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How Adverse Childhood Experiences Affect Children in School and What Protective Factors can Teachers Provide for These Students

Michelle Moorer

HOW ADVERSE CHILDHOOD EXPERIENCES AFFECT CHILDREN IN SCHOOL

AND WHAT PROTECTIVE FACTORS CAN TEACHERS PROVIDE FOR THESE

STUDENTS

by Michelle Moorer

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Primary Advisor: Dr. Melissa Erickson
Peer Reviewer: Maggie Bremer

To Eric for continuously encouraging me to follow my passions.
To Maggie for patiently being my listening ear.
To Kristen for reigniting my passion and being my thought partner.
Thank you to my Capstone Committee, I could not have done this without you.
To children around the world, may we learn to serve you so that you may flourish into
who you are meant to be.

"Obstacles are everywhere. Success is about finding ways every day to go over, under, around or through."
-Nadine Burke Harris

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ABSTRACT

The research question addressed in this Capstone Project is: *How do adverse childhood experiences (ACEs) affect children in school and what protective factors can teachers provide for these students?* I will start by giving an overview of ACEs, ACEs impact on adulthood, trauma and toxic stress, trauma informed practices, and finally discuss protective factors for children with ACEs. Research shows that having exposure to childhood adversity is connected to negative health and life outcomes. Protective factors against ACEs can be a buffer against the negative effects of ACEs. These factors can be provided in different contexts, for example in relationships, community, and society. The goal of my project is to inform educators on how they can be protective factors for their students using the context of the classroom community. The information will then be used to create a website where educational professionals can learn about ACEs and how they can be a protective factor by implementing classroom practices. The goal of this project is to inform educators on Adverse Childhood Experiences and to provide resources and strategies for teachers to provide an extra layer of support for children facing adversities.

CHAPTER ONE

Introduction

I believe that all children deserve a childhood where they feel emotionally and physically safe. A childhood where they aren't afraid to take risks, and one where they learn to believe that the world around them is inherently good. I studied to become a teacher because I love children. From the time I began studying education in 2009, it has become increasingly clear to me that more and more children in school are experiencing trauma, chronic stress, and adversities. As an educator, I know there is more that can be done in classrooms to respond to children with adverse childhood experiences to ultimately help them succeed in life.

My research question for the purpose of this Capstone Project is: *How do adverse childhood experiences (ACEs) affect children in school and what protective factors can teachers provide for these students?* I will synthesize the information I learn from my literature review to create a website where educators can learn about ACEs and ways to create classroom practices that may help mitigate childhood adversity. In this chapter, I will introduce my personal background and my own upbringing, which has influenced my interest in the ACEs study. Then, I will discuss my rationale of this study along with the prevalence of ACEs. I will end with an overview of chapters ahead.

Adverse childhood experiences, also referred to as ACEs, are traumatic events that occur in childhood (Felitti et al., 1998). When thinking about ACEs, it's important to note that the focus is on the long term effects of multiple types of childhood trauma, not just one single adverse event (Felitti et al., 1998). Some examples of ACEs are living in

households with violence, abuse, neglect, and household dysfunctions such as substance abuse, mental illness, and parent incarceration (Felitti et al., 1998). ACEs is the term used to describe the Adverse Childhood Experience Study. This research study was conducted by the U.S. health maintenance organization Kaiser Permanente and the Centers for Disease Control and Prevention (Felitti et al., 1998). This study determined that there was a correlation between ACEs and health and social issues across a lifespan (Felitti et al., 1998). I will discuss more details of the effects of ACEs into adulthood in the literature review in Chapter Two. Next, I will discuss my personal interest in ACEs.

Why am I interested in ACEs?

I believe there is nothing more important for a person's life development than having a positive and happy childhood. Childhood experiences play an incredibly important role in development which creates a foundation of young adulthood. When children have continued positive life experiences early on in life, they begin to build a sense of trust in the world around them and further develop a belief that their world is safe. These repeated positive experiences help build a secure attachment and stronger emotional resilience in children so that they are then able to manage and overcome adversities that come their way later in life (Hoffman et al., 2017).

On the other hand, when children experience traumatic experiences it can have the opposite effect on their childhood experience that can affect their life well into adulthood. Trauma and adversity can cause a child to see the world in a negative lense. These types of experiences can include child abuse, neglect, substance abuse, domestic violence, and more (Felitti et al., 1998), which I will discuss further in Chapter Two. I am

interested in studying the Adverse Childhood Experiences Study because I want to learn how to make myself a better resource for the community that I teach in and to spread awareness of the difficulties that children in school are dealing with at home. I want my classroom to serve as a strong protective factor, especially for my students who experienced ACEs. I realize that my classroom is a very influential space where my students will flourish and develop academically, emotionally, and socially. I want to do all that I can to help combat the ACEs issue by creating a classroom where all children can feel safe and learn in a setting that is reflective of their individual needs. This project will allow me to share my findings, resources, and strategies with other educational professionals who are interested in furthering their impact on their students. If we can teach children strategies to manage their trauma and emotions while they're still young, then I believe we can help prevent these children becoming adults that cope with their trauma in ways that may risk their health and wellbeing.

