Spring 4-23-2018

A Case for Child Life Specialists to be Trauma-Informed

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Masters of Child Life

Bank Street College of Education

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Submitted in partial fulfillment of the requirements of the degree of
Master of Science
Bank Street College of Education 2018

Abstract

According to The National Child Traumatic Stress Network [NCTSN] (2003), "trauma occurs when a child experiences an intense event that threatens or causes harm to his or her emotional and physical well-being". Roughly one in four children will experience a traumatic event before the age of sixteen. Due to the prevalence of traumatic events, it is necessary for healthcare professionals to know and understand the implications these experiences may have for children and their families. Child life specialists, who are a part of the interdisciplinary team in hospitals, provide a unique perspective with their knowledge of child development and coping. Their skill sets have the ability to support patients and families when navigating difficult situations and traumatic events. Recent initiatives in healthcare have encouraged knowledge and understanding of "trauma-informed care" to facilitate providing a "trauma-informed approach". Child life specialists should be trauma-informed to best meet the needs of the patients and families they serve.

Keywords: Trauma, Trauma-Informed Care, Children, Development Coping, Child life

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Literature Review: Trauma and Its Impact

The human brain is designed to sense, process, store, perceive, and act on information from the external... and the internal... environment. All of these complex systems and activities work together for one overarching purpose—survival (Perry, Pollard, Blakeley, Baker and Vigiliante, 1995, p. 273).

It is estimated that every second the unconscious brain is absorbing, categorizing, and processing roughly 11 million pieces of information (Carroll, 2008). These pieces of information and moments, create the experiences that shape our personality, our worldview, and our day to day actions while signaling both physiological and emotional responses. For example, the brain may process viewing an appealing meal and stimulate a sense of hunger as noted by drooling. Hugging someone may stimulate the increased production of oxytocin which has a bonding effect, causing those who are engaging in a hug, to feel more connected (Colino, 2016). There are seconds that may seem inconsequential, having little to no impact on the developing brain and day to life. And then, there are other seconds that will completely and utterly change the way a person views the world and interacts with their environment, such as moments of intense stress or trauma.

If the information and stimuli processed is perceived as threatening to the individual's well-being, it will activate a neurological stress response, also known as the "fight, flight or freeze" response or the "trauma/stress response" (Perry et al., 1995). Multiple factors contribute to how the body responds to environmental stressors including genetic variability, social/biological protective factors, temperament, family environment, previous experiences and developmental vulnerability as well as the individual's resilience (Bucci, Marques, Oh, and Harris, 2016; Gaynard, et al., 1998). The physiological response to trauma is the body's natural way of protecting and preparing

itself to confront danger. When the response system is initiated, it instantly sends a distress signal to the hypothalamus, the portion of the brain that coordinates the autonomic nervous system. When the hypothalamus receives the distress signal, it activates the adrenal gland to release adrenaline and cortisol which signal a variety of physical responses in the body. For example, a person may experience increased blood pressure and heart rate as blood flow is increased to the heart and vital organs. The small airways in the lungs open wider allowing more oxygen in with each breath. This extra oxygen allows for hyper-alertness and sharper senses, aided by a surge of energy and adrenaline to further help the person navigate their situation. With the stress response there is an increase in cognition, attention and euphoria as well as an inhibition of vegetative functions, such as appetite and digestion (Harris, 2014; Bucci et al., 2016).

The way in which an individual responds to a stressor is dependent on the nature of the stressor as well as the individual's coping mechanisms (Bucci et al., 2016). Lazarus and Folkman (1969) developed a coping theory which "focuses on the individual viewpoint or appraisal of a stressful situation recognizing that individuals use different coping responses in different situations," where coping is defined as "constantly changing cognitive and behavioral efforts to manage specific external or internal demands that are appraised as taxing or exceeding the resources of the person," (Thompson, 2009, p. 31). This highlights that the individual's thought process and perceptions, combined with their established coping mechanisms, will help define meaning to a situation and categorize stress (Thompson, 2009).

The Child Welfare Information Gateway (2015) and Shonkoff et al. (2011), describe three types of stress: positive, tolerable and toxic. Positive stress is typically

brief and a normal part of life; for example, learning to drive a car for the first time or taking a test. Adjusting and learning to cope with this stress is an essential component of healthy development. Tolerable stress, includes "events that have the potential to alter the developing brain negatively," (The Child Welfare Information Gateway, 2015, p. 5) and results in short-term systemic changes. This stress occurs infrequently and allows the brain time to recover. Shonkoff et al. (2011) explain that "protective adult relationships facilitate the child's adaptive coping and a sense of control, thereby reducing the physiologic stress response and promoting a return to baseline status," (p. 236). These pivotal relationships are what makes tolerable stress "tolerable" for a child. With both positive and tolerable stress, when given supports, the body can return to a stable state, known as "homeostasis" (Bucci et al., 2016, p. 409). These physiological reactions to trauma/stress are normal and necessary for survival because it is the body's natural way of protecting and preparing to confront danger. Toxic stress is on the other side of the spectrum and can be categorized as a "strong, frequent, and prolonged activation of the body's stress response system" (Child Welfare Information Gateway, 2015, p. 5), and is often experienced by children "in the absence of the buffering protection of a supportive, adult relationship," (Shonkoff et al., 2011, p. 236). Toxic stress leads to dysregulation and can ultimately cause changes in brain structure that "increase vulnerability to developmental, biological, mental and behavior adverse outcomes," (Bucci et al., 2016, p. 409).

Traumatic reactions are normal responses to abnormal situations. The brain and the stress response system are adaptive and designed to support the individual in a limited amount of time and help them return to homeostasis. This response, though, can become

harmful. Repeated exposure to toxic stress or recurring trauma can permanently alter brain development, as it dysregulates neurological activity and permanently alters how an individual views, responds to and interacts with their environment, (Carrion & Wong, 2012). Furthermore, research and inquiry has shown that exposure to repeated traumatic stress can actually lead to "changes in the brain structure and neurochemistry" (Thompson, 2009, p.166). The National Scientific Council on the Developing Child (2007) confirms that "Toxic stress in early childhood is associated with persistent effects on the nervous system and stress hormone systems that can damage developing brain architecture and lead to lifelong problems in learning, behavior, and both physical and mental health" (p. 9).

As mentioned, how a person physiologically responds to a stressor is determined by multiple factors including duration and severity of the event(s), social, biological, developmental and genetics factors and vulnerability (Bucci et al., 2016). Ultimately, what helps to separate a specific stressor and define it as a trauma is how an individual processes these responses and assigns meaning to them. According to The National Child Traumatic Stress Network [NCTSN] (2003), roughly one in four children will experience a traumatic event before the age of sixteen. Consequently, it becomes essential to have a foundational understanding of not only how toxic stress affects an individual but also an understanding and realization of trauma and its impact on human development.

What is Trauma?

In the day to day vernacular, the term "trauma" can hold several different contexts. Briere & Scott (2006) explain, "people use the term interchangeably to refer to either a traumatic experience or event, the resulting injury or stress, or the longer-term

impacts and consequences" (SAMHSA's National Registry of Evidence-based Programs and Practices, 2016, p. 1). For example, medical doctors may refer to a brutal physical accident or injury as a trauma, a psychologist may describe more psychological trauma, and teenagers who tripped in the lunchroom and are embarrassed, may describe that experience as traumatic.

Recently, trauma was officially added to the *Diagnostic and Statistical Manual of Mental Disorders,5th ed.* [DSM–5]*,* with its own chapter of "Trauma-and-Stressor Related Disorders." In the DSM-5, trauma is defined as:

> Exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways: directly experiencing the traumatic event(s); witnessing, in person, the traumatic event(s) as it occurred to others; learning that the traumatic event(s) occurred to a close family member or close friend (in case of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental); or experiencing repeated or extreme exposure to aversive details of the traumatic event(s). (American Psychiatric Association, 2013, p. 271)

The DSM-5 definition acknowledges that trauma can be an actual, potentially harmful, or dangerous event. Similar to the DSM-5 definition, the NCTSN (2003) states, "trauma occurs when a child experiences an intense event that threatens or causes harm to his or her emotional and physical well-being." Though extensive, the previous definitions are limiting, considering that trauma is subjective. The Substance Abuse Mental Health Services Administration, [SAMHSA] justifies that, "a particular event may be experienced as traumatic for one individual and not for another" (SAMHSA's National

Registry of Evidence-based Programs and Practices, 2016, p. 2). SAMHSA (2014a)

provide the seemingly most cited definition of trauma, asserting that trauma is the "result

from an event, series of events, or set of circumstances that is experienced by an

individual as physically or emotionally harmful or life threatening and that has lasting

adverse effects on the individual's functioning and mental, physical, social, emotional or

spiritual well-being" (p. 7). This definition of trauma eloquently highlights that each

trauma is subjectively and personally defined by an event, the experience of that event,

and its effects.

