook et al., 2017). Because exposure to complex trauma is often the result of abuse or neglect by a parent or primary caregiver, children with trauma histories have become suspicious and untrusting of adults. This has made it difficult for teachers and educators to build relationships (Bowlby, 1982; Cook et al., 2005).

Children exposed to complex trauma have found it challenging to navigate social situations and have perceived threats in safe situations (Child Welfare Information Gateway, 2015). For example, a child might misread a peer's neutral facial expression as anger and react by becoming aggressive or overly defensive, and

as a result, can cause a child to become socially isolated (Child Welfare Information Gateway, 2015).

Crittenden (2008), as cited by Brunzell, Stokes, & Waters (2016), identified the following three tasks of attachment; first to protect and comfort children; second to guide children to protect and comfort themselves; third to allow children the opportunities to take responsibility for themselves. Students have benefited from a sense of connectedness and belonging with their teachers. Students who have experienced complex trauma have broken attachments; therefore, they have not developed, created, and sustained meaningful relationships. By establishing trust and safety and predictable routines, teachers and educators have been able to foster positive relationships with students, thus serving as a protective factor for resilience and well-being.

Brain Biology of Trauma

Exposure to complex trauma has been found to activate the body's biological stress response system, behavioral and emotional response systems, and has been found to impact the brain and brain development (Cook et al. 2005; Child Welfare Information Gateway, 2015). The negative brain development created by complex trauma has resulted in decreased brain size, decreased connectivity in certain parts of the brain, decreased chemical activity, as well as decreased emotional and behavioral functioning as outlined in Figure 2.3 (Cook et al. 2005; Child Welfare Information Gateway, 2015).

Human brain development has occurred sequentially from the bottom up (Perry, 2000). The first areas of the brain to be fully developed were the brain stem and midbrain. These two areas of the brain have also been referred to as the reptilian brain. The reptilian brain has managed the body's automatic functions (De Bellis & Zisk, 2014). The next area of the brain to be developed has been identified as the limbic brain. The limbic brain has been responsible for emotional regulation. The final area developed in the brain is the cortex. This area of the brain has been responsible for abstract thought and problem-solving (NAIC, 2015, Northeast Family Institute, 2018). Figure 2.3 shows the effects of the exposure to maltreatment on the brain. Complex trauma has been identified as a factor that negatively alters brain development and has changed the structure and chemical activity within the brain (Child Welfare Information Gateway, 2015).

Figure 2.3

Effects of Maltreatment on Brain Structure and Activity

Brain Structure and Activity	Effect
Hippocampus	• Decreased volume • Decreased learning and memory • Reduced ability to bring cortisol levels to normal after a stressful event
Corpus Callosum	• Decreased volume in the largest white matter structure • Decreased ability for interhemispheric communication and other processes including arousal, emotion, and higher-level thinking skills
Cerebellum	• Decreased volume • Decreased motor coordination • Decreased executive function
Prefrontal Cortex	• Smaller prefrontal cortex • Decreased ability of behavior regulation • Decreased ability of emotional and social regulation • Deceased cognition
Amygdala	• Volume not affected • Overactivity in this area decreases the ability to determine threats and can trigger emotional responses
Cortisol Levels	• Abnormal cortisol levels • Release levels are flat throughout the day • Can lead to decreased energy • Can affect leaning and socialization • Increased vulnerability to autoimmune disorders; subdue immune and inflammatory reactions • Harm cognitive process • Increase risk of affective disorder
Other	• Decreased electrical activity in the brain • Decreased brain metabolism • Poor connections that are responsible for integrating complex information • Abnormal patterns of adrenaline activity

Note: Adapted from Child Welfare Information Gateway, 2015

Brain development has been defined as the process of creating connections, strengthening, and discarding synapses (Perry, 2006). Preschool-aged students with histories of complex trauma have been considered to be at risk for failing to develop the brain capacity necessary to modulate emotions and access analytical capacity to solve problems or respond to their surroundings (Cook et al.,2005). This has left these students with disorganized cognitive, emotional, and behavioral responses to stress (Cook et al., 2005).

School-aged and adolescent students have rapidly developing brains. As students have grown, their brains develop the core features of executive function, self-awareness, complex emotions, and the ability to use the experience to determine a course of action, and the ability to understand others' perspectives (Cook et al., 2005). Complex trauma could also have a negative impact on the brain development in school-aged children and adolescents. Exposure to trauma has caused the cortex to be underdeveloped and has led to increased impulsive and high-risk behaviors, as well as difficulties with tasks requiring higher-level thinking skills (Chaberlain, 2009 as cited by Child Welfare Information Gateway, 2015). Fortunately, children's brains show plasticity or the ability to change in response to repeated stimulations (Child Welfare Information Gateway, 2015).

Trauma and Affect Regulation and Dissociation

Affect regulation has been defined as the accurate identifications of internal emotional experiences (Larsen & Prizmic, 2004). Affect regulation has required one to have the ability to determine, interpret, and label the states of arousal, followed by the

ability to express emotions safely and regulate the internal experience (Cook et al. 2005). Affect regulation required the development of the prefrontal cortex. Healthy affect regulation has developed when children have been taught how to self-regulate emotions and make sense of their behavior and the behavior of others (Lester et al., 2003 as cited by O'Neill et al., 2010). Well-developed affect regulation in students has enhanced connections with peers and teachers as well as to adapt to meet the demands of their environment.

Students with complex trauma have limited capacity to self-soothe and self-regulate (van der Kolk, 2014; Cook et al., 2015). Complex trauma has caused an impairment in affect regulation, and students have struggled with emotional and behavioral expressions (Cook et al., 2015). The areas of emotional and behavioral expression in which students have struggled include dissociation, numbing of emotional experiences, dysphoria, avoidance, and maladaptive coping strategies (Cook et al., 2005). Deficits in affect regulation make it difficult for students to communicate their needs and wishes (Cook et al., 2005).

Dissociation has been identified as the splitting off and isolation of memories. It prevents traumatic memories from becoming integrated, thus creating a dual memory system or altered consciousness (van der Kolk, 2014). In dissociation, thoughts and emotions have disconnected, and sensations and behaviors occur without conscious awareness (Cook et al., 2005; De Bellis & Zisk, 2014). Students who have been exposed to complex trauma make the following dissociative adaptations: automatization of behavior that includes deficits in judgment, planning, and organized

goal-setting behavior, compartmentalizing traumatic events that caused painful memories and feelings; and detachment from self and emotion (Cook et al., 2005). Dissociation makes students who have experienced complex trauma more vulnerable to victimization and may lead students to become over-reliant on dissociation as a coping strategy, which can create difficulties with behavior, regulation, and self-concept (Cook et al., 2005).

Behavior

Childhood complex trauma has been associated with both hyperarousal and hypoarousal (Cook et al. 2005; Souers & Hall 2016). Students in states of hyperarousal, fight or flight, or hypoarousal, freeze, have exhibited behaviors that impact their ability to access learning (Souers & Hill, 2016). Behaviors associated with hyperarousal might have included the inability to remain seated, irritability, impatience, angry outburst, aggression, reactivity, defiance, hypervigilance, impulsivity, and students may exhibit an exaggerated startle response (Benckendorf, 2013; Souers& Hill, 2016). In contrast, when students have been in a state of hypoarousal, behaviors may include daydreaming, refusing to answer, not processing material, lethargy, sleeping in class, hyper-focused on an activity, unaware of surroundings, self-soothing behaviors, the appearance of laziness, and lack of motivation (Benckendorf, 2013; Souers& Hill, 2016).

Behaviors associated with hyperarousal have affected others in the classroom. They have often escalated to disciplinary action, and behaviors associated with hypoarousal have often been ignored because they do not impact the others in the

classroom (Craig, 2015; NFI, 2018). Students who have been in a state of hyperarousal may also have exhibited oppositional behavior and have had difficulty understanding and complying with rules. Educators have found it essential to understand the manifestations of complex trauma and know students' behaviors are not voluntary nor within the child's control (NFI, 2018). Educators need to understand students who have been exposed to complex trauma have a difficult time regulating their level of arousal, and their behavior is often a stress response, not necessarily defiant or misbehavior (NFI, 2018; O'Neill et al., 2010).

Trauma and Cognition

Early trauma has affected neurocognitive domains by interrupting critical periods of brain development (Ford & Courtois, 2009). Abuse and neglect during infancy have resulted in cognitive delays, delays in the development of expressive and receptive language, less flexibility and creativity in problem-solving, and deficits in overall IQ (O'Neill et al., 2010). As children get older, the impact of trauma has continued to create deficits in attention, abstract thinking, and executive function (Cook et al., 2005). Therefore, students have been more likely to receive poor grades, lower standardized assessment scores, and have been more likely to drop out of school when compared to their non-traumatized peers (Perfect, Turly, Carson, Yohanna & Saint Gilles, 2016).

In schools, traumatized students have been confronted with stressful or challenging situations. When these situations occur, students who have experienced complex trauma have not been able to formulate coherent and organized thoughts

(Cook et al., 2007). Traumatized students have often not been able to access learning because their brains may have been in a constant state of fight, flight, or freeze, thus impacting their ability to attend to the expected learning (O'Neill et al., 2010). Students of trauma have been living in a state of hyperarousal, they focus on safety, have an overreaction to stress, arousal, and threats, and have been quick to react with an exaggerated emotional response (Terrasi et al., 2017; Zilberstein, 2014). These students of trauma have also struggled with social peer relationships, further triggering distress leading to behavioral and emotional dysregulation (Zilberstein, 2014).

The neurological traits of cognition have been developed through experiences, verbal, visual, auditory, and kinetic. Cognition has referred to the factor of perceiving, thinking, and processing information and, like another aspect of brain development, have been partially experience-dependent (Ford & Courtis, 2009). Cognitive deficits have affected what information gets noticed and processed. Difficulties in processing abilities impact the speed at which information is processed, long and short-term memory, comprehension, making sense, and the ability to retrieve information. Students with these types of deficits have had difficulties making sense of and coping with the devastating effects of trauma because information cannot be easily remembered, processed, or generalized (Dehn, 2008; Unsworth & Engle, 2007).

Metacognitive skills refer to one's awareness of one's thinking, control over thoughts, actions, reactions, impulse control, and planning, sequencing, and reasoning (Merriam-Webster, n.d.). Students impacted by trauma may also struggle with metacognitive skills. Metacognitive skills are also part of the neurocognitive system

and have required for learning. Metacognitive skills have typically developed by the age of five. Research has found that students impacted by trauma have difficulties with metacognitive skills that have benefitted from learning how to stop and think through feelings, experiences, and problems rather than responding (Ziberstien, 2014).

Neurocognitive functions impact brain processing, including planning, sequencing, reasoning, cognitive flexibility, set-shifting, and sensory-motor functioning (Ziberstien, 2014). Exposure to complex childhood trauma has been associated with neurocognitive disorders. Students who have suffered from neurocognitive disorders struggle to access learning and have benefited from cognitive remediation, including breaking learning into smaller, more manageable pieces, pairing a cognitive strength with a cognitive weakness, and rehearsal and cueing.

Teachers and school staff have not always been aware of the impact of complex trauma on a child's ability to access learning (Sitler, 2008). Trauma has manifested itself in a variety of ways in a classroom. Some students have acted out or exhibited behaviors that could be considered as defiant, disrespectful, or aggressive, while others might have appeared to be inattentive or withdrawn. These behaviors of fight, flight, or freeze have been associated with complex trauma. Teachers and other school staff have frequently misinterpreted these responses. Nevertheless, it has been the responsibility of teachers to provide support for the needs of all learners (Craig, 2016).

Trauma-Informed Practices

Trauma-informed practices have been defined as a strengths-based framework grounded in an understanding of and responsiveness to the impact of trauma (Hopper, et al., 2010). Much research and theory on trauma-informed practices have been presented in the field of mental health and social services (Alisic, 2012; Cavanaugh, 2016; Thomas, Scott, & Pooler 2015). The core components of complex trauma interventions include safety, self-regulation, traumatic experience integration, relational engagement, and positive affect enhancement (Cook et al. 2005). Trauma-informed practices have been rooted in the components of trauma-informed interventions, specifically safety, relational engagement, and positive effect enhancement. Goodwin-Glick's (2017) study identified the subconstructs of Interpersonal Relationships, perspective-taking, Empathic Concern, Trust and Respect, and Student-Centeredness of trauma-informed practices in schools, most importantly establishing strong, positive relationships as the foundation of trauma-informed practices.

In mental health, interventions or a combination of interventions have been used in treating child victims of trauma (Gabowitz et al., 2008; van der Kolk, 2015). Some effective treatments that have included the use of play, art, and drama therapy; cognitive behavior therapy; and eye movement desensitization and reprocessing (EMDR) (Zilberstein, 2014). In Zilberstein's (2014) work, she noted that there had been debates as to which intervention and therapies have the best impact on the preverbal and emotional centers of the brain. Trauma-informed practices, approaches,

and interventions have been less common in the school setting, yet teachers and other educational staff provided many aspects of the core components within the school setting (Alisic, 2012; Ko et al., 2008; Reed, 2019).

Trauma-Informed Schools

In the researcher's interview with Craig, author of Trauma Sensitive Schools (2016), she stressed the importance of establishing strong, positive relationships as the foundation of trauma-informed practices. Students exposed to complex trauma are looking for a safe, trustworthy relationship, yet they also have a compulsive need to reenact their past trauma (Craig, 2016; Marvin et al., 2002, as cited by Souers & Hill, 2016). Building relationships with these students can be challenging because of a lack of trust, and they are often hesitant. Souers and Hill (2016) stated that educators are encouraged to build relationships based on trust, and that are safe enough and healthy enough for all students.

Creating safety and security for all students is another crucial element for schools to consider (Craig, 2016; Fecser, 2015). Schools can create safety and security by creating a tone or culture in which all adults maintain a calm demeanor; by building predictable structures and routines, and by revising traditional schools discipline procedures and consequences (Craig, 2016). Revising traditional school discipline procedures and consequences requires a shift in mindset for many educators. It is vital to provide professional development to help build knowledge and understanding as to why this shift is necessary for creating a safe and secure learning environment for all students (Craig, 2016; NFI, 2018).

Trauma-informed schools are sensitive to trauma and provide a safe, stable, and understanding environment (McInerney & McKlindon, 2014).

The National Child Traumatic Stress Network identified the following critical elements of a trauma-informed system:

- Screen routinely for trauma exposure and symptoms,
- Implement culturally appropriate, evidence-based assessments and treatments for traumatic stress and symptoms,
- Provide resources to children, families, and providers on trauma, its impact, and treatment options,
- Build on the strengths of children and families impacted by trauma,
- Address parent and caregiver trauma,
- Collaborate across child-serving systems to coordinate care,
- Support staff by minimizing and treating secondary traumatic stress, which can lead to burnout (as cited by McInerney & McKlindon, 2014).

The primary goal of a trauma-informed school is to prevent re-traumatization (McInerney & McKlindon, 2014). Many educators have little knowledge and training about how to manage the effects of trauma in the classroom (Sitler, 2008). Teachers, school faculty, and administration need to have a greater understanding of how trauma manifests itself in the students served by the education system, as well as pay more attention to meeting the physical, emotional, and cognitive needs of the whole child (Sitler, 2008). This puts additional responsibility on school systems. Teachers not only

have to address the educational mandates but also to address the social and emotional needs of students.

Educators working with students who have experienced complex trauma might observe behaviors that appear to be defiant or problem behaviors like arguing, yelling, and aggression towards others (Souers & Hall, 2016). Educators might also observe student behaviors of withdrawing from the group, the appearance of daydreaming or giving a blank look or stare (Souers & Hall, 2016). The National Family Institute of Vermont (2018), identified the root cause of student behaviors and explained the possible underlying cause of a student's behavior. Figure 2.4 has differentiated behaviors as misbehavior and stress behavior. Teachers and educators need to have an understanding of the impact of complex trauma and how it affects students' ability to modulating levels of arousal (O'Neill et al., 2010).

Figure 2.4

Misbehavior verses Stress Behavior

Misbehavior	Stress Behavior
• Explainable by student • Reasonably linear fashion • Able to calm down to baseline • Student can state clear motivation • Responds to traditional discipline like behavior plans, incentives, threats of loss of privilege often work	• Lacks reasonable explanation • Lacks linearity and clarity • Unable to calm • Story sound implausible, abounds with self-protections in the form of circularity, time travel, primitive defenses • Student cannot state clear motivation • Does not respond to traditional discipline; student is reactive or non-responsive to behavior plans, incentives, threats of loss of privilege • Actions and behavior are motivated by survival

Note: Adapted from Dave Melnick, NFI Vermont 2018

School administration could support trauma-informed approach by providing access to staff training and professional development, by reviewing and revising school discipline policies to reflect the understanding of the role of trauma on student behavior and developing formal collaborative partnerships with community mental health agencies (Craig, 2016; McInerney & McKlindon, 2014). By the implementation trauma-informed practices and creating partnerships with mental health services, schools would be in the position to address the academic needs as well as the social and emotional needs of students (Alisic, 2012; Lewallen, Hunt, Potts-Datema, Zaza, & Giles, 2015; McInerney & McKlindon, 2014).