Research tells us that Adverse Childhood Experiences are directly linked with negative health outcomes as adults (Felitti et al., 1998). I believe that all children should be able to experience a happy, healthy, and safe childhood. Being a teacher puts me in a position where I have the power to positively impact the lives of all children that I work with. I am interested in this study because I want to identify the ACEs issue, discover strategies and practices that I can put in place in my classroom that help children with ACEs, and finally, to share my findings with other educational professionals so that it will have a positive impact in the field. Teachers have an incredible amount of influence on their students, school, community, and society. It is my intention for my Capstone

Project to be shared with other educators in the field, and that teachers can be deeper informed on ACEs, how it impacts student learning, and what specific strategies teachers can do in the classroom.

Personal Background

I grew up in a home with a mother, father, and sister. My father worked, and my mother stayed home with me and my sister. My mother did not work so that she could stay at home with us. Since my mother didn't work we lived off of my dad's income. We were considered a middle-class family and I learned a lot about family, life, and handling money by observing my parents. My parents lived a more frugal life so that my mom was able to stay at home with us. I remember we didn't buy new clothes often, we didn't go out to eat a lot, and we didn't buy a lot of material items. We were happy; we didn't wish for material items or vacations. These types of choices allowed my mom to spend all of her time with me and my sister. I feel that this played a large part in developing a secure attachment style during my childhood.

Our home was a peaceful place for me. I had many things to do at home when I got home from school. I'd practice piano, sit outside on the swing and read, paint pictures in my room, or play with my neighbors and sister. I felt nourished and safe in my family. I learned how to take risks and how to make positive choices for myself. When I made mistakes, I learned my lessons and made better decisions moving forward. My parents were with me every step of the way. My parents helped me learn right from wrong, how to have manners, and how to be happy with what you have.

As I reflect on my childhood as an adult, I can see that my parents cut back on their lifestyle so my mother could stay at home to raise her children. Since my mother was a stay-at-home mom, we got to spend a significant amount of time with her. Ever since I can remember, my mom was explaining to me how things worked, and the *why* behind everything that she told me. We did very simple things like walk to the park and play in the driveway. I loved feeling important to my mother and knowing that she would always be there was comforting to me. The amount of time that we spent together helped create positive and happy memories for myself and my sister. I believe that her investment of time and energy into raising us helped develop us into happy and healthy adults.

Since I had a healthy childhood foundation, I had the confidence to feel that I could grow up and be anything that I wanted to be. I felt that I could be a veterinarian, journalist, or even a teacher if I wanted to. I began to dream big about my life at a young age. I dreamed about traveling, learning about the world around me, and making a difference in the world. I was very happy-go-lucky about my life and what I would do with it. I dreamed of traveling, having a career, and a family. I had no doubt that I would achieve my dreams because I felt support from my family. My childhood experiences set me up to believe that good things would happen in my life. I trusted that the world was generally good, which I attribute to my parents forming a secure attachment style (Hoffman et al., 2017).

When I started college at the University of Minnesota in 2009, I knew that I wanted to be involved in the helping professions. I thought about studying counseling so

I could help others, specifically children. I felt that I had adults that invested so much time into me as a child, so I wanted to return the favor to other children in the world. I decided to major in Family Social Science so that I could have a strong background in relationships for the career I would have in the future. Yet I still wasn't sure exactly what specific career path I wanted to take.

During my time studying Family Social Science, I became really interested in learning about parent-child relationships. I was fascinated by parenting styles, conflict resolution styles, and how they would have an effect on adult children. I learned productive problem-solving strategies and destructive problem-solving strategies. I remember being very interested in the parent-child dynamic, and how conflict would follow children into adulthood.

ACES Interests Begins. From my experience studying parent-child relationships, I came across the ACEs study and it piqued my interest. I listened to a Ted Talk given by Dr. Nadine Burke-Harris (2014), the Surgeon General of California. Dr. Harris talked passionately about the connection between childhood adversities and health issues later in life. At this point I became captivated by the ACEs study. I couldn't stop talking about it to my friends and family for weeks afterwards. I shared it with everyone I knew, I watched the Ted Talk again and again. I started a self-guided inquiry of ACEs and how they can affect the developing brain out of my own interest in the topic.

I spent a summer in Hawaii where I dedicated three months envisioning what I wanted my future to look like. After much time and thought, I decided I wanted to become a teacher. When I was earning my initial teaching credential from Hamline

University in 2017, I took an Educational Psychology course and one assignment was to read a book relating to education and to make a presentation of the findings. I chose to read How Children Succeed (Tough, 2012). This book looked at how negative childhood experiences can be linked with negative outcomes into adulthood, and how children benefit greatly from learning character skills. I became even more fascinated with how our childhood experiences shape our adulthood. This learning solidified for me how important having a positive childhood is. It motivated me to become a teacher that can help my future students develop character skills.

Between my own childhood experiences and studying the psychology of child development, I have come to believe that each childhood experience culminates to create our foundation for adulthood. Now that I am in a career that directly impacts children, I want to learn more of how I can be a resource to help create positive life experiences for my students. My goal of this Capstone Project is to learn how Adverse Childhood Experiences (ACEs) affect children in school, and what protective factors teachers can provide for these students.