The Three "E's" of Trauma: Event(s), Experience of Event(s) and Effect(s)

The event dimension of a trauma is defined as an "actual or extreme threat of

physiological or psychosocial harm or severe, life threatening neglect for a child"

(SAMHSA, 2014a, p. 8). The event can be a single occurrence or repeated over time.

How the individual labels and assigns meaning to the events will determine whether or

not it is defined as a trauma. Factors that influence how an individual experiences the

trauma include: cultural beliefs, family systems, social supports, and developmental

stages of the individual. The effect(s) of trauma may be immediate or have a delayed

onset where the individual may not recognize the connection between his/her symptoms

and the event. In addition, these effects may alter the individual's neurological

development, health and well-being. The three E's of trauma further emphasize that

trauma is subjective, personal, and situationally dependent (SAMHSA, 2014a).

Event: Types of trauma. Trauma can be natural or caused by humans. It is

important to note that depending on the nature of the trauma, people will respond to it in

different ways. For example, when traumatic events stem from natural causes, such as a

tornado or a hurricane, "the amount, accessibility, and duration of relief services can significantly influence the duration of traumatic stress reactions as well as the recovery process," (SAMHSA, 2014b, p. 35), and will consequently play a role in not only coping, but also processing and classifying the event as traumatic. On the other hand, there are human-caused traumas which are either intentional, such as a school shooting, or unintentional, such as an engineering error causing a fuse explosion. The reactions to these traumas "often depend on their intentionality" (SAMHSA, 2014b, p. 35).

To better help understand trauma, the NCTSN (2018a), has defined and categorized types of trauma into a list that includes: community violence, complex trauma, domestic violence, early childhood trauma, medical trauma, disasters, physical abuse, refugee trauma, sexual abuse, terrorism and violence, and traumatic grief. Trauma can be further sub-categorized as individual, group, community, or mass trauma. Individual trauma refers to an event/events influencing one person; group trauma is an event/events geared towards a particular group of people; community trauma is traumatic events inflicted on a specific community or culture; and mass trauma affects "large numbers of people either directly or indirectly," (SAMHSA, 2014b, p. 40). With this, how an individual responds to the trauma is also influenced by if the traumatic incident is intentional or not, such as a bridge collapsing, versus the collapse of the World Trade Center.

Similarly, trauma can also be expected, such as with a known natural disaster, or unexpected, such as a sexual assault or a car accident. If it's an expected trauma, such as a hurricane, an individual may work towards minimizing traumatization by preparing for what is to come in order to avoid increased psychological injury and distress. Compared

to its counterpart, unexpected trauma brings an increased vulnerability for the effects of trauma. It is important to remember that even when trauma is anticipated, it may still cause unexpected or unanticipated consequences as well (SAMHSA, 2014b).

Trauma can also be categorized as acute, chronic, or complex. Acute trauma is a single isolated event, such as a natural disaster or a car accident; chronic trauma is a repeated and prolonged trauma, such as domestic violence or child neglect; and complex trauma "is exposure to varied and multiple traumatic events, often of an invasive, interpersonal nature," (The Missouri Department of Mental Health, 2018). The characteristics of traumatic experiences influence the effects of traumatic stress and how an individual processes, interprets and assigns meanings to them.

Experience of event: Impact of trauma. The impact of trauma can be extensive. A person who has experienced a trauma may have a variety of emotional, physical, cognitive, behavioral, social and developmental consequences. Its affects reach and influence every aspect of the human person and their existence. Children will respond to traumatic experiences in a variety of different ways influenced by their "developmental level, ethnicity/cultural factors, previous trauma exposure, available resources, and preexisting child and family problems" (La Greca et al., 2008, p. 2).
Nearly all will demonstrate some response or distress from the traumatic event(s). For example, some children may "[develop] new fears separation anxiety (particularly in young children), sleep disturbance, nightmares, sadness, loss of interest in normal activities, reduced concentration, decline in schoolwork, anger, somatic complaints irritability, etc" (La Greca et al., 2008, p. 2). These symptoms may influence their familial, peer and school relationships and impair daily functioning. Ideally, with time,

children will return to their baseline of functioning after the traumatic event.

Unfortunately, not all children receive the supports necessary, and as a result are

impacted by the pervasive effects of trauma. (La Greca et al., 2008; SAMHSA, 2014a).

Trauma is prevalent. According to a community sample, the American

Psychological Association, report that over two thirds of children report experiencing a

traumatic event by the age of 16 (La Greca et al., 2008, p. 2). La Greca et al. (2018)

comments that, "estimated rates of witnessing community violence range from 39% to

85% — and estimated rates of victimization go up to 66%. Rates of youths' exposure to

sexual abuse…. are estimated to be 25 to 43%. Children and adolescents have likely

comprised a substantial proportion of the nearly 2.5 billion people affected worldwide by

disasters in the past decade" (p. 2).

The economic and social consequences of complex trauma in childhood are

extensive and science has confirmed that toxic stress and adversity affects health across a

lifetime. According to the National Trauma Institute (2018), a 2015 report found

that trauma costs "$671 billion a year in health care and lost productivity" and is the "#1

cause of death between the ages of 1-46." The NCTSN (2018a) reports a "conservative

annual cost of child abuse and neglect is an estimated $103.8 billion, or $284.3 million

per day (in 2007 values)." This number includes the "immediate needs" of maltreated

children, such as hospitalization and law enforcement, as well as the also "indirect

costs….[or] secondary or long-term effects of child abuse and neglect" such as special

education and juvenile delinquency, (NCTSN, 2018a). In addition to these tangible and

known impact of trauma, there is the "intangible losses of pain, sorrow, and reduced

quality of life" that cannot be quantified and accurately accounted for (NCTSN,

2018a). Knowing and understanding the pervasive impact of trauma helps individuals better assess their needs and change their practices moving forward. (Bucci et al., 2016; SAMHSA, 2014a).

Effects: Trauma, the brain and development. As discussed, traumatic experiences can profoundly impact those affected by the event(s). There has been extensive research and commentary documenting how trauma exposure can have an effect on brain development. Furthermore, delays in cognition, development, and behavior are linked with vulnerabilities related to exposure of Adverse Childhood Events and traumatic events (Bucci et. al, 2016; Cook et. al, 2005; McLean, 2016; Perry, 2006, 2009; Shonkoff et al., 2011). Though this is also influenced by genetic vulnerability and social/biological protective factors, from a neurological standpoint, dysregulation due to repeated exposure to the stress response system can alter and damage brain architecture and its development (Bucci et. al, 2016; Shonkoff et al., 2011). Dr. Nadine Burke Harris explains in her TED talk, repeated trauma exposure influences "the nucleus accumbens, the pleasure and reward center. It inhibits the prefrontal cortex, which is necessary for impulse control and executive function, a critical area for learning. And on MRI scans, we see measurable differences in the amygdala, the brain's fear response center" (2014).

Neuroimaging often shows that, a trauma affected individual may have a smaller hippocampus which is the memory and learning center of the brain, and a smaller cerebellum, the area of the brain that controls coordination of motor behavior and executive functioning. Studies have also shown that individuals' cortisol levels are impacted by trauma. Toxic stress can hinder the hippocampus' capacity to bring cortisol levels back to normal after stressful events. Abnormal cortisol levels cas have many

negative effects including: dysregulated energy levels, complications with learning and socialization abilities, increased vulnerability to autoimmune disorders, hindered cognitive processes, subdued immune and inflammatory reactions, or executive functioning, learning deficits, as well as volume in the prefrontal cortex of the brain (Bucci et al., 2016; Carrion and Wong, 2012; Leitch, 2017; Child Welfare Information Gateway, 2015). Furthermore, research has found that children who have been maltreated and diagnosed with post-traumatic stress disorder were found to be at an increased risk for changes in the structure and size of the brain, as well as "problematic behavioral, emotional, cognitive, and psychological symptoms" (Thompson, 2009, p. 167).

The brain has a "plasticity," quality or the " ability to change in response to repeated stimulation," where the extent of its plasticity depends on the development of the brain (Child Welfare Information Gateway, 2015, p.3). As an individual grows and develops, the brain creates pathways and synapses making connections, and teaching the brain how to navigate an individual's unique environment. Through repeated use, pathways are strengthened and more connections are formed, and the same goes inversely. Synaptic pathways that are not strengthened will undergo the pruning process, more commonly described as, 'use it or lose it.' For adults, an experience may change their behavior, but in early childhood, when the brain is most vulnerable and malleable, it can alter brain structure and how information is received and processed, (Bucci et al., 2016; Child Welfare Information Gateway, 2015; Cook et. al, 2005; Perry, 2009).