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Trauma-Informed Classrooms

Trauma-informed classrooms essentially establish a healthy ecosystem that addresses the needs of the whole child (Plumb, Bush, & Kersevich, 2016). The foundation of a trauma-informed classroom begins by establishing a positive relationship with students, followed by creating a safe, secure, consistent, and predictable environment for students (Bruznell, Stokes, & Waters, 2016; Craig, 2016).

A social-emotional learning (SEL) framework is a component of a trauma-informed classroom (Craig, 2016). Social-emotional learning programs and interventions have been effective in enhancing social and academic skills and reducing conduct problems and emotional distress, thus promote positive academic growth, behavior, and development (Durlak et al., 2015). Programs that support social-emotional learning can help students' better access learning (Taylor, Oberle, Durlak, &

Weissberg, 2017). In their recent meta-analysis, Taylor, Oberle, Durlak, and Weissberg, their findings indicate that school-based universal SEL programs have an immediate positive impact. However, the long-term effects and the initial positive findings needed further research (2017).

Social and emotional learning has been used in classrooms to address challenging social and academic issues, and SEL addresses emotional literacy and problem solving, the two areas most recommended for treating childhood trauma (Payton et al., 2008). Social-emotional skills have been linked to academic readiness and school success (Blair, 2002). Children with strong social-emotional competence are also better able to acquire the skills necessary to build and maintain peer relationships (Denham, 2006).

Trauma-informed classrooms provided students with supports that help manage stress, avoid trauma triggers, and build positive relationships with educators and peers (Craig, 2016). A social-emotional framework provides educators with the necessary tools to help students recognize their feelings, monitor their behavior, and develop empathy and cooperation (Craig, 2016).

In a classroom setting, using clear, precise language, differentiating instruction, remaining objective, and maintaining a calm demeanor creates a safe classroom environment (Craig, 2016; Fecser, 2015). Educators working with traumatized students can further support a trauma-informed classroom by providing students positive attention by breaking assignments into manageable segments, and by using predictable routines (Fecser, 2015).

Traumatized students have a difficult time with modulating their levels of arousal and may be at risk for multiple academic and behavioral challenges (O'Neill, et al., , 2010). Professional development is needed to help build and establish a new mindset for working with students impacted by the effects of complex trauma (Craig, 2016; Fecser, 2015). Educators should have an understanding of the effects of complex trauma on students' social, emotional, and cognitive growth, yet many do not have the knowledge or training to do so.

Multiple trauma-informed approaches have been developed in recent years (Ko et al., 2008; Cavanaugh, 2016; Fecser, 2015). Since 2005, schools throughout the United States have integrated these approaches. Massachusetts and Washington are leading the way in moving toward district-wide approaches. Cole, director of the Trauma a Learning Policy Initiative, says, "Without a school-wide approach, it is difficult to address the role that trauma is playing in learning,"

In any school setting there are inherent challenges with the traditional approaches to teaching and addressing student behavior. Change is difficult at any level, and in complicated settings like schools, it can be time-consuming and does require commitment and buy-in across all levels (Barrow, McMullin, Tripp, & Tsemberis, 2012). Everyone working in schools has the responsibility to respond to students' needs; everyone working in school needs to help students manage emotions and behaviors without causing retraumatizing, thus creating a safe environment for learning (Massachusetts Advocates for Children, 2005).

Positive Behavioral Interventions and Supports

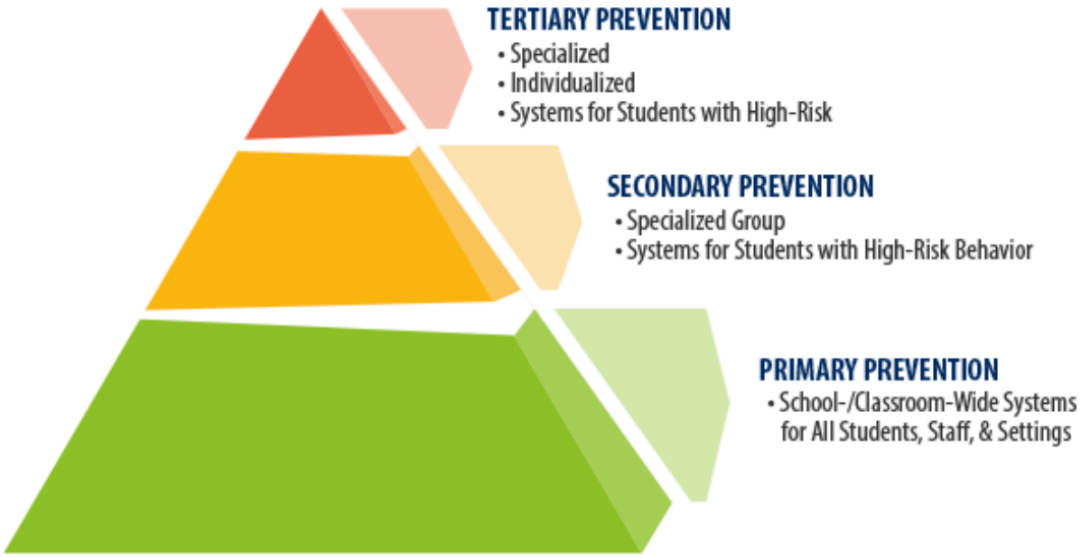
Current federal policy, Every Student Succeeds Act (ESSA) of 2015 (Civic Impulse, 2016), and the reauthorization of the Individuals with Disabilities Education Improvement Act (IDEA) have influenced how school systems handle behavioral needs. Positive Behavioral Interventions and Supports (PBIS) was added to IDEA, as a proactive way to address the behavioral needs of students with emotional disabilities (Plumb et al., 2016). However, PBIS often does not address the root cause of the impact of complex trauma. With the increased prevalence of trauma, likely, many students may not be identified or receive special services and interventions (Cavanaugh, 2016).

Positive Behavioral Interventions and Supports (PBIS) is similar to an academic model within a Multi-Tiered System of Support (MTSS) intervention model. In a PBIS and MTSS model, as shown in Figure 2.5, is a three-tiered system of support. In a PBIS tiered system, the first tier involves school-wide interventions typically with the development of a school motto and where tokens have been provided to students who meet the behavioral expectations. The second tier provided supports and interventions usually to a smaller group who need additional help and support to meet the school wide behavioral expectations. The third tier provided support for individual students who require a specialized systems of supports to meet the behavioral expectations. The PBIS system addresses the outward or external behaviors, is dependent on student compliance and may not help students who have internal issues related to trauma.

Positive Behavioral Interventions and Supports is primarily used to manage classroom behavior and may have immediate benefits for teachers. The system, however, does not address the underlying causes of student behavior nor does it address the root causes of behavior or the impact of complex trauma on learning and brain development (Plumb et al., 2016). The intent of a PBIS system, is to provide each student with the appropriate level of support to meet the behavior expectations within a school setting. When students fail to meet the behavioral expectations at the first-tier or within the regular classroom expectations, they are moved to the second-tier, which involves working with small groups on focused interventions. If the student's needs are still not met at the second tier, they move to the third-tier and receive individual interventions (OSEP, 2015).

Figure 2.5

PBIS/MTSS 3-Tier Pyramid



Note: The 3-Tier Pyramid retrieved from– http://www.koi-education.com/

Educational Expectations for Learning

Beginning in 1965, with the establishment of the Elementary and Secondary Education Act (ESEA), the federal government expanded funding for public education in an attempt to ensure access and equity for all public-school students (ESEA, 1965). The reauthorization of ESEA, in 2001, is known as the No Child Left Behind Act (NCLB). In order for states to access federal funding for education, states were required to establish learning standards in reading, writing, and mathematics. In an attempt to increase accountability, states were also required to administer standardized assessments as well as one other local measurement to ensure that students were demonstrating academic growth (NCLB, 2001). NCLB required that all students are proficient or on grade level in reading, writing, and mathematics by the end of the 2013-2014 school year (NCLB, 2001).

When many states failed to meet the requirements of NCLB (2001), the Obama Administration granted states waivers for schools that showed successes. These waivers required schools to adopt academic standards like the Common Core State Standards (CCSS), which are currently being used in forty-one states and the District of Columbia (CCSS, 2009).

No Child Left Behind Act (2001) was replaced in December 2015 with the Every Student Succeeds Act (ESSA, 2015). Every Student Succeeds Act (2015) retains the annual assessment hallmark of NCLB. It allowed states more control in establishing standards, setting goals, and determining how the state plans to achieve

these standards (ESSA, 2015). States are required to submit these plans to the United States Department of Education for review and approval (ESSA, 2015). Once the United States Department of Education approves the plan, states submit students' assessment scores, which have been used to determine the success of the state's plan (ESSA, 2015). The system of using student assessment scores can create a learning environment overemphasis on standardized tests throughout the school year (ESSA).

The Common Core State Standards (2009) in English Language Arts and Mathematics have been the foundation for the public education standards in forty-one states and the District of Columbia (CCSS, 2009). The hope was that these rigorous academic standards would ensure high achievement for students, yet the United States Public schools have struggled to meet these standards. Assessment data collected by the National Center for Education Statistics in 2017 indicated 36% of fourth and eighth-grade students as proficient in reading and 40% of fourth-grade students and 34% of eighth-grade students as proficient in mathematics. Much time has been spent focusing on preparing students for these assessments. As a result, schools and teachers have focused on content and related skills and have spent less time attending to the social and emotional needs of the students, which have been shown to be equally as important (Di Carlo, 2015; Glazer, 2017).

Vermont Education

In response to the rigorous academic standards and high stakes testing established by ESSA, Vermont Agency of Education has focused its attention on a proficiency-based system of learning and grading. Proficiency-based Learning (PBL)

has been defined as a system of academic instruction, assessment, and reporting that is based on learners demonstrating proficiency in knowledge, skills, and abilities they are expected to learn before progressing to the next level or challenge (Vermont Agency of Education, 2018). The hope is that this system would help ensure high achievement in academic learning for all students. This initiative has dominated teachers' professional development opportunities in Vermont. Curriculum initiatives and high-stakes testing are making it more difficult for advocates for trauma-sensitive practices (Terrasi et al., 2017). Educators have an obligation not only to help children achieve the high academic standard but also, to create a balanced approach that also supports, nurtures, and develop social-emotional skills Craig, 2016).

Other Vermont initiative included The Flexible Pathways Initiative, which was created by Act 77 in 2013 and Multi-Tiered Systems of Support. Flexible Pathways encouraged and supported school to develop and expand high-quality educational experiences and promoted opportunities for students to achieve postsecondary readiness through developing personalized learning for all students. Multi-Tiered Systems of Support (MTSS) has been defined as an instructional framework that includes universal screening, multiple tiers of instruction and support services, and an integrated data collection and assessment system to inform decisions at each tier of instruction (Vermont Agency of Education, 2014; 2019).

Many schools in Vermont have implemented a Multi-Tiered System of Support. The MTSS system is intended to provide support for students who are struggling, thus helping students access learning. In theory, MTSS provides tiered

intervention supports academically, socially, emotionally, and behaviorally; however; many interventions provided in schools focus solely on academics, and fewer, if any interventions focus on behavior and the social, emotional needs of students. While academic supports are essential, students of trauma may not be able to access the academics skills until schools provide learning environments and interventions that support the social and emotional needs of these students.

Trauma in Vermont

Vermont, like much of the United States, had experienced an increase in addiction, leaving many children at higher risk of trauma along with a host of health, developmental, and behavioral problems (Vermont Department of Health, 2018). The Vermont Agency of Education (Vermont AOE) reported that the number of homeless children had increased and the number of Vermont children in protective custody also continued to increase (Vermont Agency of Education, 2019; Vermont Department of Children and Families, 2019).

The statistic related to complex childhood trauma in Vermont have been troubling. The Vermont Agency of Education (2019) reports that the number of homeless children increased by 46% since 2010. The number of Vermont children in protective custody continues to increase, with 41% of the children in protective custody listed as between the ages of 0-5 years. Almost 60% of the children who had to be physically restrained in 2015 in Vermont were in grades K-3. Based on these statistics, Vermont educators need to have knowledge and understanding of complex

and trauma-informed practices because they been charged with the task of working with these children.

Vermont also had the highest proportion of its overall student population classified as Emotionally Disabled as compared to other states (Vermont Agency of Education, 2017). In a memorandum, Vermont's Secretary of Education released information on Act 43, H.508 Adverse Childhood Events Bill. The bill was intended to create trauma-informed systems in public health and education to help mitigate the effects of childhood trauma (Vermont AOE, Administrators Handbook, 2017). A committee had been tasked with looking at the impact, identifying possible strategies for working with children, and the cost associated with implementing the strategies at State and local school levels (Vermont AOE, 2017).

To begin to mitigate the impact of complex trauma, Vermont's Secretary of Education in a recent memorandum (July 2017) released information on Act 43, H.508 Adverse Childhood Events Bill. The bill was intended to create trauma-informed systems in public health and educational system to help mitigate the effects of childhood trauma (Vermont AOE, Administrators Handbook, 2017). A committee will be tasked with looking at the impact, identifying possible strategies for working with children, and the cost associated with implementing the strategies at State and local school levels (Vermont AOE, 2017).

Conclusion

This literature review highlighted the domains of complex trauma and the impact complex trauma had on students, trauma-informed practices, as well as the

current educational expectation in the United States and Vermont. Having knowledge and understanding of the impact complex trauma has on students plays a vital role in setting educational policy and educating and supporting the schools and educators in their work with students who have experienced trauma.

Chapter 3

Research Design and Methodology

Purpose

The purpose of this study was to determine Vermont educators' perceived knowledge and understanding of the impact of complex trauma. The secondary purpose was to understand Vermont educators' knowledge of trauma-informed practices. The tertiary purpose of this study examined Vermont educators' knowledge of the impact trauma had on a student's ability to access learning. The final purpose of this study sought to determine if there were and significant differences in Vermont educators' knowledge and understandings of complex trauma based on demographic data.

The primary goal was to establish educator knowledge and understanding of the impact of complex trauma on students. Working with students of trauma requires educators to respond to the needs of the students by creating safe, caring environments and by building positive, trusting relationships (Craig, 2016). The findings this study will help inform educational practice and policy related to trauma-informed practices within the researcher's school and school district and potentially in surrounding schools and school districts.

In this study "educators" referred to both licensed and non-licensed employees who worked in Vermont prekindergarten though grade 12 schools. Access to learning refers to a child's ability to pay attention to education, learning, the teacher and school

staff, and other students; to follow directions, self-regulate, and to engage in a variety of settings within the classroom, playground, and the greater school community.

This study used Goodwin-Glick Trauma-Informed Care Disposition Survey (TIC-DS) with her permission. This researcher tailored the survey tool to be a self-assessment for educators rather than a pre and post assessment. For this study, the survey was completed by educators who may or may not have participated in professional development in trauma-informed practices. Specific items in the survey were identified as a Subconstruct related to the impact of complex trauma on a student's ability to access learning. This study sought to answer the following research question:

1. What are Vermont educators' knowledge and understanding about the impact of complex trauma on students?
2. How do Vermont educators report their knowledge of trauma-informed practices?
3. To what extent do Vermont educators report their knowledge of the impact of trauma on a student's ability to access learning?
4. Are there significant differences in the knowledge and understanding of licensed educators versus non-licensed educators regarding their perceived knowledge of complex trauma experienced by students?
5. What, if any, are the differences in knowledge and understanding of the impact of complex trauma, if any based on demographic data?

The Goodwin-Glick study survey was chosen because it was the only study that focused on all school personnel, both licensed and non-licensed. Survey research is standard in educational settings as it allowed the researcher to collect more substantial quantities of data at a minimal cost with the capacity to "describe the opinions, behaviors or characteristics of a population of interest (Slavin, 2007. p.105). The findings of the study helped identify the need for continuing and expanding trauma-informed practice professional development opportunities for Vermont educators. Comparing the results of this replication study to the original study necessary helped provide validity to previous findings. Replication is a necessary step in the scientific process, and when researchers achieve similar findings, it can be concluded that the methods and findings are less affected by personal biases (Nardi, 2018).

Participants

For this study, licensed and non-licensed educators working in PreK-12 public schools in Vermont were targeted. This research focused on licensed and non-licensed educators employed during the fall of 2019. Participants needed to be at least 18 years of age and were selected based on current employment in Vermont Public Schools.

Licensed and non-licensed educators were invited by email to complete the survey. A purposeful sample is necessary because the study focused on gathering information from a specific population. The completion of the survey was voluntary and was based on the respondents' willingness to complete the survey. School administrators, general educators, special educators, and non-licensed school staff

(e.g., administrative assistants, paraprofessional, school counselors, custodians, etc.) were included in this study as they all interact with students on a daily basis. All licensed and non-licensed educators were included in this study considering everyone working within a school shares the responsibility for creating a safe, caring, and supportive environment for students and it allowed for comparison of the similarities and differences between the responses of licensed and non-licensed educators.

Participant Recruitment

The researcher found that "all-staff" school email lists were not available to people outside of the organizations. In order to seek participation, the researcher sent an email request to all Vermont Principals using the Vermont State Directory of Schools. The principals who agreed to support this research were sent the recruitment email explaining the research study along with a link to the Qualtrics Survey. Several principals requested a copy of the survey prior to agreeing to forward the recruitment email to their staff. One school district required the researcher to provide IRB approval along with the research proposal. The Vermont Principals' Association also posted the information about the research and a link to the survey in their weekly "VPA Leads" email.