Rationale

According to the CDC, 61% of adults have at least one ACE, and 16% have four or more ACES (Center for Disease Control and Prevention, 2019). There are more and more children in schools having experienced traumatic events. From my teaching experience I have noticed that childhood traumatic experiences such as divorce, parent incarceration, neglect, domestic violence and poverty are just some of the experiences that our students are coming to school with. After I earned my K-6 teaching credential

from Hamline University, I moved to California and taught kindergarten in South Los

Angeles for my first three years of teaching. I've experienced firsthand when my students

are unable to focus on their learning due to traumatic events happening at home. My

students reacted to trauma in different ways, some would shut down emotionally, become

closed off and quiet. Others would show aggressive and disruptive behaviors in class. I

understood that each child was reacting to the traumatic experiences that were going on

in their lives. Children cannot shut off trauma when they walk through our classroom

door, so it is to everyone's benefit if teachers are educated in how to best serve children

with ACEs. I'm interested in learning how Adverse Childhood Experiences (ACEs)

affect children in school and what protective factors can teachers provide for these

students?

Further impacting the prevalence of ACEs is the Coronavirus pandemic.

Stay-at-home orders were put in place in response to the pandemic, causing many people

to lose their jobs. In April 2020 the unemployment rate reached nearly 15% (U.S. Bureau

of Labor Statistics, 2020). This loss of jobs increases poverty which will likely have an

effect on children in homes that are experiencing jobs loss. While parents are navigating

job loss, children are taking on extra roles to help during a time of many unknowns.

Stay-at-home orders are forcing those who live in domestically violent homes to spend

more time at home with their aggressors. Sanders (2020) states the following:

> In fact, the response to the COVID-19 pandemic may be amplifying some ACEs.
>
> There are several ways in which ACEs may be exacerbated by the social isolation,
>
> job loss, school closures, and other stressors unleashed by the pandemic. First, the

pandemic may have increased intra-familial adversity, by exposing children to

increased parental anxieties, especially those associated with job loss, food

insecurity, and housing insecurity. Second, by amplifying toxic stress, increased

family adversity may impair child brain development, particularly during the

early years. Third, the pandemic's indirect social and economic impact on family

stress may linger for months or years. Fourth, the pandemic and its response are

disproportionately affecting low-income and ethnic minority populations, which

are already at increased risk for ACE-impacted chronic conditions like preterm

birth, diabetes, hypertension, and chronic lung disease. Taken together, the

indirect effects of the pandemic response could exacerbate each of the common

ACEs in children's lives. (p. 6)

The need for learning more about ACEs and protective factors has never been

more important than now. I want to help give educators the knowledge to understand

ACEs, and to understand that they are a protective factor for children with ACEs.

Through a literature review, I will learn ways to make my classroom a safe space where

children feel happy, emotionally safe, and free to take risks. I will explore specific

strategies that make my classroom a trauma informed space, and how to cultivate a safe

space where children experiencing ACEs can develop a love for learning and a love for

themselves. I am interested in learning more about how teachers can be buffers against

the ACEs issue. Furthermore, I want to share my findings with the larger education

community by creating a website to share my findings.

This study is significant because there needs to be awareness and education for those that work with children in school settings. This project will help give educational professionals exposure to background knowledge of ACEs and understand how they can help in creating environments and practices that help children with ACEs thrive better in school. I believe that if teachers are allowed the time to be educated around ACEs and implement appropriate strategies, it could create systemic changes in the development of the children that we serve. My goal for this study is to help inform educational professionals in strategies that help cultivate a space that reflects the needs of children with ACEs.

Chapter Summary

My guiding question for the purpose of this Capstone is*: How do Adverse Childhood Experiences (ACEs) affect children in school and what protective factors can teachers provide for these students?* The Adverse Childhood Experiences Study has shown that Adverse Childhood Experiences are directly linked to negative life outcomes into adulthood. In Chapter One, I have discussed in depth my personal background that has led me to become interested in ACEs. It is my intention to discover how ACEs can affect children and strategies that classroom teachers can use to support these children. I will use this information to create a website for educators to learn about ACEs and develop specific strategies that they can use in their classroom to support students.

In Chapter Two, I will conduct a literature review of the research on ACEs. I will read multiple research articles and studies to synthesize my findings to determine what is being said about ACEs across a variety of reputable sources. I will begin with an

introduction and provide a more in depth overview of the ACEs study. Then, I will break down ACEs into smaller subtopics and discuss a literature review of what researchers have found across the field. I will discuss specific ways ACEs can impact adulthood. Next, I will review what current research says about how ACEs impact children in school. Last, I will identify and expand on important Trauma Informed Practices, tools that teachers can use in their classrooms that can help children that have experienced trauma and ACEs. This information will help me create a culminating website to share my findings. In Chapter Three I will give an in depth description of my project, an informative website with resources for educators. Finally, in Chapter Four I will reflect on my Capstone Project by reflecting upon what I learned throughout this project and conclude my project.

CHAPTER TWO

Literature Review

Introduction

In Chapter One I discussed my personal background and professional experiences that led me to become interested in my research question: *How do Adverse Childhood Experiences (ACEs) affect children in school and what protective factors can teachers provide for these students?* In Chapter Two, I will review the literature that has been done around ACEs and related subtopics. This review of literature will help guide my next steps in creating a website meant to inform educational professionals on my research question and findings.