At this time, trauma can have a pervasive impact and reduce the number of neuronal connections made. Dr. Perry commented that "children reflect the world in which they are raised. If that world is characterized by threat, chaos, unpredictability,

fear, and trauma, the brain will reflect that by altering the development of the neural systems involved in the stress and fear response" (2000). Traumatic and toxic stress (especially with repetition) have the potential to alter not only an individual's brain structure but also their neural chemistry. This can lead to a variety of developmental delays, variations, and negative consequences. For example, if a child is neglected and has limited exposure to positive relationships and socializations, the part of the brain that mediates attachment will not develop normally due to limited activation of those neuropathways. (Bucci et al., 2016; Child Welfare Information Gateway, 2015; Cook et. al, 2005; Perry, 2006, 2009)

Children may be unable to regulate their emotions or appropriately analyze a situation due to the disorganized or underdeveloped neural pathways affected by trauma. Streeck-Fischer and Van der Kolk (2000) agree that these children "have little insight into the relationship between what they do, what they feel and what has happened to them," (p. 905). Compared to their healthy counterparts they cannot reliably depend on their emotional and logical thinking to deduce their reaction to any given situation (Streeck-Fischer & Van der Kolk, 2000). Affect and behavior regulation is greatly impacted by complex trauma and traumatic stress. For example, children who, due to trauma, have repeatedly been in a state of fear may lose their ability to differentiate between danger and safety and they may identify a threat in a non-threatening situation.

Similarly, due to frequent activation of the stress response and solidification of the neural pathways, children may get stuck in a sense of "hyperarousal," or be constantly in the 'fight or flight' mode. This is in part due to the fact that neural pathways are use-dependent. The brain makes adaptations to respond to traumatic stress, and with more

frequent activation it becomes a permanent "trait" compared to a temporary state, (Perry et al., 1995). Perry et al. (1995), further observed that these children are at higher risk for developing "maladaptive emotional, behavioral and cognitive problems... due to adaptive responses to a traumatic event," (p. 278). This is again due to the rewiring of the brain affected by traumatic stress. In fact, trauma-affected children are often mislabeled with attention deficit disorder, oppositional-defiant disorder, conduct disorders and other similar diagnosis (Walkley and Cox, 2013) as many symptoms are overlapping (NCTSN, 2016). Streeck-Fischer and van der Kolk (2000) and Cook et al. (2005), also noted these psychiatric diagnoses often don't acknowledge their traumatic origins and in turn can prove to be very limiting.

The Adverse Childhood Experiences Study

Between 1995-1997, the Center for Disease Control and Prevention along with Kaiser Permanente conducted the Adverse Childhood Experiences (ACE) study. This study sampled roughly 17,000 adults to examine the connections between 'Adverse Childhood Experiences' (ACE) and health and social outcomes, specifically "disease risk factors and incidence, quality of life, health care utilization, and mortality" (Felitti et al., 1998, p. 246). After the patient's medical history was obtained, they sent out a survey made up of 17 yes/no questions inquiring about abuse, neglect, and family/household challenges and dysfunction before the age of 18. The questions examined 7 categories of ACES, "psychological, physical, or sexual abuse; violence against mother; or living with household members who were substance abusers, mentally ill or suicidal, or ever imprisoned" (Felitti et al., 1998, p. 245).

Almost two-thirds of the participants had at least one ACE and twelve percent had four or more ACEs. The study revealed that ACEs were common and their results clearly illustrated a strong relationship between an increased number of ACEs and negative outcomes including, but not limited, to: mental and physical health concerns, such as depression, obesity, STDs, heart disease and cancer; health-risk behaviors, such as alcoholism, drug use, and promiscuity. Furthermore, the ACEs pyramid demonstrates the potential influences of how an increased number of ACEs can lead to "disrupted neurodevelopment," which has implications for "social, emotional, and cognitive impairment, adoption of health-risk behaviors, disease disability and social problems" and eventually "early death" (Felitti et al., 1998, p. 256).

This study has been reframed and recreated multiple times, all with the same conclusion and further supporting the dose-dependent relationship between adverse childhood experiences and negative adult health outcomes. Studies have also provided insight into the age the ACEs occurred also influences the likelihood of negative outcomes, depending on the individual's developmental age and vulnerability (Kerker et al., 2015). For example, Kerker et al. (2015), reported that the higher number of ACEs before the age of five correlates with a greater likelihood of mental health and chronic health problems and the correlation between ACEs and social development was most significant among three to five-year olds. Some health and behavioral problems observed included: alcoholism, drug abuse, chronic pulmonary disease, depression, adolescent pregnancy, and more (Center for Disease Control and Prevention, 2014). The ACEs study brought to light the powerful impact and maladaptive capabilities that repeated exposure to trauma has and because of this, it is becomes critical to screen for ACEs in

order to have early intervention strategies and support to minimize negative outcomes (Leitch, 2017).

What is Trauma-Informed Care?

Understanding, reframing and thinking about trauma as personalized and subjective experiences, and not a diagnosis or injury, can help provide the framework to best serve individuals who have experienced a trauma. Just as Substance Abuse and Mental Health Services Administration's definition of trauma is seemingly the most cited definition, their description of trauma-informed care is well cited and very comprehensive:

> A program, organization or system that is trauma-informed realizes the widespread impact of trauma and understands potential paths for recovery; recognizes the signs and symptoms of trauma in clients, families, staff and others involved with the system; and responds by fully integrating knowledge about trauma into policies, procedures and practices, and seeks to actively resist re-traumatization (SAMHSA, 2014a, p. 9).

The definition can be summarized into four assumptions which include, "realization, recognize, response and resist re-traumatization" (SAMHSA, 2014a, p. 9-10). In a trauma-informed environment, everyone has a basic understanding or *realization* of trauma and its effects. It provides a sense of looking at behaviors and coping strategies from a trauma perspective and it acknowledges that certain behaviors may be in response to a trauma. It also admits that trauma is universal and may manifest itself in a variety of different ways. Those who are trauma-informed can *recognize* the signs and symptoms of trauma and *respond* appropriately in the hopes of *resisting re-traumatization*.

Furthermore, SAMHSA also outlines six key principles of trauma-informed care which are: "safety, trustworthiness and transparency, peer support and mutual self-help, collaboration and mutuality, empowerment, voice, choice and cultural, historical, and gender issues" (SAMHSA, 2014a, p.10). These principles help ensure that the trauma informed care provides an environment in which children and adults feel "physically and psychologically safe", there is "transparency" that helps promote trust, understanding that peer support is a "vehicle for building trust, establishing safety, and empowerment," that there is "true partnering" and collaboration with all team members and patients, recognizing "that healing happens in relationships" (SAMHSA, 2014a, p.10). Furthermore, the organization and individual recognizes that "everyone has a role to play in a trauma-informed approach...individuals' strengths are recognized, built on, and validated and new skills developed as necessary... This includes a belief in resilience and in the ability of individuals, organizations, and communities to heal and promote recovery from trauma" and finally the organization actively moves past cultural stereotypes and biases," (SAMHSA, 2014a). SAMSHA's concept of trauma-informed care embraces this understanding of trauma and provides a way of approaching a person holistically, while being cognizant of the symptoms of trauma, accepting that anything can ignite a traumatic response, and actively working to prevent re-traumatization.

Hopper, Bassuk and Olivet (2009) also describe trauma-informed care as "a strength-based framework that is grounded in an understanding of and responsiveness to the impact of trauma, that emphasizes physical, psychological, and emotional safety for both providers and survivors, and that creates opportunities for survivors to rebuild a sense of control and empowerment," (p. 133). It is a holistic approach, looking at the

individual as a whole, considering everything they have experienced and learned from and using it as a lens to better understand behavior and coping mechanisms (Withers, 2017).

The principles of trauma-informed care bring awareness and stress the importance of treating a person with respect, support, dignity, patience and safety. It promotes a multidisciplinary approach and encourages everyone to screen, assess, treat, and avoid retraumatization while adhering to best-practice models. Kawam (2014) used the analogy of an iceberg to explain how trauma-informed care considers everything below the water and doesn't just address the tip of the iceberg To incorporate trauma-informed policies, procedures, and practices, it may require a culture shift; but once implemented and embraced can help change the outcome for trauma victims and their families, as well as those who care and treat them (Marsac et al., 2016).

Conclusion

Trauma is universal. A traumatic experience can happen to anyone at any time. Any situation can result in trauma depending on how the individual perceives and processes the potentially traumatic event. As the National Council for Behavioral Health (2017) describes, "an individual's experience of trauma impacts every area of human functioning — physical, mental, behavioral, social, spiritual." The physical, emotional and financial ramifications of trauma are enormous and incalculable.