Upon receiving permission from the IRB, an email distribution was sent the Vermont Principals who agreed to distributing the recruitment email. The email included a description of the study, participation involvement, timeframe for the survey, contact information for the researcher, along with a link to the Qualtrics Survey (see Appendix C). All participants were informed that participation was

voluntary, and participants had the right to withdraw from the study at any point. Participants were informed that consent was necessary participate in the research survey and that informed consent was indicated by selecting the "I consent to participate in the study" response. The information also included the data collection process and storage of the data in a secure location once the study was completed.

Survey Delivery

The research survey created using the web-based Qualtrics program, which was the preferred survey program used by Plymouth State University for the purpose of research. The email with the survey link was sent on September 23, 2019 and a follow-up email was sent on October 10, 2019. The survey will be closed on October 17, 2019.

Instrumentation

The study used the Trauma-Informed Care Disposition Survey, TIC-DS designed by Goodwin-Glick (2017). Goodwin-Glick specifically designed the fifty-two item survey for her school district to use to assess the impact of Trauma-Informed Care Professional Development. Goodwin-Glick's survey was designed as a pretest and posttest assessment that was administered following the school districts participating in Trauma-Informed Care Professional Development and used a Likert scale with a 5- scale range from "1" strongly disagreeing to "5" strongly agree. Educators in Goodwin-Glick's school district were asked to rate each survey item twice; their first response indicating their perceived knowledge and understanding of trauma prior to participating in the professional development and their second

response indicating their knowledge and understanding of trauma after participating in the required professional development.

Goodwin-Glick's research (2017), the TIC-DS was found to be a valid and reliable instrument. A Cronbach's Alpha for the TIC-DS was found to be .960 on the retrospective pretest responses and .955 on the posttest responses, which suggests strong internal reliability (Goodwin-Glick, 2017). In this research study, the Cronbach's Alpha was .934 which confirms the reliability of the survey.

The TIC-DS survey included items that were developed by Goodwin-Glick specifically for the expected learning outcomes of the professional development as well as items selected from four existing instruments including the Pretest/Posttest Instrument by Thomas, Scott and Pooler (2015) a tool that used to measure the effectiveness of trauma professional development for school case managers; the Interpersonal Reactivity Index (IRI) (Davis, 1980); A Survey of the Behavioral Characteristics of Teacher Caring (King, 2013); and the Teacher Disposition Index (TDI) (Schulte et al., 2004). Goodwin-Click's survey contains seven Subconstructs, as noted in Table 3.1 below.

Table 3.1

TIC-DS Subconstruct Analysis from Goodwin-Glick 2018

Subconstruct	Literature Base	Number of Items
Knowledge	Pretest/Posttest Instrument by Thomas et al. (2015)	8
Knowledge	Developed by Goodwin-Glick	8
Empathic Concern	Interpersonal Reactivity Index by Davis (1980)	5
Perspective Taking	Interpersonal Reactivity Index by Davis (1980)	6
Interpersonal Relationships	A Survey of The Behavioral Characteristics of Teacher Caring by King (2013)	5
Sense of Respect and Trust	A Survey of The Behavioral Characteristics of Teacher Caring by King (2013)	5
Student-Centered	A Survey of The Behavioral Characteristics of Teacher Caring by King (2013)	5
Behavior	A Survey of The Behavioral Characteristics of Teacher Caring by King (2013)	5
Behavior	Developed by Goodwin-Glick	5

This study used Trauma-Informed Care Disposition Survey; TIC-DS designed by Goodwin-Glick (2017). Goodwin-Glick granted permission to use the survey items with modification to be a single response survey and to also modify the demographic items to more closely match the language used in the State of Vermont.

The researcher decided to ask the demographic questions first (see appendix A). This study used a Likert scale and allowed participants to answer questions as "not applicable," thus creating a range for 0-260. Demographic data on gender, age range, years of employment in education, affiliation, current level/location (preschool,

elementary, middle school, high school, other), and whether or not the participant participated in professional development related to trauma-informed practices were also be collected. In addition to the identified Subconstruct listed the researcher had identified an embedded Subconstruct that included survey items 2, 6, 12-14, 19, 33,36-39,42-46, and 52 as they pertain directly to a student's ability to access learning.

Research Questions

This study addressed the following research questions.

1. What are Vermont educators' knowledge and understanding about the impact of complex trauma on students?
2. How do Vermont educators report their knowledge of trauma-informed practices?
3. To what extent do Vermont educators report their knowledge of the impact of trauma on a student's ability to access learning?
4. Are there significant differences in the knowledge and understanding of licensed educators versus non-licensed educators regarding their perceived knowledge of complex trauma experienced by students?
5. What, if any, are the differences in knowledge and understanding of the impact of complex trauma, if any based on demographic data?

Data Analysis

Quantitative data analysis was done using frequency models and compared the responses of licensed and non-licensed educators and looked for similarities and differences in the data. This analysis will be done using SPSS (IBM Corp., 2016).

The collected data was cleaned and reviewed. The researcher determined to keep only data from respondents who answered the demographic items and at least one of survey items. Once the data set was complete, a frequency analysis of all items was run on the demographic data and the survey items. The researcher ran factor analysis of the fifty-two survey items to confirm the seven Subconstructs identified in the Goodwin-Glick study. A beta (β) analysis was used determine whether or not to accept the null hypothesis.

A Chi-Square Tests and one-way ANOVA were used to help answer all research questions and were used to examine the similarities and differences that exist between licensed and non-licensed educators.

Researcher Bias

As a current school administrator, the researcher spent the past thirty years of career working in public education, and the researcher had seen a shift in the needs of the students entering the public-school system. With many top-down initiatives aimed at closing the academic achievement gap along with punitive action when students fail to meet the expected progress, it leads to an analysis of the data within the school system. In analyzing the data for students who meet the expectations for learning this research found a common thread; students have experienced complex trauma. Many of the requirements for the school whose student were not making adequate progress were tasked with implementing a Multi-Tiered System of Support which initially focused primarily at providing additional instruction in reading and mathematics, the content area that was assessed. What the initial system failed to recognize was the

needs of students who were not able to access the learning based on their histories of trauma.

Furthermore, schools in Vermont have recently shifted to proficiency-based graduation requirements and have been forced to merge, thus limiting their focus on the impact of complex trauma. This researcher strongly believes that educators do not have the appropriate knowledge and training for working with students who have experienced complex trauma. The researcher also believes that most educators feel overwhelmed by the number of initiatives, programs, and high-stakes testing requirements. Working with these students who have experienced complex trauma requires a shift in adult mindset, behavior, and language along with the support of the building and district leadership. All educators play a role within our schools to support the needs of all students.

Chapter 4

Results

The purpose of this study was to examine Vermont educators' knowledge and understanding of the impact of complex trauma on students. In addition, this study also examined whether or not there were any significant differences between licensed and non-licensed educators based on the reported demographic data.

This study replicated research conducted in 2017 by Goodwin-Glick in which licensed and non-licensed educators participated in trauma-informed care professional development and completed the TIC-DS. In the original research study, participants were asked to complete the survey twice following their participation in trauma-informed care professional development: One retrospective survey and one current knowledge survey. Goodwin-Glick's participants were asked to self-assess their knowledge and understanding of trauma-informed care. Goodwin-Glick's research identified dispositions and qualities of trauma-informed practices that are critical to building positive relationships with students. These included the subconstructs of Empathic Concern, Perspective Taking, Interpersonal Relationships, Sense of Respect and Trust, Student Centeredness, and Behavior.

The present study sought to answer the primary question:

1. What is Vermont educators' knowledge and understanding about the impact of complex trauma on students?

Additional research questions include:

2. How do Vermont educators report their knowledge of trauma-informed practices?
3. To what extent do Vermont educators report their knowledge of the impact of trauma on a student's ability to access learning?
4. Are there significant differences in the knowledge and understanding of licensed educators versus non-licensed educators regarding their perceived knowledge of complex trauma experienced by students?
5. What, if any, are the differences in knowledge and understanding of the impact of complex trauma, if any based on demographic data?

A qualitative research study of Vermont Educators was conducted to answer these questions. The Vermont Principal's Association (VPA) email list was used to solicit participation in the study. Principals were asked to forward an email with a link to the survey to their all school email list. A fifty-two item survey was developed based on Goodwin-Glick's study (2017). Along with the fifty-two items, the survey also collected demographic data (eight items), and professional development participation data (three items).

Demographic Statistics

Sample Size. The following section reviews the demographic data items asked on the survey. The demographic data items were analyzed to find frequencies and percentages.

The available population included 278 members of the Vermont Principal's Association; 88 of whom agreed to distribute the survey via their email distribution

list. A total of 349 participants consented to participate in the survey. Of those, 330 met the criteria established for this research, (i.e. over age 18, currently employed in a Vermont Public School, licensed or non-licensed educator).

Since the survey did look at the responses from licensed and non-licensed separately as well as combined, it is important to note that 274 participants identified their current role as a licensed educator (83%) and 61 participants identified their current role as non-licensed educators. It should also be noted that 5 participants identified their current role as both licensed and non-licensed educators.

Gender. The majority of the participants were female (n = 290, 88%). Three individuals identified as other, preferred not to answer, or did not answer the item but were still included in the analysis.

Age Range. Reported age ranged from younger than 29 years of age to over 60 year years of age (N =330). See Table 4.1 for a list of represented age ranges.

Table 4.1

Age Range of Participants

Range	n	%
< 29	21	6.4
30 - 39	80	24.2
40 – 49	92	27.9
50 – 59	86	26.1
60 +	49	14.8
Prefer not to answer	2	0.6
Total	330	100

Years of Employment. Survey participants were asked to indicate the number of years they have been employed in a Vermont Public School. The number of years ranged from 0 years to 20 or more years. Of the 330 participants 6 did not respond to this item. See Table 4.2 for a list of the represented ranges.

Table 4.2

Years of Employment in a Vermont Public School

Ranges	n	%
0 – 5 years	82	24.8
6 – 10 years	63	19.1
11 -15 years	47	14.2
16 -20 years	46	13.9
20 + years	86	26.1
No response	6	1.9
Total	330	100

Employee Classification. Participants were asked to indicate their current position as either licensed or non-licensed educator. The majority of participants indicated that they were licensed educators (n = 274, 83 %). Of the 330 participants, 61 indicated they worked in the capacity of non-licensed educators. There were 6 participants that indicated they worked in both capacities of licensed and non-licensed educators.

Licensed educators and non-licensed educators were asked to identify their current position. See Table 4.3 for a list of licensed educator positions and Table 4.4 for a list of non-licensed educators. Classroom teachers represented the majority of licensed educators (n = 111, 40%). Paraeducators and Teaching Assistants represented the majority of non-licensed educators (n = 31, 50%).

Table 4.3

Current Position Licensed Educators

Role	n	%
Classroom Teacher	111	40
Special Educator	42	15
Speech and Language Pathologist	6	2
Occupational Therapist	2	1
Physical Therapist	0	0
Counselor	16	6
Social Worker	8	3
Psychologist	4	2
Nurse	10	4
Administrator – Principal/Assistant Principal	39	14
Dean of Students	0	0
Other	36	13
Total	274	100

Table 4.4

Current Position Non-Licensed

Role	n	%
Paraeducator/Teaching Assistant	31	50
Individual Assistant	1	2
Administrative Assistant	2	3
Office Staff	3	5
Kitchen Staff	2	3
Custodian	3	5
Bus Driver	1	2
School Resource Officer	1	2
Nurse Assistant	1	2
Other	16	26
Total	61	100

School Type. Vermont had a variety of school structures and participants who indicated that they were licensed educators were asked to identify the type of school in which they work. Of the 274 licensed educators, 273 responded to this question. The majority of participants worked in schools that included prekindergarten through eighth grade (n =185, 68.6%) Table 4.5 shows the school types for respondents in this study.

Table 4.5

School Type

School/Grade Levels	n	%
Preschool or Prekindergarten	4	1.5
Primary School (K – 2; PreK - 2)	32	11.7
Intermediate School (3 - 5)	12	4.4
Elementary School (K – 5 or 6; PreK – 5 or 6)	89	32.5
Elementary/Middle School (K – 8; PreK – 8)	48	17.5
Middle School (5 or 6 – 8)	15	5.5
Middle/High School (5 – 12; 6 – 12; 7 – 12)	35	12.7
Elementary/Middle/High School (K – 12; PreK – 12)	15	5.5
High School	17	6.2
Vocational or Technical School	6	2.2
No Response	1	0.3
Total	274	100

Developed Environments. Participants were asked to identify the region where they teach as rural, suburban, or urban. Three hundred, twenty-eight responses were recorded see Table 4.6 below. Participants indicated the majority of their schools were located in a rural location (n =228, 69.5%). It is important to note the definitions for rural, urban, and suburban were provided and the definitions were taken from the 2006 National Center for Educational Statistics.

Table 4.6

Developed Environments

Developed Environment	n	%
Rural	228	69.5
Urban	68	20.7
Suburban	32	9.8
Total	328	100

Professional Development. Participants in this study were asked to indicate whether or not they had participated in trauma-informed professional development and if they had participated, was their participation mandatory or voluntary. Participants who had not participated in trauma-informed professional development were asked to indicate the reason they had not participated.

Three hundred twenty-eight participants responded to the survey item asking if they had participated in trauma-informed professional development. Of the 328, 296 (90.24%) participants indicated they participated in trauma-informed professional development, 32 participants responded they had not participated in trauma-informed professional development. There were responses from 226 participants indicating whether their participation in trauma-informed professional development was mandatory (n = 143, 63.3%) or voluntary (n = 83, 36.7%).

Participants who had not participated in trauma-informed professional development indicated reasons why they had not participated. The three main reason

why participants indicated reasons for non-participation included too many school or district initiatives (n = 12, 31.58%), use of professional development funds for another purpose (n = 9, 23.68%), and no professional development opportunities provided (n = 8, 21.06%) A total of thirty-eight responses were recorded, see Table 4.7 below.

Table 4.7

Reasons for Non-Participation in Trauma and Trauma-informed Professional Development

Responses	n	%
No professional development funds available.	2	5.26
There are limited professional development funds available.	2	5.26
I used my professional development fund for another purpose.	9	23.68
The school/district direst the use of professional development funds.	5	13.16
There are too many other school/district initiatives.	12	31.58
Professional development opportunities ae not offered to me.	8	21.06
Total	38	100

Frequency Analysis

A frequency analysis of the responses of the survey items modified from the 2017 Goodwin-Glick study was run to determine the response rate of the remaining survey questions. The results are displayed in Table 4.8. Each question asked was

modified from the initial 2017 study by Goodwin-Glick. The questions were originally created as a pre and post assessment on perceived knowledge, dispositions, and behaviors toward traumatized students following trauma-informed care professional development. For this partial replication study, the language of the survey items was modified slightly to reflect a single assessment of both licensed and non-licensed educators in the State of Vermont. Additionally, the findings were compared to the initial study to check for reliability in the data.