Due to the complexity of ACEs, there are many related subtopics. In Chapter Two, I will begin with discussing the origin of the ACEs study. Then, I will discuss the impact of ACEs. I will also discuss research around toxic stress, or repeated exposure to stress, how it impacts the developing brain and how this can impact children in school. Finally, I will discuss the research around ACEs protective factors and strategies that teachers can put in place to help buffer the effects of ACEs. I will introduce my Capstone Project, a website to provide a resource for educators around ACEs.

Overview of the ACEs Study

Adverse Childhood Experiences (ACEs) are traumatic experiences that occur before the age 18 (Felitti et al., 1998). These traumatic experiences are defined into the following categories: psychological abuse, physical abuse, sexual abuse, living in a household with dysfunction such as substance abuse, mental illness, a mother being

treated violently, or criminal behavior (Felitti et al., 1998). Research has shown that ACEs negatively affect children into adulthood (Felitti, 2002; Javier et al.; 2019, Larkin et al.; 2012, Nurius et al.; 2015), and that childhood adversities commonly co-occur (Brown et al. 2019, Edwards et al., 2003, Felitti et al., 1998, Tilson 2018). According to the CDC (2019), over 50% of adults have reported experiencing one ACE, and 15% have experienced four or more ACEs.

Research on ACEs primarily began in 1995 when the Centers for Disease Control and Kaiser Permanente in California pioneered the ACEs study (Harvard University, 2020). Since then, ACEs have gained much attention from many groups of professionals from doctors, to educators, to policy makers. Now there is a wealth of research on ACEs. Researchers have conducted a large variety of studies around the topic such as implications of ACEs, ACEs effects on the brain, and protective factors of ACEs to name a few (Mosley-Johnson et al., 2018).

While child abuse and neglect has been happening for centuries, ACEs specifically refer to the accumulation of adverse childhood experiences (Felitti et al., 1998). To understand ACEs from a deeper perspective, we need to look back to the origin of research. The ACEs study began when two physicians, Anda and Felitti, noticed while managing a weight loss clinic that the participants were strangely dropping out of the program at a rapid rate, even though they were losing weight (Felitti et al., 1998). They eventually came to discover one thing the participants that dropped out had in common, a history of childhood abuse (Felitti et al., 1998). They discovered that the participants were using overeating as a coping strategy for previous sexual abuse (Felitti

et al., 1998). Overeating was a defense mechanism of a deeper psychological problem caused by the abuse (Lynch et al., 2013). They found that participants were subconsciously using obesity to deter sexual attention (Lynch et al., 2013). This discovery sparked what we now know as the ACEs study based at Kaiser Permanente's San Diego Health Appraisal Clinic (Felitti et al., 1998).

The ACEs study was unique because it focused on the long term effects of multiple types of childhood trauma that was accumulated, as opposed to focusing on long term effects of single types of abuse (Felitti et al., 1998). Participants of this study were mailed a questionnaire regarding psychological abuse, physical abuse, sexual abuse, exposure to substance abuse, mental illness, violent treatment of mother or stepmother, and criminal behavior in the household (Felitti et al., 1998). The results found a connection between childhood trauma and health risk factors (Felitti et al., 1998). Health risk factors are categorized as smoking, severe obesity, physical inactivity, depressed mood, suicide attempts, alcoholism, drug abuse, parenteral drug abuse, high amount of seuxal partners, and a history of having a sexually transmitted disease (Felitti et al., 1998). The findings of this study were astonishing to the researchers. More than half of the respondents experienced at least one ACE, and 6% experienced four or more ACEs. Interestingly, the prevalence and risk for having these health risk factors (smoking, obesity, physical inactivity, depressed mood, and suicidede attempts) increased as the number of ACEs increased (Felitti et al., 1998). Furthermore, the study found a strong relationship between the number of ACEs and the number of health risk factors that lead to an early death in adults (Felitti et al., 1998).

These findings bring up an important claim in the development of ACEs research: health risk factors that can lead to early death in adults can possibly be used as coping mechanisms for those that have faced ACEs (Felitti et al., 1998). The most prevalent coping behaviors are smoking, alcohol and drug abuse, overeating, or sexual behaviors, which can be used as a psychological relief to alleviate the stress from ACEs (Felitti et al., 1998, Shonkoff et al., 2011). According to Felitti et al, (1998):

In fact, we found that exposure to a higher number of categories of adverse childhood experiences increased the likelihood of smoking by the age of 14, chronic smoking as adults, and the presence of smoking-related diseases. Thus, smoking, which is medically and socially viewed as a 'problem' may, from the perspective of the user, represent an effective immediate solution that leads to chronic use. Decades later, when this 'solution' manifests as emphysema, cardiovascular disease, or malignancy, time and the tendency to ignore psychological issues in the management of organic disease make improvable any full understanding of the original cause of adult disease. (p. 254)

Living in a household where one experiences ACEs can be traumatic and stressful. Behaviors such as smoking, drinking, drug abuse, and sexual behavior are ways that victims of ACEs might manage the stress of living in abuse (Felitti et al., 1998, Shonkoff et al., 2011). This study pioneered the beginning of ACEs research by suggesting to health professionals to consider childhood abuse and trauma as a precursor for disease and early death, and to use this knowledge to create care prevention strategies. As a response to the seriousness and complexity of ACEs, healthcare industries are

creating educational resources and providing preventive strategies to prevent ACEs

(Bethell et al. 2016, CDC, 2019, Javier et al., 2019).