Research has repeatedly shown the negative effects of trauma and its toll on human development (Bucci et al., 2016; Streeck-Fischer and van der Kolk, 2000). In addition, trauma not only affects the human person but society as a whole. Community issues such as poverty, crime, homelessness, addiction, etc, are often connected to

unaddressed childhood trauma (Beyerlein & Bloch, 2014). For example, the National

Council for Behavioral Health (2017) reports that "The ACE Study revealed that the

economic costs of untreated trauma-related alcohol and drug abuse alone were estimated

at $161 billion in 2000." The ramifications of trauma are extensive. Nevertheless,

research has also shown that trauma is treatable. Development of resilience and coping

strategies as well as the use of healthy relationships and early intervention can help

protect and even minimize the pervasive effects of trauma. Due to the high prevalence

and the extent of the impact of trauma, it is both critical and essential that individuals

have a solid understanding of trauma and be trauma-informed.

Trauma and Development: A Focus On Early Childhood

Early childhood is a period of intense and rapid development, physically and

mentally. By age four, the brain is 90% developed as compared to the adult brain; at this

stage the brain has plasticity, making it very malleable and receptive to environmental

influences (Perry, 2006; Shonkoff et al., 2011). As a result, early childhood trauma has a

pervasive and profound impact on the social-emotional, behavioral, cognitive, and

physical development and functioning of children as developmental experiences create

the framework and organizational structure of the brain. For example, "three years of

neglect can cause a lifetime of dysfunction and lost potential," (Perry, 2006, p. 40). As

discussed earlier, a child's development plays a significant role in how they perceive and

process a traumatic event (The Chadwick Trauma-Informed Systems Project [CTISP],

2012; SAMHSA, 2014a). Understanding children's vulnerabilities around and responses

to traumatic stress in early childhood is essential to understanding the prolonged and

potentially severe effects of trauma and how it can influence multiple domains of the

human person (CTISP, 2012).

Developmental Perspectives

Piaget (1973) and Erikson (1950) were the forerunners of developmental

theory. Erikson believed that "early childhood years were critical in the development of

trust, autonomy, and initiative," (Moony, 2013, p.55). His first stage of infancy (birth to

12 months) is "Trust versus Mistrust," (Mooney, 2013, p.57). In this stage infants either

learn to trust others to care for their basic needs or mistrust them. They learn through

their sensory and motor experiences and build the foundation for attachment as they

respond to stressful situations and seek a sense of trust. If their needs are regularly met,

they will form attachments and develop a sense of trust. This then lays the foundation for toddlers (ages 1 to 3), as they start to want and crave independence while they learn to explore their world. They are then in Erikson's developmental stage of "Autonomy versus Shame and Doubt" (Moony, 2013, p. 62). Children in this stage will learn how to exercise their willpower and benefit from clear limits and opportunities for appropriate choice and control. As they become preschoolers (3 to 6) they enter into Erikson's stage of "Initiative versus Guilt," (Moony, 2013, p. 67). They are continuing to explore this world but now with an added sense of purpose. They start to engage in magical thinking and imaginative play, they are more literal as they learn by doing and incorporate transductive reasoning into their daily life. Similarly, The Piagetian stage that correlates with this age range is called the "preoperations stage" of cognition. In this stage, children "form ideas based on their perceptions; can only focus on one variable at a time; overgeneralize based on limited experiences," (Moony, 2013, p.81). In this stage they are egocentric and form ideas based from their life experiences. They adapt to meet their environment and look for a sense of balance.

Developmental Impact

Research has highlighted that traumatic stress generates chemical responses which can negatively affect critical neural growth and brain development due to its plasticity, especially during sensitive periods of early childhood; and as a result, early childhood is an especially vulnerable time period to the pervasive effects of trauma (Bucci et al., 2016; Marcellus & Cross, 2016; SAMHSA, 2014b). Marcellus & Cross (2016) also noted that repeated exposure to toxic stress during the critical periods of development result in fewer neural connections and ultimately leads to smaller brains.

Evidence has also shown that children who experienced abuse as infants and toddlers often show developmental, cognitive, language, and motor and social delays, resulting in impairments of healthy attachment, emotional and behavior regulation, cognition and self concept; all of which can carry over into adulthood (Cook et al., 2005; Leitch, 2017; Perry, 2006; Streek-Fischer & van der Kolk, 2000).

The impact of exposure to trauma may manifest itself in a variety of ways, including increased helplessness and anxiety, loss of developmental skills (such as sleeping, toileting, and speech regressions), and a change in play behaviors, (NCTSN, 2010). Depending on the developmental stage and social and cultural context, children and adolescents, will perceive, interpret, and cope with traumatic experiences differently and looking at the impact of trauma from a developmental lens can help promote understanding and competency (Cook et al., 2005).

The developmental theories and perspectives of Bronfenbrenner (1979) and Vygotsky (1962) can further strengthen one's understanding of the pervasive effects of trauma on development and coping as an individual navigates their environment. Bronfenbrenner's Ecological Systems Theory not only suggests that people are interwoven and interconnected, but also discusses how, "individual, interpersonal, community and organizational, societal, cultural and time in history" factors impact how an experience influences an individual (SAMHSA, 2014b, p. 16). This theory illustrates how depending on the developmental stage, "children, adolescents, and adults will perceive, interpret, and cope with traumatic experiences differently" (SAMHSA, 2014b, p. 15). This theory also highlights the "bidirectional influence" that multiple contexts can have (SAMHSA, 2014b, p. 15). This ecological model grasps that there are multiple

levels of influence on psychosocial development. A traumatic experience can alter the way a child interacts with the parents/caregivers, siblings and loved ones and how parents/caregivers, siblings and loved ones interact with the individual and both should be considered when assessing trauma (SAMHSA, 2014b).

Similarly to Bronfenbrenner, Vygotsky developed a sociocultural perspective to developmental theory. He believed that social and cognitive development are interdependent. He discussed the "Zone of Proximal Development" as described as the "distance between the most difficult task a child can do alone and the most difficult task a child can do with help" (Moony, 2013, p.101). This can be described as their actual versus potential development, which is influenced by their interaction with adults and peers. Vygotsky stressed the importance of social interaction to promote positive growth and development by stating, "Learning awakens a variety of internal developmental processes that are able to operate only when a child is interacting with people in his environment in cooperation with his peers" (McGraw-Hill Education, 2016). Vygotskian theory considers not only what the child learns but how the child learns it and that relationship will influence and impact development (Thompson, 2009).

Perry (2006), discussed how repetition is essential for brain development in early childhood. The framework for traumatic stress is created by repeated neural activation of traumatic stress reaction or cases of neglect, inactivation of important systems. In turn, this influences multiple facets of the human person. As discussed by Erikson (1950) and stressed by Bowlby (1969) and Ainsworth (1973), in early childhood development, the process of attachment is essential as it helps create the biological framework for how children interpret and react to future stimuli and future stress. Infants are dependent on

their caregivers to meet their basic and fundamental needs. When caregivers meet these basic needs, such a feeding them, soothing them when they are in distress and changing their diapers, infants develop secure attachment, learn to self-regulate and respond to future stress. Their caregiver becomes a 'secure base' in which the child can freely explore their world and learn and grow from their experiences. When their caregiver does not meet those basic needs, as in cases of abuse and neglect, infants do not learn to self-regulate their emotions during times of arousal or stress. Research has shown that 80% of maltreated children will develop disorganized attachment patterns. When attachment is dysregulated, it in turn presents physical and psychological risks and dysfunction, such as "increased susceptibility to stress, inability to regulate emotions without assistance and altered help-seeking" (Cook et al., 2005, p. 393). (CTISP, 2012; Cook et al., 2005; Melville, 2017; Moony, 2010; Streeck-Fischer and Kolk, 2000).

Disorganized attachment can lead to problems with emotional and behavioral regulations. Children need to be able to correctly identify emotional experiences and responses to help find homeostasis and self soothe and self regulate their emotions. Due to traumatic experiences, some children have not developed those skills and are therefore at risk for aggressive behaviors. Similarly, they struggle with behavior regulation as well, as Streeck-Fischer and van der Kolk (2000) described, they "have little insight into the relationship between what they do, what they feel and what has happened to them" (p. 905). Loss of self-regulation can be seen in a variety of different ways such as attention issues, lack on inhibition, emotional numbness, dissociation, derealization, depersonalization and "uncontrolled feelings of rage, anger or sadness" (Streeck-Fischer and van der Kolk, 2000, p. 910). Perry et al. (1995) agrees that research indicates that

trauma-affected children, are easily "moved from being mildly anxious to feeling threatened to being terrorized" (p. 278). From a developmental perspective, Piaget noted that children in the preoperational stage who tend to overgeneralize are egocentric and are looking for balance. This becomes difficult due to traumatic stress, especially when they are misinterpreting incoming information. (Cook et al, 2005; Mooney, 2013, Streeck-Fischer & van der Kolk, 2000).