Table 4.8

Survey Items Responses(Total N = 330 Respondents)

Survey Items	Total Response	SD	D	NA/DA	A	SA	DNA
	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)	n(%)
1. I am familiar with the symptoms of traumatized students display.	318 (96.4)	2 (0.6)	5 (1.5)	9 (2.7)	165 (50)	137 (41.5)	0
2. I am knowledgeable about the impact trauma can have on a student's success.	317 (96.1)	3 (0.9)	3 (0.9)	3 (0.9)	130 (39.4)	177 (53.8)	1 (0.3)
3. I am knowledgeable about the impact trauma can have on a student's behavior.	316 (95.8)	2 (0.6)	4 (1.2)	4 (1.2)	122 (37)	184 (55.8)	0
4. I know have to make behavioral observations when interacting with students that help me identify signs of trauma.	317 (96.1)	3 (0.9)	24 (7.3)	44 (13.3)	152 (46.1)	92 (27.9)	2 (0.6)
5. I am knowledgeable about the different types of trauma.	315 (95.5)	4 (1.2)	34 (10.3)	39 (11.8)	153 (46.4)	85 (25.8)	0
6. I understand the symptoms of trauma may be similar or identical to symptoms of other diagnoses such as emotional disturbed, Attention Deficit Hyperactivity Disorder, or autism.	318 (96.4)	4 (1.2)	7 (2.1)	17 (5.2)	150 (45.5)	140 (42.4)	0
7. I am knowledgeable of the steps to take once a student has been identified as experiencing trauma.	317 (96.1)	7 (2.1)	53 (16.1)	52 (15.8)	139 (42.1)	64 (19.4)	2 (0.6)
8. I am knowledgeable about trauma in school-aged children.	317 (96.1)	2 (0.6)	13 (3.9)	31 (9.4)	176 (53.3)	95 (28.8)	0

9. I am knowledgeable about the next steps to take if I suspect a student is or has experienced trauma.	316 (95.8)	6 (1.8)	43 (13)	49 (14.8)	155 (47)	63 (19.1)	0
10. I am knowledgeable about how my behaviors impact students who may have experienced trauma.	317 (96.1)	2 (0.6)	15 (4.5)	15 (4.5)	157 (47.6)	128 (38.8)	0
11. I am knowledgeable about how to talk to students who may have experienced trauma.	307 (93.0)	3 (0.9)	32 (9.7)	52 (15.8)	157 (47.6)	62 (18.8)	1 (0.3)
12. I am knowledgeable about the impact trauma has on a student's ability to learn.	309 (93.6)	2 (0.6)	3 (0.9)	10 (3.0)	154 (46.7)	139 (42.1)	1 (0.3)
13. I am knowledgeable about how to deescalate and manage student behavior.	308 (93.3)	6 (1.8)	24 (7.3)	44 (13.3)	145 (43.9)	88 (26.7)	1 (0.3)
14. I believe that my interactions with students how have faced trauma might positively impact his or her ability to learn.	309 (93.6)	0	1 (0.3)	12 (3.6)	161 (48.8)	135 (40.9)	0
15. I utilize strategies with the intent to create a safe environment for students.	308 (93.3)	0	1 (0.3)	9 (2.7)	152 (46.1)	145 (43.9)	1 (0.3)
16. I am knowledgeable about the role empathy plays in creating positive and trusting adult-student relationships.	309 (93.6)	0	3 (0.9)	6 (1.8)	123 (37.3)	176 (53.3)	1 (0.3)
17. I am self-aware and mindful of my interactions with students.	309 (93.6)	0	2 (0.6)	5 (1.5)	139 (42.1)	163 (49.4)	0
18. I use active listening strategies when interacting with students.	309 (93.6)	0	1 (0.3)	7 (2.1)	150 (45.5)	151 (45.8)	0
19. I am knowledgeable about the impact of positive and negative emotional state on neurological functioning (brain functioning) and learning potential.	309 (93.6)	0	12 (3.6)	26 (7.9)	154 (46.7)	117 (35.5)	0
20. I believe all students can learn.	308	1	4	6	68	228	1

	(93.3)	(0.3)	(1.2)	(1.8)	(20.6)	(69.1)	(0.3)
21. I have concerned feeling for students who are less fortunate than me.	304 (92.1)	1 (0.3)	2 (0.6)	22 (6.7)	106 (32.1)	172 (52.1)	1 (0.3)
22. I sometimes find it difficult to see things from the student's point of view. †	304 (92.1)	3 (0.9)	64 (19.4)	45 (13.6)	134 (40.6)	58 (17.6)	0
23. I feel empathy for students when they are having problems.	303 (91.8)	2 (0.6)	2 (0.6)	6 (1.8)	134 (40.6)	159 (48.2)	0
24. I look at a student's side of a disagreement before making a decision.	304 (92.1)	2 (0.6)	1 (0.3)	25 (7.6)	174 (52.7)	101 (30.6)	1 (0.3)
25. When I see a student being taken advantage of, I feel somewhat protective toward them.	303 (91.8)	1 (0.3)	0	11 (3.3)	132 (40.0)	158 (47.9)	1 (0.3)
26. Students' misfortunes do not disturb me a great deal.†	304 (92.1)	4 (1.2)	5 (1.5)	20 (6.1)	143 (43.3)	131 (39.7)	1 (0.3)
27. If I am right about something, I do not waste time listening to student arguments. †	302 (91.5)	2 (0.6)	8 (2.4)	34 (10.3)	147 (44.5)	111 (33.6)	0
28. I believe that I have the ability to assist traumatized students so they can learn.	304 (92.1)	1 (0.3)	9 (2.7)	25 (7.6)	169 (51.2)	98 (29.7)	2 (0.6)
29. I believe that there are two sides to every story and try to look at both of them.	304 (92.1)	1 (0.3)	1 (0.3)	16 (4.8)	157 (47.6)	128 (38.8)	1 (0.3)
30. I describe myself as a soft-hearted person.	302 (91.5)	4 (1.2)	25 (7.6)	63 (19.1)	117 (35.5)	93 (28.2)	0
31. When I am upset with a student, I try to "put myself in his or her shoes."	306 (92.7)	0	5 (1.5)	54 (16.4)	177 (53.6)	67 (20.3)	3 (0.9)
32. Before criticizing/critiquing a student, I try to imagine how I would feel if I were in their place.	305 (92.4)	0	6 (1.8)	35 (10.6)	177 (53.6)	81 (24.5)	6 (1.8)
33. I create an environment where students feel safe.	303 (91.8)	0	0	4 (1.2)	142 (43.0)	157 (47.6)	0
34. I am positive with students.	305	0	0	5	149	151	0

	(92.4)			(1.5)	(45.2)	(45.8)	
35. I intervene when students pick on each other.	304	0	2	7	134	160	1
	(92.1)		(0.6)	(2.1)	(40.6)	(48.5)	(0.3)
36. I give students positive reinforcement for good behavior.	305	0	3	9	141	151	1
	(92.4)		(0.9)	(2.7)	(42.7)	(45.8)	(0.3)
37. I enforce the same rules for all students.	306	3	34	57	130	82	0
	(92.7)	(0.9)	(10.3)	(17.3)	(39.4)	(24.8)	
38. I take a personal interest in what students do outside their class.	306	2	3	32	156	112	1
	(92.7)	(0.6)	(0.9)	(9.7)	(47.3)	(33.9)	(0.3)
39. I call students by their names.	305	0	1	2	105	197	0
	(92.4)		(0.3)	(0.6)	(31.8)	(59.7)	
40. I provide students with “treats” and “goodies” on special occasions.	306	12	46	60	105	70	13
	(92.7)	(3.6)	(13.9)	(18.2)	(31.8)	(21.2)	(3.9)
41. I attempt to treat students with dignity and respect at all times.	302	0	0	1	78	223	0
	(91.5)			(0.3)	(23.6)	(67.6)	
42. I joke around with students in an appropriate manner.	302	3	1	13	146	138(	1
	(91.5)	(0.9)	(0.3)	(3.9)	(44.2)	41.8)	(0.3)
43. I recognize students for extra-curricular achievements.	300	0	5	30	144	114	7
	(90.9)		(1.5)	(9.1)	(43.6)	(34.5)	(2.1)
44. I attempt to greet students when entering the classroom or my work environment.	301	0	0	4	98	198	1
	(91.2)			(1.2)	(29.7)	(60.0)	(0.3)
45. I ask students to help with classroom or other tasks.	302	0	1	15	123	150	13
	(91.5)		(0.3)	(4.5)	(37.3)	(45.5)	(3.9)
46. I ask students for their opinions.	301	0	1	8	146	146	0
	(91.2)		(0.3)	(2.4)	(44.2)	(44.2)	
47. I maintain eye contact, if culturally appropriate, with students when talking to them.	302	0	0	1	124	176	1
	(91.5)			(0.3)	(37.6)	(53.3)	(0.3)

48. I give students opportunities to make choices and decisions that affect them.	302 (91.5)	0	0	2 (0.6)	146 (44.2)	154 (46.7)	0
49. I demonstrate qualities of humor, empathy, and warmth with students.	301 (91.2)	0	0	2 (0.6)	105 (31.8)	194 (58.8)	0
50. I attempt to be patient when working with students.	302 (91.5)	0	0	2 (0.6)	111 (33.6)	188 (57.0)	1 (0.3)
51. I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of students.	302 (91.5)	0	0	3 (0.9)	136 (41.2)	163 (49.4)	0
52. I believe it is important to learn about students and their community.	302 (91.5)	0	0	5 (1.5)	100 (30.3)	197 (59.7)	0

Note: Scale for responses Strongly Disagree (SD), Disagree (D), Neither Agree nor Disagree (NA/DA), Agree (A), Strongly Agree (SA), and Does Not Apply (DNA).

It should be noted that total percent will not equal 100; participants that did not respond are not included.

† Recoded responses.

Factor Analysis of Subconstructs

Factor analysis of the subconstructs was conducted to assist in answering the research questions related to Vermont educators' knowledge and understanding of the impact of complex, knowledge and understanding of trauma-informed practices, and knowledge of the impact trauma had on learning. The analysis included the reliability of the individual subconstructs and the survey as a whole. In addition, factor analysis was conducted for the each subconstruct's survey items.

Survey Subconstructs

The original study identified the following survey subconstructs: Knowledge, Empathic Concern, Perspective Taking, Interpersonal Relationships, Sense of Respect and Trust, Student Centeredness, and Behavior. Goodwin-Glick (2017) identified these constructs as being essential dispositions for educators working with students who have experienced complex trauma. For this study, the researcher identified an additional subconstruct: Learning. Eighteen items from the survey were identified as being specifically related to student learning. Table 4.9 identifies the item numbers for each subconstruct as well as the scale reliability of each measured by Cronbach's Alpha (α).

Table 4.9

Reliability of Subconstructs

Subconstruct Name	Item Numbers	α
Knowledge	1-13, 16, 19, 20	.927
Empathic Concern	21, 23, 25, 26, 30	.573
Perspective Taking	22, 24, 27, 29, 31, 32	.705
Interpersonal Relationships	38-42	.561
Sense of Respect and Trust	43-47	.787
Student Centeredness	48-52	.867
Behavior	14, 15, 17, 18, 28, 33-37	.812
Learning	2, 6, 12-14, 19, 20, 28, 33, 36-39, 42-46	.852
Total Survey	1-52	.934

Factor Analysis of Subconstruct Knowledge

Sixteen survey items were identified within the subconstruct of knowledge. Factor analysis was conducted for each of the survey items. The analysis yielded a beta(β) level for each of the survey items. Table 4.10 identifies each item by number from the survey along with the β for each item.

Table 4.10

TIC-DS Subconstruct Knowledge Factor Loading

Item		β
1.	I am familiar with the symptoms of traumatized students display.	.792
2.	I am knowledgeable about the impact trauma can have on a student's success.	.738
3.	I am knowledgeable about the impact trauma can have on a student's behavior.	.748
4.	I know have to make behavioral observations when interacting with students that help me identify signs of trauma.	.706
5.	I am knowledgeable about the different types of trauma.	.738
6.	I understand the symptoms of trauma may be similar or identical to symptoms of other diagnoses such as emotional disturbed, Attention Deficit Hyperactivity Disorder, or autism.	.716
7.	I am knowledgeable of the steps to take once a student has been identified as experiencing trauma.	.723
8.	I am knowledgeable about trauma in school-aged children.	.817
9.	I am knowledgeable about the next steps to take if I suspect a student is or has experienced trauma.	.627
10.	I am knowledgeable about how my behaviors impact students who may have experienced trauma.	.793
11.	I am knowledgeable about how to talk to students who may have experienced trauma.	.739
12.	I am knowledgeable about the impact trauma has on a student's ability to learn.	.723
13.	I am knowledgeable about how to deescalate and manage student behavior.	.688
16.	I am knowledgeable about the role empathy plays in creating positive and trusting adult-student relationships.	.559
19.	I am knowledgeable about the impact of positive and negative emotional state on neurological functioning (brain functioning) and learning potential.	.630
20.	I believe all students can learn.	.260

Factor Analysis of Subconstruct Empathic Concern

Five survey items were identified within the subconstruct of empathic concern. Factor analysis was conducted for each of the survey items. The analysis yielded a beta(β) level for each of the survey items. Table 4.11 identifies each item by number from the survey along with the β for each item.

Table 4.11

TIC-DS Subconstruct Empathic Concern Factor Loading

Item	β
21. I have concerned feeling for students who are less fortunate than me.	.672
23. I feel empathy for students when they are having problems.	.766
25. When I see a student being taken advantage of, I feel somewhat protective toward them.	.643
26. Students' misfortunes do not disturb me a great deal.	.490
30. I describe myself as a soft-hearted person.	.512

Factor Analysis of Subconstruct Perspective Taking

Six survey items were identified within the subconstruct of perspective taking. Factor analysis was conducted for each of the survey items. The analysis yielded a beta(β) level for each of the survey items. Table 4.12 identifies each item by number from the survey along with the β for each item.

Table 4.12

TIC-DS Subconstruct Perspective Taking Factor Loading

Item	β
22. I sometimes find it difficult to see things from the student's point of view.	.518
24. I look at a student's side of a disagreement before making a decision.	.633
27. If I am right about something, I do not waste time listening to student arguments.	.549
29. I believe that there are two sides to every story and try to look at both of them.	.630
31. When I am upset with a student, I try to "put myself in his or her shoes."	.771
32. Before criticizing/critiquing a student, I try to imagine how I would feel if I were in their place.	.770

Factor Analysis of Subconstruct Interpersonal Relationships

Five survey items were identified within the subconstruct of interpersonal relationships. Factor analysis was conducted for each of the survey items. The analysis yielded a beta(β) level for each of the survey items. Table 4.13 identifies each item by number from the survey along with the β for each item.

Table 4.13

TIC-DS Subconstruct Interpersonal Relationships Factor Loading

Item	β
38. I take a personal interest in what students do outside their class.	.704
39. I call students by their names.	.774
40. I provide students with "treats" and "goodies" on special occasions.	.363
41. I attempt to treat students with dignity and respect at all times.	.698
42. I joke around with students in an appropriate manner.	.680

Factor Analysis of Subconstruct Sense of Respect and Trust

Five survey items were identified within the subconstruct of sense of respect and trust. Factor analysis was conducted for each of the survey items. The analysis yielded a beta(β) level for each of the survey items. Table 4.14 identifies each item by number from the survey along with the β for each item.

Table 4.14

TIC-DS Subconstruct Sense of Respect and Trust Factor Loading

Item	β
43. I recognize students for extra-curricular achievements.	.667
44. I attempt to greet students when entering the classroom or my work environment.	.764
45. I ask students to help with classroom or other tasks.	.697
46. I ask students for their opinions.	.795
47. I maintain eye contact, if culturally appropriate, with students when talking to them.	.801

Factor Analysis of Subconstruct Student Centeredness

Five survey items were identified within the subconstruct of student centeredness. Factor analysis was conducted for each of the survey items. The analysis yielded a beta(β) level for each of the survey items. Table 4.15 identifies each item by number from the survey along with the β for each item.

Table 4.15

TIC-DS Subconstruct Student Centeredness Factor Loading

Item	β
48. I give students opportunities to make choices and decisions that affect them.	.667
49. I demonstrate qualities of humor, empathy, and warmth with students.	.764
50. I attempt to be patient when working with students.	.697
51. I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of students.	.795
52. I believe it is important to learn about students and their community.	.801

Factor Analysis of Subconstruct Behavior

Ten survey items were identified within the subconstruct of behavior. Factor analysis was conducted for each of the survey items. The analysis yielded a beta(β) level for each of the survey items. Table 4.16 identifies each item by number from the survey along with the β for each item.

Table 4.16

TIC-DS Subconstruct Behavior Factor Loading

Item	β
14. I believe that my interactions with students how have faced trauma might positively impact his or her ability to learn.	.679
15. I utilize strategies with the intent to create a safe environment for students.	.671
17. I am self-aware and mindful of my interactions with students.	.752
18. I use active listening strategies when interacting with students.	.735
28. I believe that I have the ability to assist traumatized students so they can learn.	.591
33. I create an environment where students feel safe.	.759
34. I am positive with students.	.724
35. I intervene when students pick on each other.	.596
36. I give students positive reinforcement for good behavior.	.589
37. I enforce the same rules for all students.	.268

Factor Analysis of Subconstruct Perspective Taking

Eighteen survey items were identified within the subconstruct of learning. Factor analysis was conducted for each of the survey items. The analysis yielded a beta(β) level for each of the survey items. Table 4.17 identifies each item by number from the survey along with the β for each item.

Table 4.17

TIC-DS Subconstruct Learning Factor Loading

Item	β
2. I am knowledgeable about the impact trauma can have on a student's success.	.603
6. I understand the symptoms of trauma may be similar or identical to symptoms of other diagnoses such as emotional disturbed, Attention Deficit Hyperactivity Disorder, or autism.	.576
12. I am knowledgeable about the impact trauma has on a student's ability to learn.	.633
13. I am knowledgeable about how to deescalate and manage student behavior.	.596
14. I believe that my interactions with students how have faced trauma might positively impact his or her ability to learn.	.639
19. I use active listening strategies when interacting with students.	.525
20. I am knowledgeable about the impact of positive and negative emotional state on neurological functioning (brain functioning) and learning potential.	.641
28. If I am right about something, I do not waste time listening to student arguments.	.543
33. Before criticizing/critiquing a student, I try to imagine how I would feel if I were in their place.	.627
36. I intervene when students pick on each other.	.557
37. I give students positive reinforcement for good behavior.	.246
38. I enforce the same rules for all students.	.515
39. I take a personal interest in what students do outside their class.	.634
42. I attempt to treat students with dignity and respect at all times.	.501
43. I joke around with students in an appropriate manner.	.461
44. I recognize students for extra-curricular achievements.	.601
45. I attempt to greet students when entering the classroom or my work environment.	.505
46. I ask students to help with classroom or other tasks.	.593

Analysis of Demographic Data and Subconstructs

Additional analysis was conducted for each independent variable and dependent variables identified by subconstruct. The analysis provided the answer to whether or not there was a difference between licensed and non-licensed educators. Additionally, the analysis helped identify differences in knowledge and understanding of complex trauma based on demographic data. The findings have been displayed in Tables 4.18 – 4.27.