Researchers are claiming that ACEs is a public health crisis that needs attention

(Bethell et al. 2016, Burke Harris 2014, Crouch et al., 2019, Sacks & Murphey, 2018,

Zarse et al. 2019). According to Zarse et al. (2019), "Adverse childhood experiences and

rearing may generate a public health burden that could rival or exceed all other root

causes" (p. 3). Zarse et al. (2019) found that exposure to ACEs increases the risk for a

combination of mental illnesses, addictions, and diseases. According to the Centers for

Disease Control (2019), "Preventing ACEs could potentially reduce chronic diseases,

risky health behaviors, and socioeconomic challenges later in life." (para. 3). Researchers

agree; Mosley-Johnson et. al (2018) stated, "ACEs can also interfere with employability,

housing stability, and social support later in life, which may impact well-being and life

satisfaction overall" (pp. 26–29). These long lasting negative impacts lead into my next

subtopic of my literature review: ACEs impact on adulthood.

ACES Impact on Adulthood

It might be considered a common understanding that adverse childhood

experiences can negatively impact a person's life, but to what extent? Researchers have

found connections between ACEs and diseases, mental health issues, life satisfaction,

addictions, and suicide into adulthood to name some of the impacts ACEs can have into

adulthood (Dube et al., 2001, Haas & Ray, 2020, Holter et al., 2020, Mosley-Johnson et

al., 2018, Shonkoff et al., 2011, Zarse et al., 2019). Exposure to four or more ACEs

increases maladaptive and health risk behaviors which can lead to disease and premature

death (Holter et al., 2020). In fact, one study found that those who have multiple ACEs are almost twice as likely to die before the age of 75 (Holter et al., 2020). Repeated exposure to ACEs inflame harmful health risk behaviors that increase the likelihood of developing chronic diseases (Holter et al., 2020). This section will review the literature around specific impacts that ACEs can have on adults.

Substance Use Disorder

Substance use disorder (alcohol or illicit drug dependence or use) has been associated as a health-risk behavior of those who have suffered from ACEs (Felitti et al., 1998; Shonkoff et al., 2011). In a study done by Bryant et al. (2020), the researchers found that experiencing one or more ACEs predicted having any type of substance use disorder. The ACEs that were the strongest predictors of developing a substance use disorder were parental substance abuse, physical abuse, and sexual abuse (Bryant et al., 2020). In another study done by Holter et al. (2020), researchers found that one of the strongest maladaptive behaviors that was associated with ACEs was substance abuse. Witnessing a parent who has substance use disorders can create a stressful home environment for a child, and may influence that adult child to develop the same behavioral patterns they witnessed of their parents (Borja et al., 2019).

A possible factor as to why ACEs are connected to substance use disorders is due to the immediate psychological benefit that substances offer (Felitti et al., 1998, Shonkoff et al., 2011). Those who suffer mentally and emotionally might find relief in substances and use them as a response to previous trauma (Felitti et al., 1998; Shonkoff et al., 2011).

Therefore, substance use could be a coping mechanism for ACEs victims (Felitti et al., 1998; Shonkoff et al., 2011).

Food Addiction

Addictive behaviors of adults with ACEs can manifest in a variety of ways. A study by Holgerson et al. (2018) found that a higher ACEs score corresponded to a higher likelihood of being positive for food addiction (FA) and more severe food addiction. According to Wiss and Brewerton (2020), "not surprisingly, childhood physical abuse and childhood sexual abuse both increase risk for FA by approximately 90%. Higher numbers of PTSD symptoms predict increased prevalence of FA, and the strength of this association increased when symptom onset occurred at an earlier age" (p. 7). This study found that a larger amount of stress over the lifetime increases impulsivity and food addiction, which suggests that food can be a go-to self-medication (Wiss & Brewerton 2020).

Shonkoff et al. (2011) states that unhealthy lifestyles can be used as coping mechanisms for ACEs,which explains why higher numbers of ACEs are connected to obesity. Similar to substance use, immediate gratification and psychological relief can be found in food for abuse victims, as well (Wiss & Brewerton, 2020). This immediate gratification could help adults with ACEs cope with post traumatic stress (Shonkoff et al., 2011).

Diabetes

Some researchers have found a modest risk between ACEs and developing diabetes (Holter et al., 2020; Huffhines et al., 2016), while others have found a stronger

connection. (Deschênes et al., 2018; Lynch et al., 2013). Reachers agree that the risk becomes more prevalent in those who experience at least four ACEs (Huffhines et al., 2016, Zarse et al, 2019). One study found that as an ACE score increased by one, an ~11% increase in odds of diabetes was associated (Deschênes et al., 2018). A single exposure to ACEs does not imply that adults will get diabetes. Alternatively, the link to diabetes is higher when one experiences severe, chronic trauma as a child (Mosley-Johnson et al., 2018).

Anxiety

Research on the connection between ACEs and anxiety is well established, and a strong connection between multiple childhood adverse experiences and anxiety has been found (Haas & Ray, 2020, Sachs-Ericsson et al., 2017). One study with a large population from the Netherlands found that participants who reported multiple ACEs were more than two times as likely to report a current anxiety disorder than those who responded with having no ACEs (Hovens et al., 2010). A theory developed from the well researched connection between ACEs and adult anxiety is that those who experience unpredictable home environments may not learn how to identify and regulate their emotions (Poole et al., 2017), helping increase the likelihood of anxiety into adulthood.