From a cognitive/behavioral standpoint, traumatic stress has shown to be connected with attention problems and focus, learning, processing new information, language development, as well as a distorted sense of self with low self-esteem, shame and guilt, all which can can be seen by 18 months of age. If young children are learning and growing in chaotic, unstable, neglectful and sensory deprived environments, they will have deficits in key critical abilities. The NCTSN (2018a) explains, "when children grow up under conditions of constant threat, all their internal resources go toward survival. When their bodies and minds have learned to be in chronic stress response mode, they may have trouble thinking a problem through calmly and considering multiple alternatives." This will therefore influence how they behave academically, socially and cognitively in a variety of different environments (Cook et al, 2005; NCTSN, 2018a; Perry, 2006).

Conclusion

To help combat the impact of trauma on the young during a critical time where the brain is still developing, early intervention is necessary (Leitch, 2017). It is imperative to have an understanding on how trauma and toxic stress influence brain growth and development. Therefore, developmental assessments and trauma screening

are necessary and should be conducted in a variety of different settings including but not limited to healthcare systems, school and welfare systems. Therapeutic interventions should be tailored to meet one's unique needs and support healthy growth and development.

Rationale for Child Life Specialists to be Trauma-Informed

Child life specialists help patients and families navigate a moment or a series of moments in hospitals and communities. They have to make assessments and create a coping plan to help families get through the 'here and now' and try to create positive experiences while developing strategies that they can use in the future. Coping plans can include providing developmentally appropriate explanations and preparation for a procedure, diagnosis, or medical event, providing alternate focus in the form of play or distraction, and implementing coping strategies such as deep breathing all while giving patients and families appropriate choice and control when possible. There are many factors that influence how a patient and family will react and cope through a situation. One thing that can seriously influence how a patient copes with a situation, and should always be taken into consideration, is if they have a history of trauma or have experienced a traumatic event (Thompson, 2009).

The NCTSN (2018a) reports that up to 80% of children and families experience some traumatic stress following a medical trauma, where medical trauma is defined as, "a set of psychological and phystionalcal responses of children and their families to pain, injury, serious illness, medical procedures, and invasive or frightening treatment experiences. Medical Trauma may occur as a response to a single or multiple medical events." This traumatic stress can have lasting effects including, "impaired day-to day functioning, affect adherence to medical treatment and impede optimal recovery" (NCTSN, 2018a). Having a solid understanding of not only trauma but that trauma is individualized, can provide child life specialists with the insight on how to further help patients and families navigate through their healthcare experience. It therefore becomes

so vital that child life specialists not only establish therapeutic relationships and provide

patients and families with support to help build resilience and positive coping, but also

create interventions and coping plans that can be tailored to help minimize these effects.

Child life and Trauma-Informed Care Practices

Child life specialists can encounter trauma every day and they need to be

especially aware that trauma, specifically medical trauma, can happen to anyone- not just

their patients. For example, there is the seemingly obvious trauma as seen in the

emergency department with a patient that suffered a serious injury, but in the same

situation, the patient's sibling in the corner who watched the events unfold and their

father who performed CPR waiting for the paramedics to arrive, may also have

experienced trauma. Consider the mother in the next room listening to the medical team

recommend admitting her febrile child, or the patient down the hall getting a formal

urodynamics test (where a catheter, a rectal tube and EMG stickers are placed),

screaming uncontrollably, and resisting the procedure at all costs. These people could

have also experienced trauma and need to be assessed as such, because with the

principles of trauma-informed care, any situation can be potentially traumatic.

Assessments and Interventions

Multiple factors contribute to an individual's response to trauma/stress such as,

"individual attributes, developmental factors, life history, type of trauma, specific

characteristics of the trauma, amount and length of trauma exposure, cultural meaning of

traumatic events, number of losses associated with the trauma, available resources

(internal and external, such as coping skills and family support), and community

reactions" (SAMHSA, 2014b, p 35). Knowing and internalizing that trauma is not only a

universal experience but a personal experience and being trauma-informed can provide a framework to better understand individuals behaviors (Withers, 2017).

    Assessment. In their considerations and assessments, child life specialists need to be aware that whether acute or chronic, trauma can influence development and how a person may respond to everyday situations and healthcare experiences; responses that differ from those who have no history of trauma. Additionally, from the patient's perspective, child life specialists should consider and understand the distinction between patients coming to the hospital as a result to trauma, those that experienced a personal trauma, and those who experience a trauma in the hospital setting. From the caregiver's perspective, child life specialists need to consider if a caregiver carries a trauma history, and understand how that might influence how the patient copes and navigates through the healthcare system as well. All of these variables affect how a patient and family not only process information in their current environment, but also how they might cope through a situation.

    As part of their assessments, child life specialists should review a variety of healthcare variables, including but not limited to diagnosis, treatment, previous health care experiences, physical responses, as well as developmental vulnerability, age, mobility, culture and language background, social and family status and family supports, (Thompson, 2009). These things all contribute to how a patient and their family experience healthcare encounters. There are other factors that patients experience that can have a major impact on their coping, such as family dysfunction, peer relationships, academic experiences, and trauma background. Similarly, Child life specialists can advocate for ACE's screenings as the ACEs study continues to provide insight into the

relationship and impact of negative childhood experiences. Screening for ACEs and trauma is necessary a component of trauma-informed care (Brown, King & Wissow, 2017). This can help refer patients and families to appropriate professionals and provide early intervention that may be necessary to support healing and positive growth and development.

When looking at the Stress Potential Assessment Process, child life specialists take into consideration healthcare as well as family and child variables to help assess vulnerabilities and create a coping plan (Thompson, 2009). Through therapeutic and supportive relationships, child life specialists can provide developmentally appropriate preparation and support, emotional support, play, and therapeutic activities to help patients and families navigate and master their environment. One of the major goals of child life specialists is to "minimize or remove stress… and to help children and families cope with their situations as effectively as possible" (Gaynard et al., 1998, p. 16).

Interventions. The Healthcare Toolbox, created by Children's Hospital of Philadelphia, outlines the "D-E-F Protocol for Trauma-Informed Pediatric Care" (2018). This protocol reminds clinicians to "reduce distress: ask about fears and worries/consider grief and loss," provide "emotional support: who and what does the patient need now," and to "remember the family: gauge family stressors and resources" (Children's Hospital of Philadelphia, 2018). This framework aligns with child life specialist assessments, goals, and objectives when working with patients.

As child life specialists create interventions and interact with patients and families, having a trauma-informed mindset and understanding how trauma can impact the patient and family experience, will help them create effective interventions. Through

interventions tailored to meet the developmental needs and considerations of patients and families, child life specialists can provide developmentally appropriate preparation, education and support for potentially traumatic situations geared towards alleviating the traumatic elements of healthcare experiences. For example, through medical play and therapeutic play interventions, child life specialists can help reduce distress by providing developmentally appropriate explanations, answer questions, allowing for opportunities to work through and practice different situations, and proving coping strategies that empower the patient and family.

Hopper, Bassuk and Olivet (2009) mention in their definition that trauma-informed care is a "strengths-based framework (p. 133), which SAMHSA (2014b) confirms by describing trauma-informed care as a "strengths-based service delivery" (p. 20). This can be easily connected to the the strengths-based approach that child life specialists often use as part of their interventions to help patients and families cope during hospitalization. Hodas (2006) describes the strength based approach as, "building on the strengths of the child and family, and also those in the community" and comments, "in order to help any individual in need, one should begin by identifying and recognizing strengths and competencies, since these ultimately become the foundation for positive change" (p. 47). Child-life specialists are trained to identify individual and family strengths and build upon factors that contribute to not only the development of positive coping skills and resilience. The strength-based approach and trauma-informed care are complimentary. Both the strength-based approach and trauma-informed care empower families and build off of strengths to promote resilience, healthy growth and development.

Trauma-informed care stresses that "healing happens in relationships" (SAMHSA, 2014a, p. 10). Therapeutic relationships are an essential part of child life practice. As part of the official statement of Mission, Vision and Values of the Association of Child Life Professionals (2018), the value of "Therapeutic Relationships" is stated as: "We are committed to relationships built on trust, respect, and professional competence that contribute to the development of confidence, resilience, and problem-solving skills that enable individuals and families to deal effectively with challenges to development, health, and well-being" (2018). Through therapeutic relationships, child life specialists can provide supportive, strength-based, resilience driven interventions to promote healing and positive coping for patients and families affected by trauma.

Implications for Child Life Practice

The National Child Traumatic Stress Network (2018b) has identified 6 essential elements of a "Trauma-Informed Integrated Healthcare System" including:

1. Creating a trauma-informed office.

2. Involving and engaging family in program development, implementation, and evaluation.

3. Promoting a child and family resilience, enhancing protective factors and addressing parent/caregiver trauma.

4. Enhancing staff resilience and addressing secondary traumatic stress.

5. Assessing trauma-related somatic and mental health issues.

6. Proving coordination, integrated care across child- and family-service systems.

As part of the integrative care and psychosocial team, child life specialists can play an active role in helping those goals become part of the culture and treatment of patients and their families. To help achieve this goal, child life specialists can advocate for staff to receive trauma-informed training (see appendix A for a sample grant proposal) and act as ambassadors for the value of trauma-informed education by highlighting the benefits to not only patients and families, but staff members as well.