Means and Standard Deviations of Gender and Subconstructs

Survey participants were asked to identify their gender as male, female, or other. Participants were also provided with the option "Prefer not to Answer" (PNA). Table 4.18 shows the means (μ) and standard deviations (σ) for each gender category.

Table 4.18

Means (μ) and Standard Deviations (σ) of Gender and Subconstructs

Gender		Subconstructs							
		K	EC	PT	IR	SR	SC	B	L
Male	μ	4.12	4.12	3.94	4.12	4.30	4.42	4.31	4.25
	σ	.562	.429	.491	.511	.474	.482	.361	.379
	n	30	29	29	29	29	29	29	29
Female	μ	4.19	4.35	4.11	4.37	4.52	4.61	4.38	4.38
	σ	.565	.455	.489	.449	.441	.397	.394	.368
	n	268	268	269	269	266	268	266	256
Other	μ	4.19	4.60	3.33	3.80	4.20	4.40	4.50	4.50
	σ	-	-	-	-	-	-	-	-
	n	1	1	1	1	1	1	1	1
PNA	μ	4.19	4.60	4.33	3.80	4.20	5.00	4.70	4.28
	σ	-	-	-	-	-	-	-	-
	n	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total	μ	4.18	4.33	4.09	4.34	4.50	4.59	4.37	4.37
	σ	.562	.456	.491	.461	.448	.408	.390	.370
	N	300	299	300	300	297	299	297	287

Note: Knowledge (K), Empathic Concern (EC), Perspective Taking (PT), Interpersonal Relationships (IR), Sense of Respect and Trust (SR), Student Centered (SC), Behavior (B), Learning (L), No Standard Deviation Calculated (-).

Means and Standard Deviations of Age and Subconstructs

Survey participants were asked to identify their age range as < 29, 30-39, 40-49, 50-59, or 60+. Participants were also provided with the option "Prefer not to Answer" (PNA). Table 4.19 shows the means (μ) and standard deviations (σ) for each age range category.

Table 4.19

Means (μ) and Standard Deviations (σ) of Age and Subconstructs

Age		Subconstructs							
		K	EC	PT	IR	SR	SC	B	L
<29	μ	4.09	4.43	4.10	4.44	4.54	4.60	4.34	4.35
	σ	.587	.391	.536	.376	.441	.437	.420	.407
	n	20	20	20	20	20	19	20	19
30-39	μ	4.17	4.34	4.06	4.31	4.45	4.58	4.39	4.35
	σ	.562	.448	.486	.464	.461	.387	.398	.371
	n	74	73	74	75	75	75	73	73
40-49	μ	4.20	4.34	4.12	4.35	4.52	4.58	4.36	4.37
	σ	.575	.485	.522	.459	.448	.387	.408	.404
	n	79	78	78	79	77	78	78	76
50-59	μ	4.16	4.24	4.08	4.37	4.51	4.60	4.34	4.37
	σ	.597	.472	.450	.479	.445	.431	.364	.341
	n	80	83	83	80	79	80	83	77
60+	μ	4.25	4.38	4.11	4.31	4.52	4.57	4.42	4.39
	σ	.484	.407	.530	.474	.448	.435	.393	.357
	n	46	44	44	45	45	46	42	41
PNA	μ	4.31	4.70	4.17	4.10	4.10	5.00	4.60	4.36
	σ	.177	.141	.236	.424	.141	.000	.141	.118
	n	2	2	2	2	2	2	2	2
Total	μ	4.18	4.33	4.09	4.34	4.50	4.59	4.37	4.37
	σ	.561	.456	.492	.461	.447	.407	.390	.369
	N	301	300	301	301	298	300	298	288

Note: Knowledge (K), Empathic Concern (EC), Perspective Taking (PT), Interpersonal Relationships (IR), Sense of Respect and Trust (SR), Student Centered (SC), Behavior (B), Learning (L), Prefer Not to Answer (PNA)

Means and Standard Deviations of Years of Service and Subconstructs

Survey participants were asked to identify the number of years they have been employed in a Vermont public school. Participants were given the following options,

0-5 years, 5-10 years, 10-15 years, 15-20 years, or 20+ years. Table 4.20 shows the means (μ) and standard deviations (σ) for each category.

Table 4.20

Means (μ) and Standard Deviations (σ) of Years of Service and Subconstructs

Years of Service		Subconstructs							
		K	EC	PT	IR	SR	SC	B	L
0-5 Years	μ	4.02	4.35	4.09	4.27	4.42	4.53	4.31	4.27
	σ	.649	.455	.466	.475	.441	.402	.387	.378
	n	75	73	72	74	73	73	72	69
5-10 Years	μ	4.21	4.19	4.00	4.35	4.48	4.59	4.37	4.39
	σ	.492	.515	.513	.443	.459	.407	.406	.358
	n	54	55	56	55	55	54	55	54
10-15 Years	μ	4.21	4.48	4.19	4.41	4.59	4.72	4.50	4.47
	σ	.578	.435	.455	.429	.466	.367	.303	.348
	n	45	46	46	45	45	46	45	43
15-20 Years	μ	4.25	4.38	4.18	4.39	4.51	4.57	4.34	4.38
	σ	.561	.402	.468	.503	.423	.418	.460	.423
	n	40	40	40	39	37	39	40	37
20+ Years	μ	4.27	4.29	4.09	4.36	4.56	4.61	4.39	4.40
	σ	.496	.430	.525	.460	.434	.416	.373	.339
	n	82	81	82	83	83	83	81	80
Total	μ	4.18	4.33	4.10	4.35	4.51	4.60	4.38	4.37
	σ	.564	.457	.492	.461	.445	.406	.388	.368
	N	296	295	296	296	293	295	293	283

Note: Knowledge (K), Empathic Concern (EC), Perspective Taking (PT), Interpersonal Relationships (IR), Sense of Respect and Trust (SR), Student Centered (SC), Behavior (B), Learning (L).

Means and Standard Deviations of Licensed and Non-Licensed Educators and Subconstructs

Survey participants were asked to identify whether they were a licensed or non-licensed educator. Licensed and non-licensed educators were asked to identify their current role. their current role. Table 4.21 shows the means (μ) and standard deviations (σ) for each identified licensed category and Table 4.22 shows the means (μ) and standard deviations (σ) for each non-licensed category.

Table 4.21

Means (μ) and Standard Deviations (σ) Licensed Position and Subconstructs

Licensed Position		Subconstructs							
		K	EC	PT	IR	SR	SC	B	L
Classroom Teacher	μ	3.97	4.26	3.98	4.31	4.47	4.55	4.27	4.27
	σ	.578	.441	.485	.463	.459	.440	.404	.373
	n	103	104	105	103	101	102	104	99
Special Educator	μ	4.37	4.37	4.17	4.58	4.60	4.71	4.47	4.49
	σ	.475	.513	.456	.450	.430	.378	.383	.381
	n	38	38	38	39	39	39	38	38
SLP	μ	3.89	4.68	4.17	4.32	4.48	4.80	4.34	4.29
	σ	.754	.228	.527	.502	.438	.245	.241	.217
	n	5	5	5	5	5	5	5	5
OT	μ	4.59	4.30	4.42	4.30	4.40	4.80	4.80	4.64
	σ	.044	.707	.354	.141	.566	.283	.283	.039
	n	2	2	2	2	2	2	2	2
Counselor	μ	4.49	4.27	4.12	4.26	4.37	4.56	4.45	4.41
	σ	.463	.631	.478	.346	.436	.369	.320	.327
	n	14	14	14	14	14	14	14	14
Social Worker	μ	4.77	4.55	4.29	4.75	4.91	4.93	4.64	4.75
	σ	.279	.316	.525	.316	.157	.149	.325	.224
	n	8	8	8	8	7	8	8	7
Psychologist	μ	4.52	4.60	4.29	4.35	4.65	4.40	4.65	4.61
	σ	.541	.432	.285	.619	.443	.283	.100	.198
	n	4	4	4	4	4	4	4	4
Nurse	μ	3.89	4.30	3.83	3.93	4.22	4.34	4.03	3.97
	σ	.429	.519	.500	.458	.452	.378	.315	.240
	n	10	10	9	9	9	10	7	6
Administrator	μ	4.42	4.33	4.26	4.35	4.58	4.71	4.52	4.51
	σ	.484	.351	.538	.381	.382	.342	.321	.299
	n	37	34	35	37	37	37	34	35
Other	μ	4.25	4.44	4.06	4.28	4.53	4.59	4.41	4.39
	σ	.572	.432	.490	.424	.466	.409	.411	.340
	n	32	33	32	33	33	33	33	33
Total	μ	4.19	4.33	4.08	4.35	4.51	4.61	4.38	4.38
	σ	.575	.454	.496	.454	.444	.405	.393	.367
	N	253	252	252	254	251	254	249	243

Note: Knowledge (K), Empathic Concern (EC), Perspective Taking (PT), Interpersonal Relationships (IR), Sense of Respect and Trust (SR), Student Centered

(SC), Behavior (B), Learning (L), Speech and Language Pathologist (SLP), Occupational Therapist (OT).

Table 4.22

Means (μ) and Standard Deviations (σ)Non- Licensed Position and Subconstructs

Non-Licensed Position		Subconstruct							
		K	EC	PT	IR	SR	SC	B	L
Paraeducator	μ	4.09	4.33	4.16	4.41	4.44	4.52	4.39	4.33
	σ	.425	.489	.490	.391	.424	.369	.301	.299
	n	27	27	27	27	27	27	27	25
Individual Aide	μ	4.00	4.00	3.67	4.00	4.00	4.00	3.80	3.89
	σ	-	-	-	-	-	-	-	-
	n	1	1	1	1	1	1	1	1
Administrative Assistant	μ	4.50	5.00	4.08	4.20	4.30	5.00	4.05	4.28
	σ	-	-	.825	.849	.990	-	.636	.707
	n	1	1	2	2	2	1	2	2
Office Staff	μ	4.52	4.00	4.28	4.70	5.00	5.00	4.80	4.94
	σ	.477	.346	.096	.424	.000	.000	.346	.0786
	n	3	3	3	2	2	2	3	2
Kitchen Staff	μ	4.28	4.20	4.17	4.20	4.50	4.50	4.30	4.31
	σ	.928	.566	.471	.566	.707	.707	.707	.904
	n	2	2	2	2	2	2	2	2
Custodian	μ	3.63	4.20	4.11	4.47	4.20	4.40	4.20	4.13
	σ	.325	.721	.509	.306	.529	.529	.361	.160
	n	3	3	3	3	3	3	3	3
Bus Driver	μ	3.31	4.20	4.00	3.80	4.00	4.20	4.20	3.83
	σ	-	-	-	-	-	-	-	-
	n	1	1	1	1	1	1	1	1
School Resource Officer	μ	4.00	3.60	3.33	3.60	4.00	3.80	4.00	4.00
	σ	-	-	-	-	-	-	-	-
	n	1	1	1	1	1	1	1	1
Nurse Assistant	μ	3.81	4.00	3.83	4.00	4.60	4.20	3.90	4.17
	σ	-	-	-	-	-	-	-	-
	n	1	1	1	1	1	1	1	1
Other	μ	4.27	4.38	4.28	4.15	4.60	4.57	4.33	4.39
	σ	.649	.436	.514	.650	.482	.433	.375	.411
	n	13	13	12	12	12	12	13	12
Total	μ	4.13	4.30	4.15	4.31	4.46	4.51	4.34	4.33
	σ	.515	.475	.478	.486	.464	.410	.363	.375
	N	53	53	53	52	52	51	54	50

Note: Knowledge (K), Empathic Concern (EC), Perspective Taking (PT), Interpersonal Relationships (IR), Sense of Respect and Trust (SR), Student Centered (SC), Behavior (B), Learning (L). No Standard Deviation Calculated (-)

Means and Standard Deviations of School Type and Subconstructs

Survey participants who identified as licensed educators were asked to indicate the type of school in which they work. Table 4.23 shows the means (μ) and standard deviations (σ) for each identified school type.

Table 4.23

Means (μ) and Standard Deviations (σ) School Type and Subconstructs

School Type		Subconstructs							
		K	EC	PT	IR	SR	SC	B	L
PreK	μ	4.28	4.35	4.08	4.25	4.45	4.75	4.35	4.32
	σ	.719	.252	.553	.700	.300	.500	.265	.288
	n	4	4	4	4	4	4	4	4
PreK/K-2	μ	4.12	4.30	4.07	4.46	4.50	4.62	4.30	4.30
	σ	.634	.435	.359	.411	.413	.420	.511	.422
	n	26	27	27	28	27	27	26	25
3-5	μ	4.43	4.47	3.96	4.32	4.68	4.70	4.51	4.56
	σ	.421	.454	.472	.356	.346	.367	.380	.275
	n	12	12	12	12	12	12	12	12
PreK/K-5	μ	4.23	4.32	4.09	4.32	4.54	4.62	4.38	4.39
	σ	.619	.450	.507	.463	.439	.411	.377	.380
	n	84	83	82	85	83	85	83	81
PreK/K-8	μ	4.08	4.42	4.06	4.31	4.53	4.61	4.40	4.37
	σ	.545	.433	.505	.427	.396	.351	.377	.322
	n	46	47	47	47	47	48	46	45
5 or 6-8	μ	4.25	4.43	4.27	4.48	4.50	4.58	4.38	4.42
	σ	.493	.408	.422	.493	.395	.413	.334	.328
	n	13	12	13	12	12	12	13	12
5, 6, or 7-12	μ	4.18	4.27	4.04	4.32	4.35	4.60	4.32	4.31
	σ	.472	.511	.594	.480	.553	.481	.369	.388
	n	31	30	30	30	30	30	29	29
PreK/K-12	μ	4.26	4.47	4.28	4.44	4.64	4.61	4.54	4.48
	σ	.560	.405	.491	.442	.448	.389	.287	.265
	n	15	15	15	15	15	15	14	14
High School	μ	4.11	3.97	3.92	4.52	4.60	4.56	4.22	4.39
9-12	σ	.729	.528	.751	.335	.400	.434	.560	.541
	n	6	6	6	5	5	5	6	5
Tech/	μ	4.25	4.17	4.08	4.37	4.39	4.51	4.38	4.37
Vocational	σ	.639	.512	.408	.575	.553	.453	.475	.441
	n	15	15	15	15	15	15	15	15
Total	μ	4.20	4.33	4.08	4.35	4.51	4.61	4.38	4.38
	σ	.574	.455	.497	.455	.444	.406	.394	.368
	N	252	251	251	253	250	253	248	242

Note: Knowledge (K), Empathic Concern (EC), Perspective Taking (PT), Interpersonal Relationships (IR), Sense of Respect and Trust (SR), Student Centered (SC), Behavior (B), Learning (L).

Means and Standard Deviations of Developed Environment and Subconstructs

Survey participants were asked to identify the environment in which their school was located. Table 4.24 shows the means (μ) and standard deviations (σ) for each location category.

Table 4.24

Means (μ) and Standard Deviations (σ) Developed Environment and Subconstructs

Developed Environment		Subconstructs							
		K	EC	PT	IR	SR	SC	B	L
Rural	μ	4.22	4.34	4.12	4.32	4.51	4.59	4.38	4.39
	σ	.574	.456	.490	.469	.451	.414	.393	.377
	n	207	206	207	211	208	209	207	202
Urban	μ	4.12	4.31	4.05	4.38	4.45	4.58	4.33	4.31
	σ	.527	.449	.503	.424	.459	.408	.385	.361
	n	65	66	66	64	63	64	66	62
Suburban	μ	4.04	4.32	4.04	4.48	4.53	4.65	4.41	4.37
	σ	.522	.484	.486	.440	.400	.343	.383	.305
	n	27	26	26	25	25	25	24	23
Total	μ	4.19	4.33	4.09	4.35	4.50	4.59	4.37	4.37
	σ	.561	.455	.492	.458	.448	.406	.390	.368
	N	299	298	299	300	296	298	297	287

Note: Knowledge (K), Empathic Concern (EC), Perspective Taking (PT), Interpersonal Relationships (IR), Sense of Respect and Trust (SR), Student Centered (SC), Behavior (B), Learning (L).

Means and Standard Deviations of Participation in Trauma-Informed Professional Development and Subconstructs

Survey participants were asked to indicate whether or not they had participated in trauma-informed professional development. Participants were also asked whether their participation was mandatory or voluntary. Participants who did not participate were asked to specify the reason why they had not participated. Table 4.25-4.27 show the means (μ) and standard deviations (σ) for each.

Table 4.25

Means (μ) and Standard Deviations (σ) Participation in Trauma-Informed Professional Development and Subconstructs

Participation		Subconstructs							
		K	EC	PT	IR	SR	SC	B	L
Yes	μ	4.23	4.32	4.09	4.35	4.49	4.59	4.37	4.38
	σ	.516	.453	.486	.460	.448	.409	.385	.367
	n	272	272	273	274	272	273	270	262
No	μ	3.69	4.38	4.10	4.27	4.58	4.59	4.38	4.28
	σ	.728	.491	.560	.471	.443	.402	.440	.387
	n	29	28	28	27	26	27	28	26
Total	μ	4.18	4.33	4.09	4.34	4.50	4.59	4.37	4.37
	σ	.561	.456	.492	.461	.447	.407	.390	.369
	N	301	300	301	301	298	300	298	288

Note: Knowledge (K), Empathic Concern (EC), Perspective Taking (PT), Interpersonal Relationships (IR), Sense of Respect and Trust (SR), Student Centered (SC), Behavior (B), Learning (L).