Suicide

A large body of research suggests that ACEs can lead to attempted suicide among adolescents and adults (Dube et al., 2001, Ports et al., 2017). Similar to diabetes, a significant study on ACEs and suicide attempts found that the higher the number of ACEs an adult has, the likihood of suicide attempts increased (Dube et al., 2001). This

data shows us how ACEs have a long term effect on the likelhood of suicide attempts (Dube et al., 2001). Acording to Ports et al. (2017), "Early adversity can set the trajectory for exposure to these future risks independently, which can accumulate and compound suicide risk over time" (p. 3). The connection found between ACEs and the risk for suicide indicate an urgent need to bring awareness to this issue and create more systemic ways to support children's ability to cope with ACEs.

Psychological Well Being and Life Satisfaction

ACEs are linked with developing psychological disorders and placing people at higher risk for depression, anxiety, behavioral disorders, personality disorders, and high risk behaviors (Mosley-Johnson et al., 2018). ACEs can also impact employability, housing stability, and social support which could impact one's life satisfaction and wellbeing (Mosley-Johnson et al., 2018). Unfortunately, ACEs are correlated with a lower overall wellbeing. Evenmore, higher ACEs scores increase the risk of having a lower well-being later in life (Mosley-Johnson et al., 2018). A study done by Manyema et al. (2018) found that participants who experienced one to five ACEs were three times more likely to report psychological distress, and participants who experienced six or more ACEs were almost eight times more likely to experience psychological distress. On the other hand, mitigating low well-being and low life satisfaction are resilience resources. Social and emotional support, community, and stable social connections can help moderate one's psychological well being (Mosley-Johnson et al., 2018).

Trauma & Toxic Stress

Toxic stress forms when a child experiences strong, frequent, and prolonged activation of the body's stress response system in the absence of a caring, safe adult (Shonkoff et al., 2011). Prolonged exposure to ACEs could create toxic stress that can negatively affect the developing brain (CDC, 2019, Nurius et al., 2016, Sege & Browne, 2017, Shonkoff et al., 2011, Walkley & Cox, 2013). As stated by the CDC (2019) "Toxic stress from ACEs can change brain development and affect such things as attention, decision-making, learning, and response to stress" (para. 3). It's important for educators to remember that the students we teach may be dealing with toxic stress and unsure of how to manage it.

Toxic stress can interrupt healthy brain development that could be the precursor for learning and behavior impairments and physical and mental illness (Sege & Browne, 2017, Shonkoff et al., 2011). Therefore, toxic stress from ACEs can impact a student's school behavior and ability to focus on tasks. Toxic stress impacts the developing brain by obstructing healthy development and creating a weak foundation for learning, behavior, and health (Shonkoff et al., 2011). Outstanding stress can activate the amygdala hypertrophy and create a hyperresponsive stress response system, or an allostatic overload (Borja et al., 2019), and increase fear and anxiety (Shonkoff et al., 2011).

Researchers agree that the accumulation of ACEs can cause toxic stress that can impact children into adulthood. A study by Shonkoff et al. (2011) found the following:

...Stress-induced changes in the architecture of different regions of the developing brain (eg, amygdala, hippocampus, and PFC) can have potentially permanent effects on a range of important functions, such as regulating stress physiology,

learning new skills, and developing the capacity to make healthy adaptations to future adversity (p. e237).

Given this information, one might infer that children with multiple and recurring ACEs could potentially suffer from toxic stress that impairs healthy brain development. According to McInerney and McKlindon (2014),

When exposed to a stressor, the body responds through a *fight, flight, or freeze* response that activates several systems in the body and releases stress hormones that are designed to be protective for survival. However, this response becomes dangerous to the brain, rather than protective, when repeated traumatic experiences lead to an over-reactive stress system. As described by one pediatrician, these children are living in a constant state of emergency and it has very real implications for their brain development and social functioning. (p. 4).

Toxic stress is important for educators to understand and be aware of because it affects our student's learning and concentration abilities (CDC, 2019). Toxic stress can cause children to feel overstimulated with emotions and have difficulties putting feelings into words (Walkley & Cox, 2013). Teachers can use this information to inform their practices by giving students breaks when children are feeling overwhelmed, and by giving more wait time to allow students to process through emotions so they don't become overwhelmed.

ACEs Effects on School and Learning

Childhood is an opportunity for tremendous growth and development, and though children are resilient, children who are impacted by ACEs cannot shut off their traumatic

experiences when they walk into their classrooms. According to McInerney and

McKlindon (2014), "Physiological changes to children's brains as well as emotional and

behavioral responses to trauma have the potential to interfere with children's learning,

school engagement, and academic success" (p. 3). According to multiple studies, children

who have four or more ACEs are at significant risk of having learning and behavioral

problems such as depression, anxiety, bullying and suicidality (Burke et al., 2011; Haas &

Ray, 2020). Children with ACEs are significantly more likely to repeat a grade level and

less likely to show the ability to stay calm and in control when faced with challenges

(Bethell et al., 2016).

The following statistics paint an alarming picture. Students with ACEs are almost

three times more likely to experience academic failure, five times more likely to have

severe attendance problems, six times more likely to have social behavior problems, and

almost four times more likely to report frequent poor health (Weber, 2020). These

statistics show just some ways in which ACEs can affect children in school. Although

this data is alarming and saddening, we must be aware of the strategies that educators can

adopt in schools and classrooms to help support children impacted by trauma, stress, and

adversity.