In addition, child life specialists can help educate team members that the family-centered care and trauma-informed care principles are complimentary (Marsac, et. al, 2016). "Family-centered care is based on the recognition that the family is the constant in the individual's life and that has significant influence over an individual's health and well being." (Thompson, 2009, p.96) Family-centered care has become a standard of practice to help improve the patient and family experience and has a lot of overlapping features with trauma-informed care. Family-centered care and trauma-informed both emphasize family as the center of patients healing process, they encourage a sense of choice and control, they respect and acknowledge an individuals strengths and rely on collaboration, (Marsac, et. al, 2016).

Along with promoting education and training, child life specialists should also encourage and foster resilience to further enhance recovery and positive growth and development of their patients. The American Academy of Pediatrics (2018) describes resilience as "critical to a child's ability to navigate through stressful events – even those that are traumatic – successfully. Resilience provides a buffer between the child and the traumatic event, mitigating the negative effects that could result, such as physical, emotional, and behavioral health issues that can last even into adulthood." Similarly,

SAMHSA (2014b) describes resilience as "the ability to bounce back or rise above adversity as an individual, family, community, or provider" (p. 19). If child life specialists build off of the individual's strengths and encourage and foster different characteristics of resilience such as, "strong kinship bonds… importance of extended family, spirituality and religious practices... value in friendships and warm personal relationships, expression of humor and creativity...philosophies and beliefs about life, suffering, and perseverance" (SAMHSA, 2014b, p. 77), they can further promote development and expansion of coping skills that can be used to help foster and strengthen an individual's healing and recovery.

When promoting resilience, child life specialists can simultaneously advocate for self-care. Self-care is an important concept that "reduces the negative effects of secondary traumatization on counselors", and promotes "hope-sustaining behaviors" in counselors, making them more motivated and open to learning, and thereby improving job performance and client care" (SAMHSA, 2014b, p.206). A support system can help professionals care for the needs of others as well as themselves by encouraging awareness of burnout and maintaining work-life balance. Working within complex situations can be draining, but having supportive relationships and being committed to self-care practices can help promote longevity and wellness for all.

Conclusion

Simply stated, trauma-informed care is "engaging people with trauma histories of trauma that recognizes the presence of trauma symptoms and acknowledges the role that trauma played in their lives" (Steele & Malchiodi, 2012, p. 16). Through implementation of the principles of trauma informed care outlined by The National Center for Trauma-

Informed Care (NCTIC), which refer to, "understanding trauma and its impact,

promoting safety, ensuring cultural competence, supporting consumer control, choice and

autonomy, sharing power and governance, integrating care, healing happens in

relationships and recovery is possible" (Steele & Malchiodi, 2012, p.16-17), child life

specialists can easily incorporate trauma into their assessments and interventions.

Educational background, understanding of developmental influencers,coping and family

systems enables them to play an active role in creating a trauma-informed environment,

positioning them to be great advocates for trauma-informed care practices.

Appendix A

New York/New Jersey Area
Common Application Form
Cover Sheet

Date of application: November 27, 2017

Name of organization to which grant would be paid. Please list exact legal name:
Cincinnati Children's Hospital Medical Center, Division of Child Life and Integrative Care

Purpose of grant (one sentence): To provide Trauma Informed Care training to the Division of Child Life and Integrative Care

Address of organization: 3333 Burnet Ave, MLC5003, Cincinnati, OH 45229

Telephone number: 518-636-8855 Fax: n/a E-mail: kathleen.romano@cchmc.org

Executive director: Kate Shamszad, MS, MPH, CCLS

Contact person and title (if not executive director): Kathleen Romano

Is your organization an IRS 501(c) (3) not-for-profit?: Yes ☒ or No ☐

    If no, please explain: Click here to enter text.

Grant request: $6000

Check one (based on the organization's priorities and the funder's guidelines):

    General support ☐

    Project support ☒

Total organizational budget (for current year): $5,000,000

Dates covered by this budget (mo/day/year): July 1st 2017- July 1st 2018

Total project budget (if requesting project support): $6000.00

Dates covered by project budget (mo/day/year): July 1st 2018 – July 1st 2019

Project name (if applicable): n/a

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I. PROPOSAL SUMMARY:

According to The National Child Traumatic Stress Network (2003), "trauma occurs when a child experiences an intense event that threatens or causes harm to his or her emotional and physical well-being." Similarly, the Centers for Disease Control and Prevention (CDC) have defined traumatic events as when "the event, or series of events, causes a lot of stress." Roughly one in four children will experience a traumatic event before the age of sixteen. This includes but is not limited to "Community Violence, Complex Trauma, Domestic Violence, Early Childhood Trauma, Medical Trauma, Natural Disasters, Neglect, Physical Abuse, Refugee Trauma, School Violence, Sexual Abuse, Terrorism and Traumatic Grief" (National Child Traumatic Stress Network, 2003). Due to the prevalence of traumatic events it becomes necessary for health care professionals to know and understand the implications these experiences may have on children and their families. Child life specialists who are a part of the interdisciplinary team in hospitals have a unique position with their knowledge on development and coping. With this skill set, they have the ability to help patients and families navigate difficult situations and traumatic events. Recent initiatives in healthcare have encouraged knowledge and understanding of 'trauma-informed' care or providing a 'trauma-informed approach'. Being 'trauma-informed' is acknowledging that people may experience different forms of trauma in their life and they need support and understanding to foster success and positive coping (Substance Abuse and Mental Health Services Administration, 2014). If the child life specialists from the Division of Child Life and Integrative Care at Cincinnati Children's Hospital Medical Center, had the training and knowledge on "trauma-informed care," it would be a great asset to them as they could use it to better improve outcomes and best meet patient care needs. Furthermore, this training and knowledge base is also in line with the goals of the Division of Child Life and Integrative Care's Mission Statement: "As a team of healthcare professionals, we are a compassionate presence providing outstanding patient and family-centered holistic care. We are dedicated to providing evidence-based developmental, cognitive, emotional, physical, spiritual and psychosocial support in order to optimize healing and wellness for patients and families" (Cincinnati Children's Hospital Medical Center, 2017).

II. NARRATIVE

A. Background

In 1883 the Hospital of Protestant Episcopal Church was opened and in 1926, expanded to a nearly 200 bed patient care facility with a formal Department of Pediatrics. They had a vision of not only treating diseases and children, but conducting research to promote prevention. By 1931, the Cincinnati Children's Research Foundation was established and in the 1970s, the Department of Pediatrics was consolidated into its own building and renamed Children's Hospital. Soon after different independent organizations became affiliated with Children's Hospital and consolidated themselves into Children's Hospital Medical Center. By the 1980s they had expanded with ambulatory services and a freestanding surgery center. Growth, expansion and innovation continued and in 2002 officially became Cincinnati Children's Hospital Medical Center, leading the world in pediatric care and being ranked in the Top 3

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Children's Hospitals according to U.S. News and World Report. (Cincinnati Children's Hospital Medical Center, 2017; U.S. News and World Report, 2017)

Today Cincinnati Children's Hospital Medical Center is led by the vision to "be the leader in improving child health," and a mission that "Cincinnati Children's will improve child health and transform delivery of care through fully integrated, globally recognized research, education and innovation. For patients from our community, the nation and the world, the care we provide will achieve the best: Medical and quality-of-life outcomes, Patient and family experience and value, today and in the future," (Cincinnati Children's Hospital Medical Center, 2017). Each day over 15,000 employees work together to provide the best patient and family experience for over 1,000,000 patient and family served each year from all over the world. (Cincinnati Children's Hospital Medical Center, 2017)

Just as the Cincinnati Children's Research Foundation was established in 1931, the Division of Child Life was created with organized recreation services with paid staff. Today it has grown into the Division of Child Life and Integrative Care with over 100 employees including child life specialists, child life assistants, music therapist, recreation specialists, facility dogs, art therapist and a complete leadership and administrative team supported by hundreds of volunteer hours each week. The division is guided by the mission "as a team of healthcare professionals, we are a compassionate presence providing outstanding patient and family- centered holistic care. We are dedicated to providing evidence-based developmental, cognitive, emotional, physical, spiritual and psychosocial support in order to optimize healing and wellness for patients and families" (Cincinnati Children's Hospital Medical Center, 2017).