Table 4.26

Means (μ) and Standard Deviations (σ) Mandatory vs. Self-Selected Participation in Trauma-Informed Professional Development and Subconstructs

Mandatory vs Self-Selected Participation		Subconstructs							
		K	EC	PT	IR	SR	SC	B	L
Mandatory	μ	4.16	4.31	3.98	4.35	4.48	4.57	4.30	4.32
	σ	.491	.473	.498	.473	.476	.432	.398	.383
	n	131	131	132	132	129	131	132	123
Self-Selected	μ	4.26	4.34	4.16	4.35	4.48	4.58	4.41	4.41
	σ	.562	.419	.452	.464	.440	.393	.366	.365
	n	77	78	77	77	77	76	77	76
Total	μ	4.20	4.32	4.05	4.35	4.48	4.57	4.34	4.36
	σ	.519	.453	.488	.468	.462	.417	.389	.378
	N	208	209	209	209	206	207	209	199

Note: Knowledge (K), Empathic Concern (EC), Perspective Taking (PT), Interpersonal Relationships (IR), Sense of Respect and Trust (SR), Student Centered (SC), Behavior (B), Learning (L).

Table 4.27

Means (μ) and Standard Deviations (σ) Reason for Non-Participation in Trauma-Informed Professional Development and Subconstructs

		Subconstructs							
Reasons for Non-Participation		K	EC	PT	IR	SR	SC	B	L
No PD funding available	μ	3.88	4.30	4.08	4.40	4.50	4.50	4.30	4.33
	σ	.884	.990	.825	.566	.707	.707	.283	.629
	n	2	2	2	2	2	2	2	2
Limited PD fund available	μ	3.31	4.30	4.58	4.60	4.90	4.90	4.65	4.28
	σ	.884	.424	.589	.283	.141	.141	.354	.157
	n	2	2	2	2	2	2	2	2
Used PD funds for another purpose	μ	3.65	4.53	4.26	4.31	4.40	4.64	4.53	4.35
	σ	.894	.387	.480	.376	.441	.328	.472	.337
	n	9	9	9	9	8	9	9	8
School/District directs the use of PD funds	μ	3.98	4.16	4.13	4.44	4.60	4.48	4.12	4.21
	σ	.308	.555	.217	.329	.316	.390	.303	.206
	n	3	5	5	5	5	5	5	5
Too many other initiatives	μ	3.61	4.36	3.80	3.86	4.22	4.36	4.03	3.98
	σ	.661	.497	.711	.604	.466	.420	.602	.422
	n	10	10	10	10	10	10	10	10
PD opportunities are not offered to me	μ	3.73	4.53	3.94	4.20	4.47	4.60	4.40	4.23
	σ	.672	.413	.417	.420	.468	.379	.453	.449
	n	8	6	6	6	6	6	5	5
Total	μ	3.68	4.40	4.06	4.20	4.42	4.54	4.29	4.19
	σ	.695	.470	.555	.495	.447	.390	.503	.381
	N	34	34	34	34	33	34	33	32

Note: Knowledge (K), Empathic Concern (EC), Perspective Taking (PT), Interpersonal Relationships (IR), Sense of Respect and Trust (SR), Student Centered (SC), Behavior (B), Learning (L), Professional Development (PD).

Chi-Square Analysis

In order to answer the question if there were any significant differences of Vermont educators' knowledge and understanding of complex trauma and trauma-informed practices based on demographics. Data analysis of the Multivariant Tests and Test of Between Subject Effect suggested that there may be statistical significance between the demographic variables and Subconstructs. Further data analysis was conducted by performing Chi-Square (χ^2)Tests for each case where statistical significance may have occurred. Tables 4.28 - 4.32 show the results for each of the χ^2.

Chi-Square Test Between Gender and Interpersonal Relationships Means

Initial analysis indicated possible significance was between gender and interpersonal relationships. Table 4.28 shows the results of the χ^2 test and has indicated that there is no significance between these variables.

Table 4.28

Chi-Square Test Gender and Interpersonal Relationships Means

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	42.906[a]	33	.116
Likelihood Ratio	23.296	33	.895
Linear-by-Linear Association	3.265	1	.071
N of Valid Cases	300		

a. 38 cells (79.2%) have expected count less than 5. The minimum expected count is .01.

Chi-Square Test Between Gender and Empathic Concern Means

Initial analysis indicated possible significance was between gender and Empathic Concern. Table 4.29 shows the results of the χ^2 test and had indicated that there is no significance between these variables.

Table 4.29

Chi-Square Test Between Gender and Empathic Concern Means

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	29.443[a]	33	.645
Likelihood Ratio	23.365	33	.893
Linear-by-Linear Association	7.213	1	.007
N of Valid Cases	299		

a. 39 cells (81.3%) have expected count less than 5. The minimum expected count is .00.

Chi-Square Test Between Age and Empathic Concern Means

Initial analysis indicated possible significance was between age and Empathic Concern. Table 4.30 shows the results of the χ^2 test and had indicated that there is no significance between these variables.

Table 4.30

Chi-Square Test Between Age and Empathic Concern Means

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	40.830[a]	55	.923
Likelihood Ratio	46.390	55	.789
Linear-by-Linear Association	.371	1	.543
N of Valid Cases	300		

a. 46 cells (63.9%) have expected count less than 5. The minimum expected count is .01.

Chi-Square Test Between Years of Employment and Empathic Concern Means

Initial analysis indicated possible significance was between years of employment and Empathic Concern. Table 4.31 shows the results of the χ^2 test and had indicated that there is no significance between these variables.

Table 4.31

Chi-Square Test Between Years of Employment and Empathic Concern Means

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	49.608[a]	44	.260
Likelihood Ratio	46.541	44	.368
Linear-by-Linear Association	.008	1	.930
N of Valid Cases	295		

a. 29 cells (48.3%) have expected count less than 5. The minimum expected count is .14.

Chi-Square Test Between Licensed or Non-licensed Educator and Knowledge Means

Initial analysis indicated possible significance was between licensed or non-licensed educator and knowledge. Table 4.32 shows the results of the χ^2 test and had indicated that there was significance between these variables. Additional analysis was conducted to further explore these findings.

Table 4.32

Chi-Square Test Between Licensed or Non-licensed Educator and Knowledge Means

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	52.763[a]	36	.035
Likelihood Ratio	62.291	36	.004
Linear-by-Linear Association	.810	1	.368
N of Valid Cases	298		

a. 51 cells (68.9%) have expected count less than 5. The minimum expected count is .16.

Chi-Square Test Between Licensed and Non-licensed and Empathic Concern Means

Initial analysis indicated possible significance was between licensed and non-licensed and Empathic Concern means. Table 4.33 shows the results of the χ^2 test and had indicated that there was significance between these variables. Additional analysis was conducted to further explore these findings.

Table 4.33

Chi-Square Test Between Licensed and Non-licensed and Empathic Concern Means

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	5.490[a]	11	.905
Likelihood Ratio	5.923	11	.878
Linear-by-Linear Association	.739	1	.390
N of Valid Cases	297		

a. 9 cells (37.5%) have expected count less than 5. The minimum expected count is .16.

Chi-Square Test Between Licensed and Non-licensed and Student Centeredness Means

Initial analysis indicated possible significance was between licensed and non-licensed and student centeredness means. Table 4.34 shows the results of the χ^2 test and had indicated that there was no significance between these variables.

Table 4.34

Chi-Square Test Between Licensed and Non-licensed and Student Centeredness Means

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	11.716[a]	7	.110
Likelihood Ratio	10.339	7	.170
Linear-by-Linear Association	4.384	1	.036
N of Valid Cases	298		

a. 7 cells (43.8%) have expected count less than 5. The minimum expected count is .15.

Chi-Square Test Between Licensed Position and Knowledge Mean

Initial analysis indicated possible significance was between licensed position and knowledge means. Table 4.35 shows the results of the χ^2 test and had indicated that there was no significance between these variables.

Table 4.35

Chi-Square Test Between Licensed Position and Knowledge Means

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	317.061[a]	324	.598
Likelihood Ratio	259.955	324	.996
Linear-by-Linear Association	11.520	1	.001
N of Valid Cases	253		

a. 365 cells (98.6%) have expected count less than 5. The minimum expected count is .01.

Chi-Square Test Between Licensed Position and Perspective Taking Means

Initial analysis indicated possible significance was between licensed position and perspective taking means. Table 4.36 shows the results of the χ^2 test and had indicated that there was no significance between these variables.

Table 4.36

Chi-Square Test Between Licensed Position and Perspective Taking Means

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	102.628[a]	126	.937
Likelihood Ratio	106.713	126	.893
Linear-by-Linear Association	2.662	1	.103
N of Valid Cases	252		

a. 138 cells (92.0%) have expected count less than 5. The minimum expected count is .01.

Chi-Square Test Between Licensed Position and Interpersonal Relationships Means

Initial analysis indicated possible significance was between licensed position and interpersonal relationships means. Table 4.37 shows the results of the χ^2 test and had indicated that there was significance between these variables. Additional analysis was conducted to further explore these findings.

Table 4.37

Chi-Square Test Between Licensed Position and Interpersonal Relationships Means

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	146.872[a]	99	.001
Likelihood Ratio	113.425	99	.152
Linear-by-Linear Association	1.327	1	.249
N of Valid Cases	254		

a. 105 cells (87.5%) have expected count less than 5. The minimum expected count is .01.

Chi-Square Test Between Licensed Position and Student Centeredness Means

Initial analysis indicated possible significance was between licensed position and student centeredness means. Table 4.38 shows the results of the χ^2 test and had indicated that there was no significance between these variables.

Table 4.38

Chi-Square Test Between Licensed Position and Student Centeredness Means

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	70.419[a]	63	.243
Likelihood Ratio	72.811	63	.186
Linear-by-Linear Association	.368	1	.544
N of Valid Cases	254		

a. 65 cells (81.3%) have expected count less than 5. The minimum expected count is .01.

Chi-Square Test Between Licensed Position and Behavior Means

Initial analysis indicated possible significance was between licensed position and behavior means. Table 4.39 shows the results of the χ^2 test and had indicated that there was no significance between these variables.

Table 4.39

Chi-Square Test Between Licensed Position and Behavior Means

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	156.981[a]	153	.396
Likelihood Ratio	138.348	153	.796
Linear-by-Linear Association	5.570	1	.018
N of Valid Cases	249		

a. 169 cells (93.9%) have expected count less than 5. The minimum expected count is .01.

Chi-Square Test Between Licensed Position and Learning Means

Initial analysis indicated possible significance was between licensed position and learning means. Table 4.40 shows the results of the χ^2 test and had indicated that there was no significance between these variables.

Table 4.40

Chi-Square Test Between Licensed Position and Learning Means

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	238.158[a]	252	.725
Likelihood Ratio	200.877	252	.992
Linear-by-Linear Association	4.749	1	.029
N of Valid Cases	243		

a. 285 cells (98.3%) have expected count less than 5. The minimum expected count is .01.

Chi-Square Test Between Participation in Trauma-Informed Professional Development and Knowledge Means

Initial analysis indicated possible significance was between participation in trauma-informed professional development and knowledge means. Table 4.41 shows the results of the χ^2 test and had indicated that there was significance between these variables. Additional analysis was conducted to further explore these findings.

Table 4.41

Chi-Square Test Between Participation in Trauma-Informed Professional Development and Knowledge Means

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	83.044[a]	36	.000
Likelihood Ratio	63.755	36	.003
Linear-by-Linear Association	24.431	1	.000
N of Valid Cases	301		

a. 51 cells (68.9%) have expected count less than 5. The minimum expected count is .10.

Chi-Square Test Between Mandatory or Voluntary Participation in Trauma-Informed Professional Development and Perspective Taking Means

Initial analysis indicated possible significance was mandatory or voluntary participation in trauma-informed professional development and perspective taking means. Table 4.41 shows the results of the χ^2 test and had indicated that there was significance between these variables. Additional analysis was conducted to further explore these findings. Additional analysis was conducted to further explore these findings

Table 4.42

Chi-Square Test Between Mandatory or Voluntary Participation in Trauma-Informed Professional Development and Perspective Taking Means

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	24.347[a]	14	.042
Likelihood Ratio	26.869	14	.020
Linear-by-Linear Association	6.587	1	.010
N of Valid Cases	209		

a. 13 cells (43.3%) have expected count less than 5. The minimum expected count is .37.

Further Data Analysis

This study sought to examine Vermont educators' perceived knowledge and understanding of the impact of complex trauma on students. The survey sample consisted of 330 licensed and non-licensed Vermont educators who answered one or more of the survey items. In addition, the study examined whether there were significant differences based on demographic variables.

Additional analysis was conducted for that indicated a p value < .05. One-way between subject ANOVA were conducted for the following: licensed verses non-licensed educators and knowledge, licensed position type and interpersonal relationships, participation in trauma-informed professional development and knowledge, and mandatory verses voluntary participation in trauma-informed professional development and perspective taking.

A one-way between subjects ANOVA was conducted to compare licensed and non-licensed educators' knowledge of complex childhood trauma. There was not a significant difference between licensed and non-licensed educators and their knowledge of complex childhood trauma at a level $p < .05$ for the two conditions [F(1,296) = .809, p = .369] with licensed educators (m = 4.19) and non-licensed educators (m = 4.11). These results indicate there is not a significant difference in licensed and non-licensed educators' knowledge of complex childhood trauma.

A one-way between subjects ANOVA was conducted to compare the respondents current licensed position and their interpersonal relationships. There was a significant effect between current licensed position and interpersonal relationships at the $p < .05$ for three conditions [$F(244, 9) = 3.13$, $p = .001$]. A comparison of the mean scores of the identified licensed positions indicated a significant difference in the mean score of school nurses (m = 3.93) and the average mean of the other licensed educators (m = 4.39). The greatest difference within this group was between school nurses (m = 3.93) and social workers (m = 4.75). These results indicate that school nurses may differ from other licensed educators in the area of interpersonal relationships when working with students. It should be noted that only ten school nurses participated in this study.

Another one-way between subjects ANOVA was conducted to compare respondents participation in trauma-informed professional development and their knowledge of the complex childhood trauma. There was a significant difference of knowledge between those respondents who had participated in trauma-informed

professional development and those who had not participated at the $p < .05$ level of the two conditions [$F(1,299) = 26.51$, $p = .000$]. The mean score for respondents who had not participated in trauma-informed professional development (m = 3.69) was significantly different from those who did participate in trauma-informed professional development (m = 4.23). These results suggest participation in trauma-informed professional development had an effect on educators' knowledge of complex childhood trauma.

Based on the Chi-Square Tests, an additional one-way, between subjects ANOVA was conducted to compare respondents mandatory or voluntary participation in trauma-informed professional development and perspective taking. There was a significant difference between respondents who were required to participate in trauma-informed professional development and those voluntarily participated and their perspective taking at the $p < .05$ level for the two conditions [$F(207,1) = 6.77$, $p = .010$]. The comparison indicated the mean score for respondents who were required to participate in trauma-informed professional development (m = 3.98) was significantly different from those respondents who voluntarily participated in trauma-informed professional development (m = 4.16). These results suggest that voluntary participation in trauma-informed professional development may lead to educators greater ability to see the perspective of the students with whom they work.

Since this study sought to examine Vermont educators' perceived knowledge and understanding of the impact of complex childhood trauma on students, their knowledge of trauma-informed practices, and their knowledge of the impact trauma

has on a student's ability to access learning, the researcher conducted one-way ANOVAs for the independent variable which asked respondents to identify their current position. One-way between subject ANOVAs were conducted for each Subconstruct and of the eight Subconstructs, four had a $p < .05$. The Subconstructs in which $p < .05$ included licensed educators' knowledge of the impact of complex trauma, licensed educators knowledge of trauma-informed practices, specifically related to student centeredness and behavior, as well as licensed educators knowledge of the impact of trauma on a student's ability to access learning.

In order to compare licensed educators' knowledge of the impact of complex trauma a one-way between subjects ANOVA was conducted to. There was a significant difference between the licensed educators at the $p < .05$ on their knowledge of the impact of complex trauma [$F(9,243)=5.51$, $p = .000$]. Comparisons indicated that the mean score for classroom teachers (m = 3.97), speech and language pathologists (m = 3.88), and school nurses (m = 3.89) were significantly different from the other licensed educators mean score ranging from 4.25 to 4.77. The results suggest that licensed educators have different levels of knowledge of the impact of complex trauma.

In regard to licensed educators' knowledge of trauma-informed practices, specifically the disposition related to student centeredness, .centeredness, statistical significance was found [$F(9, 244) = 2.25$, $p = .020$]. The p value of .020 indicated that there is significance within the group of licensed educators. The mean scores for

psychologists (m = 4.40) and school nurses (m = 4.34) were slightly less than the means scores for other licensed educators (m = 4.69).