Trauma Informed Practices

Trauma informed practices is a popular terminology that describes ways to

respond to ACEs (Bethell et al., 2016). Schools play an important role in providing a safe

environment for children that surrounds them by caring adults. Research has found that

trauma informed practices can help address the needs of children in school who have

experienced trauma (McInerney & McKlindon, 2014). Educators can use what we know

about trauma to respond to students and positively impact their school and learning

experiences and create a school culture that is sensitive to all learners (McInerney &

McKlindon, 2014). Some researchers suggest that schools should adopt trauma informed

practices to create trauma informed schools, especially since it could be likely that we do

not know who our students with ACEs are (McInerney & McKlindon, 2014). According

to McInerney and McKlindon (2014):

> *Trauma-informed* approaches are not new – they have been implemented in many
>
> fields including the medical profession and our judicial system. The lessons
>
> learned from these evidence-based approaches can be directly applied to
>
> classrooms and schools. At the heart of these approaches is the belief that
>
> students' actions are a direct result of their experiences, and when students act out
>
> or disengage, *the question we should ask is not "what's wrong with you," but*
>
> *rather "what happened to you?"* By being sensitive to students' past and current
>
> experiences with trauma, educators can break the cycle of trauma, prevent
>
> re-traumatization, and engage a child in learning and finding success in school. (p.
>
> 2)

Trauma informed practices are important for teachers because they allow

educators to understand children's behavior through a lens of what has happened to a

child to initiate a certain behavior, instead viewing behavior as a choice a child makes

(McInerney & McKlindon, 2014). The educator in a trauma informed classroom needs to

understand that their students may be dealing with various stressors in their personal life,

and that behavior may be a result of that trauma happening outside of the classroom. A trauma informed classroom needs to be rooted in routine and predictability. The educator must also be flexible in responding to different student's needs at a certain time. Below I will discuss different classroom practices that help children manage stress and emotions, which may help in regulating behavior.

Mindfulness

One trauma informed practice in schools is Mindful Moments (Udesky, 2018). In this practice, the teacher leads students in a routine that allows students to sit quietly while the teacher rings a chime (Udesky, 2018). Students breathe in and out over a span of three minutes. The students can quiet their mind and practice deep breathing exercises (Udesky, 2018). Teachers who use this strategy have reported less behavior issues in their classes (Udesky, 2018).

Role Playing

Another practice that teachers can use in the classroom is modeling positive behavior and problem solving strategies through role playing. During my time teaching kindergarten in Los Angeles, I had the privilege to be involved in a partnership with the UCLA Lab School, an inquiry based elementary school with skilled demonstration teachers. I was trained on how to facilitate what was called a "fishbowl" activity. The class would sit in a circle and the teacher would describe a problematic scenario for the students to discuss ways to solve the problem. Issues to role play could be anything from a bullying situation to promoting inclusion. The scenario should reflect the needs of the teacher's unique group of children. Then, the teacher asks for volunteers to act out how to

solve the problem in the middle of the circle for the other students to watch. The goal is for the students to learn problem prevention and problem solving strategies through modeling. When problem solving strategies are modeled and discussed, students will be more likely to use positive problem solving strategies. Role playing will not only greatly benefit children with ACEs, this activity benefits all children's problem solving strategies.

Child-Centered Play Therapy (CCPT)

Children with ACEs are exposed to experiences and situations which can create a more negative outlook and mindset of oneself (Haas & Ray, 2020). One way to help children with ACEs is to help give them more positive experiences that contradict traumatic experiences (Haas & Ray, 2020). Haas and Ray (2020) set out to research the effects that Child-Centered Play Therapy (CCPT) had on children with four or more ACEs. They found that through play therapy, children demonstrated significant improvements in prosocial behaviors (Haas & Ray, 2020). Haas and Ray (2020) suggest that play therapy allows children to engage in positive new experiences that give them an opportunity to contradict negative experiences.

In the study, children with ACEs who engaged in CCPT showed a significant increase in self-concept and decreased externalizing, and overall behaviors (Haas & Ray, 2020). This study was done in a preschool with children from low-income families (which is associated with ACEs [Haas & Ray, 2020]). The results found that the children who experienced CCPT had a significant decrease in disruptive behavior, aggressions, and attention problems (Haas & Ray, 2020). The study measured children's emotional

symptoms, conduct problems, hyperactivity and attention problems, peer relationship

problems, prosocial behavior, and total difficulties (Haas & Ray, 2020). The child

participants in this study demonstrated a decrease in all areas after receiving 24 play

therapy sessions that were 45 minutes each (Haas & Ray, 2020). Furthermore, this study

found the relationship between the play therapist and the child seemed to provide

reparative experiences for children with ACEs (Haas & Ray, 2020).

This information is important to my research question because this research

shows that play can significantly reduce children's total difficulties in behavior and

promote self-actualization and confidence for children with ACEs (Haas & Ray, 2020).

Although educators are not, nor should, attempt to be play therapists, we can use this

research to inform us and guide classroom practices. Play can be a positive experience

for children with ACEs which can contradict negative experiences (Haas & Ray, 2020).