Every day the members of the division work to meet the psychosocial needs of the patients and families. Some of the key members of the division are the child life specialists. Child life specialists help patients and families navigate stress and uncertainty and, through a developmental lens, help them cope with a variety of situations throughout the medical center. Child life specialists have a presence in the critical care units, inpatient units, mental health units, the emergency department, outpatient clinics, surgery/pre-op as well as other specialty areas. Child life specialists see patients from all over the world. They help patients from every socioeconomic status, race, ethnicity, gender, sexual orientation, age and physical abilities with the goal of increasing coping and decreasing stress and anxiety. They often work in conjunction with other disciplines such as social work, behavior medicine, holistic health, chaplains, nurses, doctors, counselors, etc. in both the inpatient and outpatient settings. Through these efforts, they carry out treatment plans and create goals and objectives to best fit patient care needs.
Child life specialists help patients and families navigate a moment or a series of moments. They have to make assessments and create a coping plan to help them get through the 'here and now' and try to create positive experiences and develop strategies that they can use in the future. Coping plans can include providing developmentally appropriate explanations and preparation for a procedure, diagnosis, or medical event, providing alternate focus in the form of play or distraction, and implementing coping strategies such as deep breathing all while giving patients and families appropriate choice and control when able. There are so many factors that influence how a patient and family will react and cope through a situation. One thing that can seriously influence how a patient copes with a situation, and should be considered, is if they have a trauma history or have experienced a traumatic event.

As the National Child Traumatic Stress Network (2003) describes, "trauma occurs when a child experiences an intense event that threatens or causes harm to his or her emotional and physical well-being." Similarly, the Substance Abuse and Mental Health Services

Administration, or SAMHSA (2014) has described individual trauma as "result from an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individuals functioning and mental, physical, social, emotional or spiritual well-being." It is estimated that roughly one in four children will experience a traumatic event before the age of sixteen. This includes but is not limited to "Community Violence, Complex Trauma, Domestic Violence, Early Childhood Trauma, Medical Trauma, Natural Disasters, Neglect, Physical Abuse, Refugee Trauma, School Violence, Sexual Abuse, Terrorism and Traumatic Grief" (National Child Traumatic Stress Network, 2003).

Trauma knows no boundaries and does not discriminate between age, gender, socioeconomic status, ethnicity, location or sexual orientation. Anyone and everyone is at risk to experience trauma as it becomes a more widespread, damaging and costly problem. The impact of trauma is tremendous. For example, a research study revealed expenses for "untreated trauma-related alcohol and drug abuse alone were estimated at $161 billion in 2000" (National Council for Behavioral Health, 2017). Experiencing trauma has also shown to impact neurodevelopment, immune systems and health in addition to influencing and affecting behaviors. Yet, with appropriate supports and interventions, traumatic experiences can be overcome and treated. (Trauma-Informed Care Resource Guide, 2017 & Substance Abuse and Mental Health Services Administration, 2014)

Due to the prevalence of traumatic events and the increase in the number of patients who have experienced trauma, it is necessary for health care professionals to know and understand the implications these experiences may have on children and their families. Recent initiatives in healthcare have encouraged knowledge and understanding of 'trauma-informed care' or providing a 'trauma-informed approach'. Being 'trauma-informed- or becoming more acclimated with 'trauma-informed care' requires the realization of trauma and its effects, recognizes the symptoms, reposed to them and work towards avoiding re-traumatization. (Substance Abuse and Mental Health Services Administration, 2014)

Throughout Cincinnati Children's Hospital Medical Center, different divisions and specialties have been educated in a trauma-informed approach and in implementing the implications into their practice. This has helped their overall practice and improve outcomes. Child life specialists should also be trauma-informed and need to be educated and equipped with resources and interventions to best meet patient and family needs. The goal of this grant is to gain the funding to provide trauma-informed care education and training to the child life specialists within the division of Division of Child Life and Integrative Care so that they can better assess patients and tailor interactions and interventions and understand them through a trauma lens. With the ever evolving and changing world and with the increasing prevalence of (known) trauma, the education and training would be a great resource for child life specialists to utilize in their practice.

B. Funding Request

As mentioned, child life specialists in their daily work use their knowledge of development and their assessment skills to help patients and families cope through a variety of situations. Being trauma-informed will provide them with a deeper level of understanding/realization of trauma and the impact of how it affects their patients and families. Their assessments and interventions will be strengthened with this knowledge base. One of the

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training opportunities available on trauma-informed care is through the National Council for Behavioral Health. They provide a one to two day training that includes, but is not limited to an overview of understanding trauma, information about compassion fatigue, trauma-informed approaches and other helpful information. The cost of the training per day, per trainer is $2,500, for a two day total cost of $5,000. Additional money would be required for trainer's travel expenses, hotel stay and food for the trainer and trainees as well as for unforeseen costs. For these additional expenses, $1,000 dollars should be budgeted. In order to bring this training and education to the child life specialist in the Division of Child Life and Integrative Care this grant seeks to obtain $6,000 for the necessary funding.

C. Evaluation

To evaluate the success of the training, several surveys will be sent out to the attendees. The first survey will be sent out in order to receive a certificate of completion and get educational credit. The survey questions will assess the quality of the training, the usefulness of the information provided and likelihood of implementation of the skills learned. The survey will also provide opportunities to request further training and education. There will then be a four month follow up survey sent to all attendees, evaluating the success of implementing the training into practice and impact on patient care. For this survey, a narrative portion will be utilized to provide further insight into how the information learned was being applied into practice.

Also at the four month period an invitation for a follow up lunch will be sent to all the attendees of the training to promote further evaluation and continued discussion. Interdisciplinary team members from other divisions who are also educated in trauma- informed care, such as social work and behavioral medicine, will be invited to promote collaboration, discussion and further insight into how the training has influenced their daily work and learn from each other's unique perspectives. With these evaluations and follow up learning opportunities, the attendees of the training will hopefully be able to continue the conversation and grow from each other's experiences. Lastly, the feedback from the surveys and luncheon will provide insight into the success of the program and offer additional avenues for collaboration and future development of trauma-informed care within the division

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References

American Academy of Pediatrics. (2018). *Promoting Resilience.* Aap.org. Retrieved 8

April 2018, from https://www.aap.org/en-us/advocacy-and-policy/aap-health-

initiatives/resilience/Pages/Promoting-Resilience.aspx

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental

disorders* (5th ed.). Washington, DC: Author.

Association of Child Life Professionals. (2018). *Mission, Values, Vision*. Childlife.org.

Retrieved 8 April 2018, from https://www.childlife.org/child-life-

profession/mission-values-vision

Beyerlein, B., & Bloch, E. (2014). Need for trauma-informed care within the foster care

system: A policy issue. *Child Welfare*, *93*(3), 7-21.

Brown, J., King, M., & Wissow, L. (2017). The central role of relationships with trauma-

informed integrated care for children and youth. *Academic Pediatrics*, *17*(7), S94-

S101. http://dx.doi.org/10.1016/j.acap.2017.01.013

Bucci, M., Marques, S., Oh, D. & Harris, N. (2016). Toxic Stress in Children and

Adolescents. *Advances in Pediatrics*, 63, pp.403-428.

Carrion, V. & Wong, S. (2012). Can Traumatic Stress Alter the Brain? Understanding the

Implications of Early Trauma on Brain Development and Learning. *Journal of

Adolescent Health*, 51(2), S23-S28.

Carroll, M. (2008). Understanding your Mind; Conscious and Unconscious Processing.

[online] Nlpacademy.co.uk. Available at:

http://www.nlpacademy.co.uk/articles/view/understanding_your_mind_conscious

_and_unconscious_processing/ [Accessed 20 Jan. 2018].

Center for Disease Control and Prevention. (2018). *Adverse Childhood Experiences*

(ACEs). Retrieved 9 November 2017, from

https://www.cdc.gov/violenceprevention/acestudy/index.html

The Chadwick Trauma-Informed Systems Project. (2012). Creating trauma-informed

child welfare systems: A guide for administrators (1st ed.). San Diego, CA:

Chadwick Center for Children and Families.

Child Welfare Information Gateway. (2015). Understanding the effects of maltreatment

on brain development. Washington, DC: U.S. Department of Health and Human

Services, Children's Bureau.

Children's Hospital of Philadelphia. (2018). *Basics of Trauma-Informed Care*.

Healthcare Toolbox. Retrieved 17 April 2018, from

https://www.healthcaretoolbox.org/online-education-for-providers.html

Colino, S. (2016). The Health Benefits of Hugging. *U.S. News And World Report*.

Retrieved from https://health.usnews.com/health-news/health-

wellness/articles/2016-02-03/the-health-benefits-of-hugging

Cook, A., Spinazzola, J., Ford, J., Lanktree, C., Blaustein, M., Cloitre, M., DeRosa, R.,

Hubbard, R., Kagan, R., Liautaud, J., Mallah, K., Olafson, E. & van der Kolk, B.

(2005). Complex Trauma in Children and Adolescents. Psychiatric Annals, 35(5),

390-398.

Felitti, V., Anda, R., Nordenberg, D., Williamson, D., Spitz, A., & Edwards, V. et al.

(1998). Relationship of Childhood Abuse and Household Dysfunc Young

Children. *Academic Pediatrics*, *15*(5), 510-517.