With respect to behavior, the one-way between subjects ANOVA for this condition [$F(9, 239) = 3.37$, $p = .001$]. This case ($p = .001$) indicates some significance within the group of licensed educators. The mean scores for classroom teachers (m = 4.27) and school nurses (m = 4.02) were slightly less than the average mean of other licensed educators (m = 4.53). These results indicate that the role of a licensed educator's may have an impact on their knowledge of trauma-informed practices related to student centeredness and behavior.

Lastly, a one-way between subjects ANOVA was conducted to understand to what extent Vermont licensed educators report their knowledge of the impact of trauma on a student's ability to access learning, [$F(9, 233) = 4.23$, $p = .000$]. The mean score for school nurses (m = 3.97), speech and language pathologists (M = 4.29) and classroom teachers (m = 4.27) were less than the average mean of the other licensed educators (m = 4.54). These results indicate that there are varied levels of knowledge Vermont licensed educators have of the impact of trauma on a student's ability to access learning.

Implications and limitations of the results will be discussed in the following chapter.

Chapter 5

Discussion

"One cannot underestimate the therapeutic impact of a caring teacher."

(Perry & Ludy-Dobson as cited by Craig, 2016)

This study was designed to discover Vermont educators' perceived knowledge and understanding of the impact of complex trauma on students and trauma-informed practices. This was done by partially replicating Goodwin-Glick's 2017 study. The survey used in this study was broken into seven identified subconstructs (Knowledge Empathic Concern, Perspective Taking, Interpersonal Relationships, Sense of Respect and Trust, Student Centeredness, and Behavior). An additional Learning subconstruct was created and identified survey items related to student learning to help understand how Vermont educators perceived their knowledge and understanding of the impact trauma has on a student's ability to access learning.

Complex trauma has a detrimental impact on students' social, emotional well-being, brain development, learning, and behavior. Research indicates that complex childhood trauma is widespread and negatively impacts a student's ability to access learning in school. The impact of complex childhood trauma has created a growing need for educators to participate in professional development related to trauma and trauma-informed practice (Craig, 2016). Until recently, most trauma-informed practices were generated by medical and mental health professionals, and trauma-informed practices within the school setting have been limited (Dorado et al., 2016; Chafouleas et al., 2016). Although it has been assumed to be the responsibility of

mental health workers, educators play a crucial role in supporting students dealing with trauma (Alisic, 2012). This chapter is structured to present interesting findings and examine ideas represented in the main research questions.

Demographics

Demographic data indicated some interesting findings. For example, only 6.4% of participants were under the age of 29 years old, yet 44% of the participants indicated ten or fewer years of employment in Vermont public schools. This is surprising because the researcher expected a greater alignment between participant age and participant length of employment these demographics to be more closely aligned.

The majority of participants identified themselves as licensed educators. While this was expected, this also highlights the need to be more inclusive in designing surveys that are accessible to all educators, both licensed and non-licensed. Licensed educators typically have more experience with the completion of educational surveys.

Surprisingly a large percentage (90.2 %) of participants indicated they had participated in professional development on trauma-informed practices. Of those who did participate in professional development on trauma-informed practices, the majority indicated their professional development was mandatory.

The participants who had not participated in professional development on trauma-informed practices indicated they had not done so because of too many other district incentives, used professional development funds for another purpose, or no professional development opportunities were provided. It was not surprising that educators identified those reasons for non-participation in professional development.

Knowledge and Understanding of Complex Trauma

The education profession has grown in complexity due to the ever-changing needs of students, especially those who have experienced complex trauma. One of the most important aspects of working with students who have experienced complex trauma is to have knowledge and understanding of complex trauma. Vermont educators indicated they have substantial knowledge and understanding of complex trauma. The researcher was excited to learn that Vermont educators know the importance of understanding complex childhood trauma.

When looking specifically at licensed educators, this study did find knowledge and understanding varied depending on the licensed position. Special educators, occupational therapists, school counselors, social workers, school psychologists, and building-level administrators had stronger knowledge and understanding of complex trauma when compared to classroom teachers, speech and language pathologists, and school nurses. Classroom teachers must have strong knowledge and understanding of the impacts of complex trauma since they spend the most significant amount of time with students.

It was not surprising to find that special educators, school psychologists, occupational therapists, school counselors, and social workers reported a stronger knowledge and understanding of complex trauma since many of the manifestations of complex trauma often mimic other disabilities. Professionals in these fields often received extensive training in the manifestations of disabilities. Knowing this core group of professionals has a strong knowledge and understanding may help build

professional knowledge and understanding within their teams and school communities. By providing suggestions to their collaborative teams, special educators, school psychologists, occupational therapists, school counselors, and social workers can support the design of learning environments in which all students can access learning.

The results from this study found that there were no significant differences in knowledge and understanding of complex trauma between licensed and non-licensed educators. This is the opposite of what the researcher had anticipated. However, there were a small number of non-licensed educators (N = 61) that participated in the study. The researcher expected non-licensed educators to have reported having less knowledge and understanding of complex trauma. One possible explanation for this may be that the majority of non-licensed educators who participated in this study identified their role as a paraeducator or teaching assistant. Educators working in these positions may have propensity to learn about issues impacting individual students or small groups of students who have an identified disability that might be a result of complex trauma.

Knowledge and Understanding of Trauma-Informed Practices

Knowledge and understanding of trauma-informed practices is another crucial aspect for educators to have when working with students who have experienced complex trauma. The researcher examined the subconstructs of Interpersonal Relationships, Perspective-Taking, Empathic Concern, Trust and Respect, Student-Centeredness, and Behavior to determine the knowledge and understanding of trauma-

informed practices. Each of the subconstructs was analyzed separately. These analyses of trauma-informed practices again varied depending on the educator's position. As mentioned, the results for the analysis of the subconstructs indicated that the subconstructs for Empathic Concern, Perspective-Taking, and Interpersonal Relationships were not as reliable as the others subconstructs in this study. One explanation may be that these subconstructs included only five or six survey items and were located between the middle and end of the survey (indicating potential survey fatigue).

Overall, the respondents in this study reported a strong understanding of trauma-informed practices. Examining the subconstructs related to the knowledge and understanding of trauma-informed practices some patterns of potential significance in the area of Empathic Concern began to emerge. However, when further analysis was run, no statistical significance was identified.

Based on the researcher's professional experience in several Vermont school districts the researcher expected educators would not have a strong knowledge and understanding of complex trauma. However, over 90 % of the participants in this study had been exposed to professional development in trauma-informed practices, which could explain these results.

Knowledge and Understanding of How Trauma Impacts Learning

Public schools in the United States have been charged with implementing rigorous academic standards and high stakes testing, therefore, must assure students learn. Students who have experienced complex trauma have often been in a state of

hyperarousal or hypoarousal and have not been able to access learning in school. In order to examine access to learning, the additional subconstruct of Learning was created by the researcher in this study. Eighteen items from the original Goodwin-Glick survey that were directly related to student learning comprised the Learning subconstruct.

When analyzing the data, this study found that Vermont educators indicated a strong perceived knowledge of the impact complex trauma has on learning. This may be a result of a large number of respondents' participation in trauma-informed professional development. Educators who have a strong understanding of how complex trauma impacts learning play a key role in designing learning environments and instruction to meet the needs of the students. Educators play a vital role as collaborative team members within their schools.

Limitations

Several factors limit the generalizations made from this research, such as a large number of participants accessed trauma-informed professional development opportunities, sample size, inability to more widely distribute the survey, and survey fatigue.

The fact that 90.2 % of participants have had exposure to training in the area of trauma-informed practices, which foundationally begins with building a knowledge base of the impact of complex trauma and creates the condition of preexisting knowledge, may have skewed the data. Because participation was voluntary, it is also possible that people who had knowledge of complex trauma selected to participate in

the study. Educators who may not have had a knowledge of complex trauma may not have selected to participate in the study.

The sample size for this study was limited to Vermont educators, and results may differ with more diverse participation group. The original intent of the research was to distribute the survey via email to the approximate 17,000 current Vermont educators. The initial number of participants included 349 respondents, once the data was cleaned, 330 participants were included. In addition to the small sample size, 88 % of respondents were female. While closely representative of the gender distribution for Vermont educators, additional research encouraging greater male participation may change results. This small sample size also had a limited number of non-licensed educators (n = 61). It would be essential to find a way to reach a greater population of non-licensed educators (including kitchen staff, custodial staff, and bus drivers) who engage with students regularly.

Survey fatigue may have also been a limitation of this study. While 330 participants responded to the initial demographic items, the researcher noticed that fewer responses were collected for the latter half of the survey. Fewer and more relevant survey items might have yielded more participation. Based on the analysis of the reliability of the subconstructs, revisions of the survey may be warranted. The researcher would recommend eliminating the survey items related to Empathic Concern, Perspective Taking, and Interpersonal Relationships. This would eliminate sixteen survey items and would reduce the survey to a total of thirty-six items. This might also help moderate survey fatigue.

Areas for Future Research

Futures studies could target a more representative sample of schools within the state of Vermont, employees working directly with students, building administrators, and the students themselves. Visiting schools and soliciting participation from various stakeholders, in person, would allow for a more diverse pool of participants and provide triangulated data. This study focused on the educator's knowledge and understanding of complex trauma, not including the perspective of students who work directly with the educators. The majority of educators who participated in this survey indicated a strong knowledge and understanding of the impact of complex perceptions. Research examining the student's perspective about how trauma-informed practice supports the students and the student's ability to learn may add a significant element to understanding the impact of trauma-informed practices.

A comparison between trauma-informed schools and those that are not identified as trauma-informed schools should be undertaken. Gathering data on both types of schools can help specify areas of knowledge and understating necessary to support students.

The results for the analysis of the subconstructs indicated that the subconstructs for Empathic Concern, Perspective-Taking, and Interpersonal Relationships were not as reliable as the others constructs in this study. Based on the statistical analysis of the survey subconstructs, this study found the subconstructs of Empathic Concern, Perspective Taking, and Interpersonal Relationships generated moderate Cronbach's alpha values ($\leq$.70). It may be beneficial to eliminate these

subconstructs. Elimination of these items could potentially increase participation and alleviate survey fatigue.

Conclusion

Complex childhood trauma has become an epidemic in the United States impacts a student's cognition, behavior, and ability to access learning in schools. Yet the DSM-V still does not recognize childhood trauma as a formal diagnosis. Professionals researching the impact of complex trauma should continue to advocate for the recognition of appropriate diagnoses, interventions, practices, and treatment for students who have experienced complex childhood trauma.

A commonly heard phrase in educations is "what gets assessed gets taught". Current education policy is heavily laden with rigorous academic standards and high-stakes assessments. Every Student Succeeds Act (ESSA) focuses primarily on these rigorous academic standards, however, an additional and frequently overlooked requirement of ESSA is to provide professional development and in-service training for school personnel in techniques related to developing educators' understanding of the impact of childhood trauma. ESSA also requires schools to create a comprehensive school or community-based support services that address trauma. For educational systems, trauma-informed school practices are imperative if the expectation is to shift our schools to show educational successes as required by both Federal and State educational policies.

Trauma-informed practices in schools have been shown to create safe environments in which students are more available to learn. School leaders must

provide ongoing, differentiated trauma-informed professional development opportunities for both licensed and non-licensed educators to help support student learning.

Trauma-informed practices in schools have been shown to create safe environments in which students are better able to be available to learn. Trauma-informed schools create educational environments that are responsive to the needs of trauma-exposed students through the implementation of effective practices and systems-change strategies. In some states, small clusters of schools, trauma-informed practices have taken root. In Vermont educators and educational leaders need to continue to advocate for ongoing professional development and resources to support the most vulnerable students. The results of this study could inform educational policy to support educators in meeting both the academic and social-emotional needs of our students. Educational policy needs to consider the importance of trauma-informed practices, so our schools are safe for all learners. If we expect students to learn, we must first be sure the students can access learning.

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Appendix A

Survey

Survey Directions.

Thank you for agreeing to participate in completing this survey. Please read each item carefully. Your responses are anonymous and will be pooled with all responses received by participants. The researcher is interested in your candid responses related to your perspectives, knowledge, and understanding of students who may have experienced complex trauma. Part 1 of the survey will collect demographic data to understand if there is any relationship between responses, current position, location of school, and years working in education. Part 2 of the survey, each statement asks you to indicate your level of agreement using the following scale - Strongly Disagree (SD), Disagree (D), Neither Agree or Disagree (NS), Agree (a), and Strongly Agree (SA). If you feel a statement does not apply to your current position, please check "Does not apply" and move on to the next item.

Part 1: Background Information.

Your Gender:

_____Male

_____Female

_____Other

_____Prefer not to answer

Your age range:

_____< 29

_____30-39

_____40-49

_____50-59

_____60+

_____Prefer not to answer

The number of years of employment in Vermont public school(s):

_____0-5 years

_____6-10 years

_____11-15 years

_____16-20 years

_____20+ years

Please indicate your current position: For the purpose of this study a licensed educator is someone who is required to have an educator's license to work in your current position including teacher; special educator speech language pathologist, occupational therapist, physical therapist, counselor, social worker, psychologist, nurse, administrator/principal/vice principal, dean of student. A Non-Licensed Educator is anyone working directly with students including paraeducator, teaching assistant administrative assistant, office staff, kitchen staff, custodian, bus driver, school resource officer, or nurse assistant.

_____Licensed Educator

_____Non-Licensed Educator

School that best describes the location of employment:

_____Preschool

_____Primary School (PreK-2 or K-2)

_____Intermediate (3-5)

_____Elementary School (PreK-5 or 6; or K-5 or 6)

_____Elementary/Middle School (PreK-8; or K-8)

_____Elementary/Middle/High School (PreK-12; or K-12)

_____Middle School (5-8 or 6-8)

_____Middle/High School (5-12; 6-12; or 7-12)

_____High School (9-12)

_____Other (Please Specify)_____

Setting that best describes the location of your school:

_____Rural

_____Suburban

_____Urban

Participation in Professional Development Related to Trauma-Informed Practices:

_____ I have not participated in professional development related to trauma-informed practices.

If you have not participated, please select all that apply:

_____ No PD funds available

_____ No interest

_____ Limited PD funds; used PD funds for other purposes

_____ School/District directs the use of PD funds

_____ Too many other initiatives

_____ Other, please specify

I have participated in professional development related to trauma-informed practice. If you have participated, please select all that apply:

_____PD was mandatory

_____I selected PD opportunity.

Part 2: Trauma-informed Care Disposition Survey: TIC-DS Survey created by Goodwin-Glick

1. I am familiar with the symptoms of traumatized students display.
2. I am knowledgeable about the impact trauma can have on a student's success.
3. I am knowledgeable about the impact trauma can have on a student's behavior.
4. I know how to make behavioral observations when interacting with students that will help me identify signs of trauma.
5. I am knowledgeable about the different types of trauma.
6. I understand that the symptoms of trauma may be similar or identical to the symptoms of other diagnoses, such as emotional disturbed, Attention Deficit Hyperactivity Disorder, or autism.
7. I am knowledgeable of the steps to take once a student has been identified as experiencing trauma.
8. I am knowledgeable about trauma in school-aged children.
9. I am knowledgeable about the next steps to take if I suspect a student is or has experienced trauma.

10. I am knowledgeable about how my behaviors impact students who may have experienced trauma.
11. I am knowledgeable about how to talk to students who may have experienced trauma.
12. I am knowledgeable about the impact trauma has on a student's ability to learn.
13. I am knowledgeable about how to deescalate and manage student behavior.
14. I believe that my interactions with students how have faced trauma might positively impact his or her ability to learn.
15. I utilize strategies with the intent to create a safe environment for students.
16. I am knowledgeable about the role empathy plays in creating positive and trusting adult-student relationships.
17. I am self-aware and mindful of my interactions with students.
18. I use active listening strategies when interacting with students.
19. I am knowledgeable about the impact of positive and negative emotional state on neurological functioning (brain functioning) and learning potential.
20. I believe all students can learn.
21. I have concerned feeling for students who are less fortunate than me.
22. I sometimes find it difficult to see things from the student's point of view.
23. I feel empathy for students when they are having problems.
24. I look at a student's side of a disagreement before making a decision.
25. When I see a student being taken advantage of, I feel somewhat protective toward them.

26. Students' misfortunes do not disturb me a great deal.
27. If I am right about something, I do not waste time listening to student arguments.
28. I believe that I have the ability to assist traumatized students so they can learn.
29. I believe that there are two sides to every story and try to look at both of them.
30. I describe myself as a soft-hearted person.
31. When I am upset with a student, I try to "put myself in his or her shoes."
32. Before criticizing/critiquing a student, I try to imagine how I would feel if I were in their place.
33. I create an environment where students feel safe.
34. I am positive with students.
35. I intervene when students pick on each other.
36. I give students positive reinforcement for good behavior.
37. I enforce the same rules for all students.
38. I take a personal interest in what students do outside their class.
39. I call students by their names.
40. I provide students with "treats" and "goodies" on special occasions.
41. I attempt to treat students with dignity and respect at all times.
42. I joke around with students in an appropriate manner.
43. I recognize students for extra-curricular achievements.
44. I attempt to greet students when entering the classroom or my work environment.

45. I ask students to help with classroom or other tasks.
46. I ask students for their opinions.
47. I maintain eye contact, if culturally appropriate, with students when talking to them.
48. I give students opportunities to make choices and decisions that affect them.
49. I demonstrate qualities of humor, empathy, and warmth with students.
50. I attempt to be patient when working with students.
51. I communicate in ways that demonstrate respect for the feelings, ideas, and contributions of students.
52. I believe it is important to learn about students and their community.

Appendix B

Instructional Review Board Application

Instructional Review Board Application

PLYMOUTH STATE UNIVERSITY

Institutional Review Board

Application for Approval for Involving Human Subjects

Full Review ☐ Expedited Review ☐Exempt Review ☒

Proposed Start Date August 16, 2019

Is research being funded? Yes ☐ No ☒ Source of funding: NA

Title of Study Impact of Childhood Complex Trauma: Knowledge and Understanding of Vermont Educators.

Investigator:

Name Debra Fishwick

Position Doctoral Candidate

Phone Number 802-282-2504

Email dlf1010@plymouth.edu

Faculty Advisor Name (if applicable) Clarissa Uttley

Qualifications to Conduct this Research CITI Certified; Research Design Coursework including: ED 5030 Research Design, EP 7050 Qualitative Methodology

and Applied Research, EP 7120 Appreciative Inquiry, and EP 8045 Qualitative Research Methods.

Additional Research Staff and Qualifications to Conduct Research

N/A

1. Purpose of the Study and Brief Background and Review of Literature

Describe your research question and the background for the study. Include a brief literature

review with supportive references.

The purpose of this study is to better understand educators' perceptions and knowledge of the impact of complex trauma on students' ability to access learning. Childhood trauma has become prevalent in the United States and is creating a public health epidemic (Oehlberg, 2012). It is estimated that between half and two-thirds of school-aged children are exposed to addiction, violence, abuse, and neglect, thus exposing them to trauma (McInerney & McKlindon, 2014).

Trauma can have a serious impact on student learning as well as behavior, social-emotional well-being, physical health (Anda, et al., 2006), and brain development (Perry, 2006). Teachers and school staff who work with students who have experienced trauma may observe problem behaviors like arguing, yelling, and aggression towards others, or might also observe student behaviors of withdrawing from the group, the appearance of daydreaming, or giving a blank look or stare

(Souers & Hall, 2016). According to van Der Kolk (2005), the childhood experience of trauma is often not recognized by teachers.

Today, teachers need to recognize signs of trauma and understand the impact trauma may have on students. Children who have experienced complex trauma may have a difficult time modulating their levels of arousal or emotional regulation (O'Neill, Guenette, & Kitchenham, 2010). Students who have experienced trauma need the school, the classroom, and the teachers and staff to provide a safe environment. One might argue that the responsibility of working with students of trauma falls on mental health workers, yet students spend the majority of their time each week in schools and classrooms. Student exposure to complex trauma puts schools in the position of addressing not only the academic needs of students but also the social and emotional needs of students in ways that educators have not seen in the past.

In addition to students learning rigorous academic standards, students also need to learn responsibility, respect, resilience, how to build relationships (Souers & Hall, 2016). While meeting the academic needs is the primary goal of public education, schools face the growing challenge to also be responsive to the needs of students who have been experienced complex trauma (Blodgett, 2012). Teachers were not trained to identify and address the challenges of complex trauma yet face the impact of complex trauma in their classrooms on a daily basis (Alisic, 2012). Educators are often unaware of the manifestations of complex trauma, thus mistaking these acts as willful defiance, disobedience, or inattention as misdemeanors rather than the

manifestations of complex trauma (Terrasi & Crain de Galace, 2017; Sitler, 2008). It is critical that educators understand the impact of complex trauma and create school environments that support children who have been exposed to complex trauma (Simonich et al., 2015).

2. Recruitment Procedures and Participant Population

A. List the expected number of participants The survey will be sent to approximately 15,650 teachers and support staff working in Vermont Public Schools with the hope of receiving 2,000 -3,000 responses.

B. Does the research involve special populations specifically, children, prisoners, or individuals who are cognitively impaired? Yes ☐ No ☒

C. Describe who is going to participate in the research (i.e. age, demographic characteristics, etc.).

Participants in this study will be licensed and non-licensed school staff working in Vermont Public Schools. Based on the most recent data provided by the Vermont Agency of Education, of the approximate 15,650 licensed and non-licensed school staff, there are approximately 21% male and 79% female. The National Center for Education Statistics indicates that 97.1% of the educators in Vermont are white. Additional demographic characteristics will be collect4ed as part of the survey including age range, the number of years working in Vermont public schools, position, and the type of school in which the educator works.

D. Indicate whether anyone might be excluded from the research and why. Educators who are not currently working in a Vermont public school will be excluded from the study. The study will exclude this population because the researcher is looking to gain an understanding of the perceived knowledge and understanding of current educators.

E. Discuss how and by whom participants will be recruited, selected, and assigned to groups. Attach flyers, posters, oral or written communication, or other recruitment materials used to contact potential subjects as an appendix.

Participants will be recruited via email invitation. Licensed and non-licensed educators working directly with students in a Vermont Public School will be included.

3. Procedures and Methodology

A. Materials: Describe the apparatus, stimuli, questionnaires, or any type of measures to be used in the study. Attach questionnaires, interview guidelines, and measures to be used as an appendix.

The study will use Trauma-Informed Care Disposition Survey, TIC-DS designed by Goodwin-Glick (2017). Goodwin-Glick specifically designed the survey for her school district to use to assess the impact of Trauma-Informed Care Professional Development. Goodwin-Glick's survey was designed as a pretest and posttest assessment that was administered following the school districts participating in Trauma-Informed Care Professional Development and used a Likert scale with a 5-scale range from "1" strongly disagreeing to "5" strongly agree. Educators in Goodwin-Glick's school district were asked to rate each survey item twice; their first

response indicating their perceived knowledge and understanding of trauma prior to participating in the professional development and their second response indicating their knowledge and understanding of trauma after participating in the required professional development. The TIC-DS survey included items that were developed by Goodwin-Glick specifically for the expected learning outcomes of the professional development as well as items selected from four existing instruments including the Pretest/Posttest Instrument by Thomas et al. (2015) a tool that has been used to measure the effectiveness of trauma professional development for school case managers; the Interpersonal Reactivity Index (IRI) (Davis, 1980); A Survey of the Behavioral Characteristics of Teacher Caring (King, 2013); and the Teacher Disposition Index (TDI) (Schulte, Edick et al., 2004).

Goodwin-Click's survey contains seven Subconstructs, as noted in the figure below.

Figure 1: TIC-DS Subconstruct Analysis from Goodwin-Glick 2018

Subconstruct	Literature Base	Number of Items
Knowledge	Pretest/Posttest Instrument by Thomas et al. (2015)	8
Knowledge	Developed by Goodwin-Glick	8
Empathic Concern	Interpersonal Reactivity Index by Davis (1980)	5
Perspective Taking	Interpersonal Reactivity Index by Davis (1980)	6

Interpersonal Relationships	A Survey of The Behavioral Characteristics of Teacher Caring by King (2013)	5
Sense of Respect and Trust	A Survey of The Behavioral Characteristics of Teacher Caring by King (2013)	5
Student-Centered	A Survey of The Behavioral Characteristics of Teacher Caring by King (2013)	5
Behavior	A Survey of The Behavioral Characteristics of Teacher Caring by King (2013)	5
Behavior	Developed by Goodwin-Glick	5

This study will use Trauma-Informed Care Disposition Survey, TIC-DS designed by Goodwin-Glick (2017). Goodwin-Glick granted her permission to use the survey items with modification to be a single response survey and to also modify the demographic items to more closely match the language used in the State of Vermont. The researcher has decided to ask the demographic questions first (see appendix A). This study will use a Likert scale and will allow participants to answer questions as "not applicable," thus creating a range for 0-260. Demographic data on gender, age range, years of employment in education, affiliation, current level/location (preschool, elementary, middle school, high school, other), and whether or not the participant has participated in professional development related to trauma-informed practices will also be collected. In addition to the identified Subconstruct listed the researcher has

identified an embedded Subconstruct that includes survey items 2, 6, 12-14, 19, 33,36-39,42-46, and 52 as they pertain directly to a student's ability to access learning.

The survey will be emailed to VSA and VPA distribution list and will include a link to the anonymous research survey, created using the web-based Qualtrics program, which is the preferred survey program used by Plymouth State University for the purpose of research. Quantitative data was analysis will be done using frequency models and will be compare the responses of licensed and non-licensed educators will look for similarities and differences in the data. This analysis will be done using SPSS (IBM Corp., 2016).

Data collected will be cleaned and will be reviewed. The researcher will determine whether to keep all data, replace missing data to keep only completed data. Once the data set is complete, a frequency analysis of all items will be run on the demographic data and the survey items. The researcher will run factor analysis of the fifty-two survey items will be run to confirm or deny the seven Subconstructs identified in the Goodwin-Glick study and to explore the data to determine if an additional Subconstruct might be a better fit. A beta (β), analysis will determine whether or not to accept the null hypothesis. A chi square and one-way Enova will be used to answer research questions 4 and 5 determine whether similarities or differences exist between licensed and non-licensed educators.

B. Describe each step of the procedure or study protocol, including the instructions participants will be given and any experimental manipulations that will be administered. Indicate where the research be conducted.

The researcher is conducting a study to better understand Vermont educator's knowledge and understanding of the impact complex trauma has on a student's ability to access learning in a public-school setting. Participation in the study is voluntary and participants will be asked to give their informed consent. Responses will be anonymous and will be pooled with all responses received by participants. If educators agree to participate in the study, they will be asked to complete the Trauma-Informed Care Disposition Survey (TIC-DS). Part 1 of the survey will ask participants to provide background information including gender, age range, number of years working in Vermont public education, current position; type of school in which they are employed, and whether or not they have participated in any profession development related to trauma to understand if there is any relationship between responses, current position, location of school, and years working in education. (see Appendix A). The second part of the survey contains fifty-two items. In Part 2, the survey, asks educators to indicate their level of agreement to each statement using the following scale - Strongly Disagree (SD), Disagree (D), Neither Agree or Disagree (NS), Agree (a), and Strongly Agree (SA). If an educator feels a statement does not apply to their current position, they have the option of answering, "Does not apply".

C. State the specific dates/timeframe in which you plan to conduct your research.

Survey will be sent via email on 9/9/19 and will remain open for four weeks and will close on 10/11/19. Data analysis will begin on 10/12/19 and be completed by 11/16/19.

4. Informed Consent Process

A. How and when will you explain the study and the informed consent?

Participants will be provided with a consent form as the first item on the survey site. Participants will be asked to "agree" to participate prior to beginning the survey. The consent form will also be provided as a downloadable document.

B. If there are subjects under the age of 18, how will the study be explained to them? How will parental consent and child assent be handled?

Participants in this study must at least 18 years old to participate.

C. Indicate the primary language(s) of the participants. If not English, explain how you will ensure the participants understand the informed consent and procedures of the study. Discuss the need for foreign language translations, if applicable.

The primary language of the participants is English.

5. Participant Debriefing

Will participants be exposed to deception? Yes ☐ No ☒

If yes, how will the participants be debriefed?

N/A

6. Risks and Safeguard Procedures to Minimize Risk

A. What kind of risks, if any, will the participants be exposed to?

The risks you describe here should match the risks you list in the informed consent form.

Guidelines for Determining Risk.

Risk relates to the probability of harm or injury (physical, psychological, social, economic, legal) occurring as a result of participation in a research study. Risks also include invasion of privacy and loss of confidentiality. Types of risk include: (1) physical, (2) psychological, (3) social, (4) legal and (5) economic harm. A risk is minimal where the probability and magnitude of harm or discomfort anticipated in the proposed research are not greater, in and of themselves, than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests.

Participation in this study there are no foreseeable risks involved in participating other than those encountered in day-to-day life. Participants may become aware of their own strengths and challenges related to working with students who may have experienced complex trauma.

B. What efforts will be made to minimize the risks?

There are no risks in participation in this study as the subject material relates educational practices and the online survey is anonymous.

C. Discuss how participants' rights to privacy and confidentiality will be protected. Discuss how and where data will be stored and how long the data will be kept. Who will have access to the data and how will access be limited?

All documents and information from this research study will be kept confidential in accordance with all applicable federal, state, and local laws and regulations. Data generated by the study may be reviewed by Plymouth State University's Institutional Review Board, which is the committee responsible for ensuring my welfare and rights as a research participant, to assure proper conduct of the study and compliance with university regulations. Any presentations or publication resulting from this research will not be identify participants.

Confidentiality will be protected to the degree permitted by Qualtrics and other technology used. The results of this study will be available to participants; a space will be provided for an email at the end of the survey. The email address collected will not be linked to the survey responses. Survey responses will be entirely anonymous. The information collected during this study will be kept for three years following the researcher's dissertation defense.

D. Alternative Therapies or Procedures: Indicate if there are any alternatives. If there are none, indicate the alternative is not to participate in the study.

The alternative is not to participate in the study.

7. Benefits

Discuss the potential benefits to participants and society, science, and/or knowledge development.

There may be no direct benefits of participating in this study; however, the knowledge received may be of value to the researcher's understanding of educators' knowledge and understanding of the impact of complex trauma on students' ability to access learning.

8. References

List supportive references used in the application.

Alisic, E. (2012). Teachers' perspectives on providing support to children after trauma:
A qualitative study. School Psychology Quarterly, 27(1), 51–59. https://doi.org/10.1037/a0028590

Anda, R. F., Felitti, V. J., Bremner, J. D., Walker, J. D., Whitfield, C., Perry, B. D., & Giles, W. H. (2006). The enduring effects of abuse and related adverse

experiences in childhood. European Archives of Psychiatry & Clinical Neuroscience, 256(3), 174- 186. doi:10.1007/s00406-005-0624-4

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Terrasi, S., & de Galarce, P. C. (2017). Trauma and learning in America's classrooms. Phi Delta Kappan, 98(6), 35-41.

Van der Kolk, B. A., Roth, S., Pelcovitz, D., Sunday, S., & Spinazzola, J. (2005). Disorders of extreme stress: The empirical foundation of a complex adaptation to trauma. Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies, 18(5), 389-399.

9. Assurances

Investigator's Assurances:

I certify that the information contained herein is complete and accurate. I agree to conform to the procedures as described and to conduct the research with the highest respect and regard for the participants' right to be protected from undue risk or invasion of privacy. If changes to the procedure become necessary, I agree to seek prior approval from the IRB.

In the case that a student is the principal investigator, if changes to the procedure become necessary, I agree to seek prior approval from the IRB as well as to inform my research supervisor and the Director of my program. Finally, I agree to keep my research supervisor informed of my progress and of any complications that may arise.

Name: Debra L. Fishwick

Signature: Debra L. Fishwick Date: 8/20/19

Assurances of Faculty Research Supervisor:

I certify that the information contained herein accurately represents the student's complete and final research study and that it has been reviewed and approved by all responsible for the supervision of the work. I agree to periodically review the student's progress and make sure that the procedures are being carried out as approved.

Name: Clarissa Uttley

Signature: Clarissa Uttley Date: 8/20/19

Appendix C

Recruitment Email 1

Good Friday Morning Vermont Principals,

I am currently the principal at Manchester Elementary Middle School in Manchester VT, and I am also a Doctoral Candidate at Plymouth State University. I am doing research on Vermont Educators' Knowledge and Understanding of Childhood Complex Trauma and would like to send your staff a survey to help me learn more about potential needs for professional development.

I am hoping to survey both licensed and non-licensed staff who interact with students on a regular basis. My goal is to survey is to collect 2000 licensed and non-licensed staff in the state of Vermont.

I was hoping to send you an email along with a link to the survey for you to forward to your all-staff email.

Please let me know if you would be willing to help me complete my research.

Best,

Deb Fishwick

Elementary Principal

Manchester Elementary Middle School

802-367-1705

dfishwick@brsu.org

Doctoral Candidate

Plymouth State University

dlf1010@plymouth.edu

Recruitment Email 2

Dear Vermont Educator,

I have asked principals and administrators to forward this email with you.

As you are aware, many students enter the school and classroom with a variety of needs. We have seen an increase in the number of students who may have been exposed to maltreatment or complex trauma that negatively impacts the students' social, behavioral, and academic functioning. As a result, schools play a critical role in support these students.

Little is known about administrators, teachers, and support staff experience supporting students with trauma histories. As administrators, teachers, and as educational support staff, your experience, knowledge, and views are essential.

You are invited to participate in an educational research survey conducted by Debra Fishwick, M.Ed., a doctoral candidate at Plymouth State University, Plymouth, New

Hampshire. Survey participants are asked to provide your perception, knowledge, and understanding of the impact of trauma on students in our public schools by completing the survey linked below.

If you are currently employed in a Vermont Public School you are eligible to complete the survey. Your responses to the survey are anonymous, and the survey should take approximately 20 minutes to complete.

To participate, please click the link below.

The Impact of Childhood Complex Trauma: Vermont Educators Knowledge and Understanding

Thank you in advance for considering this survey.

Sincerely,

Debra L. Fishwick

Doctoral Candidate Plymouth State University and

Elementary Principal

Manchester Elementary Middle School

80 Memorial Ave.

Manchester, VT 05255

(802)362-1597