Gaynard, L., Wolfer, J., Goldberger, J., Thompson, R., Redburn, L., & Laidley, L.

>   (1998). *Psychosocial care of children in hospitals: A clinical practice manual*

>   *from the ACCH child life research projec*t. Rockville, MD.: Child Life Council,

>   Inc.

Harris, N. B. (2014, September).How childhood trauma affects health across a lifetime

>   [Video file]. Retrieved from

>   https://www.ted.com/talks/nadine_burke_harris_how_childhood_trauma_affects_

>   health_across_a_lifetime

Hodas, G. (2006). *Responding to childhood trauma: The promise and practice of trauma*

>   *informed care.* Retrieved from

>   http://www.childrescuebill.org/VictimsOfAbuse/RespondingHodas.pdf

Hopper, E., Bassuk, E. and Olivet, J. (2009). Shelter from the Storm: Trauma-Informed

>   Care in Homelessness Services Settings. *The Open Health Services and Policy*

>   *Journal*, 3(2), pp.131-151

Kawam, E. (2014). Trauma Informed Care and Social Work Education: A Case Study.

>   Advances In Social Sciences Research Journal, 1(7), 122-132.

Kerker, B., Zhang, J., Nadeem, E., Stein, R., Hurlburt, M., & Heneghan, A. et al. (2015).

>   Adverse Childhood Experiences and Mental Health, Chronic Medical Conditions,

>   and Development in Young Children. *Academic Pediatrics, 15(5)*, 510-517.

>   http://dx.doi.org/10.1016/j.acap.2015.05.005

LaGreca, A., Boyd, B., Jaycox, L., Kassam-Adams, N., Mannarino, A., & Silverman, W.

>   et al. (2008). *Children trauma: An update for mental health professionals*.

American Psychological Association. Retrieved from

http://www.apa.org/pi/families/resources/update.pdf

Leitch, L. (2017). Action steps using ACEs and trauma-informed care: a resilience

model. *Health & Justice*, *5*(5). http://dx.doi.org/10.1186/s40352-017-0050-5

Marcellus, L., & Cross, S. (2016). Trauma-informed care in the NICU: Implications for

early childhood development. *Neonatal Network*, 35(6), 359-366.

Marsac, M., Kassam-Adams, N., Hildenbrand, A., Nicholls, E., Winston, F., Leff, S., &

Fein, J. (2016). Implementing a Trauma-Informed Approach in Pediatric Health

Care Networks. *JAMA Pediatrics*, *170*(1), 70-77.

http://dx.doi.org/10.1001/jamapediatrics.2015.2206

McGraw-Hill Education. (2016). *[Series: Influential educators] Lev Vygotsky and the

Zone of Proximal Development. McGraw-Hill Education*. Retrieved 4 April 2018,

from https://www.mheducation.ca/blog/series-influential-educators-lev-vygotsky-

zone-of-proximal-development/

McLean, S. (2016). *The effect of trauma on the brain development of children Evidence-

based principles for supporting the recovery of children in care*. Melbourne,

Australia: Australian Institute of Family Studies. Retrieved from

https://aifs.gov.au/cfca/sites/default/files/publication-documents/cfca-practice-

brain-development.pdf

Melville, A. (2017). Trauma-Exposed Infants and Toddlers: A Review of Impacts and

Evidence-Based Interventions. *Advances in Social Work*, 18(1), 53-65. Mooney, C. G.

(2013). *Theories of childhood: An introduction to Dewey, Montessori,

Erikson, Piaget and Vygotsky* (2nd ed.). St. Paul, MN: Redleaf Press.

Mooney, C. (2010). *Theories of attachment: An Introduction to Bowlby, Ainsworth,*
 Gerber Brazelton, Kennell and Klaus. St Paul, MN: Redleaf Press.

National Scientific Council on the Developing Child. (2007). *The science of early*
 childhood development. Center for the Developing Child. Retrieved from
 https://46y5eh11fhgw3ve3ytpwxt9r-wpengine.netdna-ssl.com/wp-
 content/uploads/2015/05/Science_Early_Childhood_Development.pdfNational
 Council for Behavioral Health. (2017). Trauma Informed Care. [online] Available
 at: https://www.thenationalcouncil.org/areas-of-expertise/trauma-informed-
 behavioral-healthcare/ [Accessed 9 Nov. 2017].

National Trauma Institute. (2018). *Trauma Statistics and Facts. National Trauma*
 Institute. Retrieved 10 April 2018, from https://www.nattrauma.org/what-is-
 trauma/trauma-statistics-facts/

Perry, B. D. (2000). Traumatized children: How childhood trauma influences brain
 development. *The Journal of the California Alliance for the Mentally III, 1* (l),
 48-51.

Perry, B. D. (2006). Applying principles of neurodevelopment to clinical work with
 maltreated and traumatized children: The neurosequential model of therapeutics.
 In N. B. Webb (Ed.), *Working with traumatized youth in child welfare* (pp. 27-
 52). New York: Guilford Press.

Perry, B. D. (2009). Examining child maltreatment through a neuro developmental lens:
 Clinical applications of the neurosequential model of therapeutics. Journal for
 Loss and Trauma, 12, 240-255.

Perry, B., Pollard, R., Blakley, T., Baker, W., & Vigilante, D. (1995). Childhood trauma, the neurobiology of adaptation, and ''use-dependent'' development of the brain: How ''states'' become ''traits'. Infant Mental Health Journal, 16(4), 271-291. doi:10.1002/1097- 0355(199524)16:4<271

SAMHSA's National Registry of Evidence-based Programs and Practices. (2016). *Behind the Term: Trauma*. SAMHSA. Retrieved from https://nrepp-learning.samhsa.gov/sites/default/files/documents/behind_the_term/pdf_07_26_2 017/Behind_the_Term_Trauma_7.2017.pdf

Shonkoff, J., Garner, A., Siegel, B., Dobbins, M., Earls, M., & Garner, A. et al. (2011). The Lifelong Effects of Early Childhood Adversity and Toxic Stress. *Pediatrics*, 129(1), e232-e246. http://dx.doi.org/10.1542/peds.2011-2663

Steele, W., & Malchiodi, C. (2012). *Trauma-informed practices with children and adolescents*. New York: Routledge.

Streeck-Fischer, A. & van der Kolk, B. (2000). Down will come baby, cradle and all: diagnostic and therapeutic implications of chronic trauma on child development. A*ustralian and New Zealand Journal of Psychiatry,* 34(6), pp. 903-918.

Substance Abuse and Mental Health Services Administration. *SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach.* HHS Publication No. (SMA) 14-1448. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2014(a).

Substance Abuse and Mental Health Services Administration. *Trauma-Informed Care in Behavioral Health Services.* Treatment Improvement Protocol (TIP) Series 57.

HHS Publication No. (SMA) 13-4801. Rockville, MD: Substance Abuse and

Mental Health Services Administration, 2014(b).

The Missouri Department of Mental Health. (2018). *Trauma*. Early Childhood Mental

Health. Retrieved 18 February 2018, from

https://dmh.mo.gov/healthykids/providers/trauma.html

The National Child Traumatic Stress Network. (2003). *What Is Child Traumatic Stress?*

Retrieved 9 November 2017, from

http://www.nctsnet.org/sites/default/files/assets/pdfs/what_is_child_traumatic_str

ess_0.pdf

The National Child Traumatic Stress Network. (2010). *Age-Related Reactions to a*

Traumatic Event. National Child Traumatic Stress Network. Retrieved from

https://www.nctsn.org/sites/default/files/resources//age_related_reactions_to_trau

matic_events.pdf

The National Child Traumatic Stress Institute. (2016). *Is it ADHD or child traumatic*

stress?: A guide for clinicians. National Child Traumatic Stress Institute.

Retrieved from

https://www.nctsn.org/sites/default/files/resources//is_it_adhd_or_child_traumatic

_stress.pdf

The National Child Traumatic Stress Network. (2018a). *What is Child Trauma? The*

National Child Traumatic Stress Network. Retrieved 6 April 2018, from

https://www.nctsn.org/what-is-child-trauma

The National Child Traumatic Stress Network. (2018b). *Essential Elements*. *The National*

Child Traumatic Stress Network. Retrieved 6 April 2018, from

https://www.nctsn.org/trauma-informed-care/trauma-informed-

systems/healthcare/essential-elements

Thompson, R. H. (Ed.) (2009). *The handbook of child life: A guide for pediatric*

psychosocial care. Springfield, IL; Charles C Thomas Publisher, LTD.

Walkley, M. and Cox, T. (2013). *Building trauma-informed schools and communities.*

Children & Schools, 35(2), 123-126.

Withers, M. (2017). *Trauma-informed care and why it matters*. [online] Psychology

Today. Available at: https://www.psychologytoday.com/blog/modern-day-

slavery/201707/trauma-informed-care-and-why-it-matters [Accessed 30 Aug.

2017].