I've noticed several benefits of incorporating play in my own first grade

classroom. For example, students who had shown difficulty getting along with each other

were able to demonstrate cooperative relationships, problem solving skills, and teamwork

with peers after I included two hours of playtime a week over a span of several weeks.

One limitation of my observation is that I do not know if these children had ACEs. The

playtime was able to facilitate positive experiences between children which helped build

relationships. I even noticed that the amount of play that I included during the week had

an impact on the amount of unwanted classroom behaviors I noticed during that week.

Mindfulness-Based Mind Body Approach (MBMB)

Another valuable trauma-informed practice that provides support for those with trauma and toxic stress is mindfulness-based, mind-body approaches (MBMB) (Bethell et al., 2016). Practices categorized by MBMB are connected to increasing healing, resilience, and self regulation of stress, emotions, and behavior (Bethell et al., 2016). According to Bethell et al. (2016), "Purposeful, moment by moment presence and self-awareness of one's breathing, body sensations, emotions, and/or thoughts in a non-judgmental manner (e.g., mindfulness) is a common, cross-cutting component of most mind-body methods, like biofeedback, guided imagery, yoga, hypnosis, and meditation" (p. 3). A study done by Bethell et al. (2016) showed that MBMB approaches promote resilience in children, however, they found a delay and underuse of these methods to prevent ACEs.

This is important to my research question because MBMB practices promote resilience in children with ACEs and can improve their ability to manage chronic stress (Bethell et al., 2016). Mindfulness practices can be used by educators to promote resilience and school success (Bethell et al., 2016). There are a wealth of resources available to educators to use MBMB. I will provide resources for educators who are interested in implementing Mindfulness Based Mind Body Approaches to their classrooms on my website.

ACES Protective Factors and Resilience

Although ACEs are connected to many negative effects, researchers agree that exposure to ACEs does not condemn a child to a negative adulthood (Crouch et al., 2019, Javier et al., 2019). "Protective factors are characteristics associated with a lower

likelihood of negative outcomes or that reduce a risk factor's impact. Protective factors

may be seen as positive countering events." (*Risk and Protective Factors*, n.d.) A

protective factor serves as a shield to help children build resilience. Resilience improves

the ability to overcome adversity and show heightened psychological functioning

(Tranter et al., 2020).

Protective factors can occur in different contexts, for example in relationships,

community, and society (*Risk and Protective Factors*, n.d.). Some examples of prominent

protective factors are safe, stable, nurturing relationships, safe environments, and social

connectedness. In fact, early childhood is an opportunity for protective factors to prevent

damage and pave the way for healthy development (Sege & Browne, 2017). With the

support of different protective factors, the effects of ACEs can be decreased through

positive experiences that build resilience (Crouch et al., 2019, Sege & Browne, 2017).

Safe, Stable, Nurturing Relationships

One of the most important protective factors against ACEs is a nurturing,

supportive relationship with an adult (Crouch et al., 2019, Sege & Browne, 2017). We

know from attachment theory that developing brains need warm and responsive care from

an adult which lays the foundation for a well adjusted adult who is self-assured and can

have successful relationships (Sege & Browne, 2017). Effective parenting can help secure

children experiencing ACEs (*Risk and Protective Factors*, n.d.). Children want and need

to feel cared for, protected, and nurtured and this can help develop a child's sense of self

worth (Haas & Ray, 2020). It is important for an adult to show love and support through

safe, stable, nurturing relationships (SSNRs) (Crouch et al., 2019). The CDC considers SSNRs as a prevention strategy for child maltreatment (Crouch et al., 2019).

Children also need caring adults outside of their homes to set rules and boundaries and to help build a sense of trust and belonging (Sege & Browne, 2017). These positive adult-child relationships are connected with positive child well-being outcomes (Sege & Browne, 2017). Healthy adult relationships provide a shield for children with ACEs that promote secure attachment and more emotionally competent children (Sege & Browne, 2017).

This finding is important to my research question because teachers spend a significant amount of time with their students which allows teachers the opportunity to build meaningful relationships with students. Teachers certainly do not and cannot replace a child's parent, however, teachers can have a significantly positive impact on their students by being a positive adult role model that children can trust. These are relationships that can serve as SSNR, and help buffer trauma from ACEs and build resiliency. Teachers should invest time throughout the school year in developing relationships with their students by showing students that they care about their wellbeing, student's interests, and their future.

Safe, Stable, Protective Environment

Another important protective factor for children with ACEs is having a safe, stable, protective environment (Crouch et al., 2019, Sege & Browne, 2017). This type of environment can benefit children's physical, emotional, social, cognitive, brain and behavioral health and development (Sege & Browne, 2017). Safe and stable housing,

living in a safe neighborhood, good nutrition, sufficient sleep, and quality learning

opportunities all contribute to a safe, stable, and protective environment (Crouch et al.,

2019, Sege & Browne, 2017).

It is crucial for teachers to understand how a safe environment provides protection

for children with ACEs. This is so important because our students spend a significant

amount of time in our classrooms, the classroom environment in itself can be a protective

factor for children with ACEs. Teachers could benefit their students by creating

classroom environments that promote inclusion, risk taking, team based rewards, respect,

responsibility, character education, and much more. Some ways teachers can create a safe

environment is to collaborate in creating classroom agreements, assign student's class

jobs, provide team building activities, value student input, and spend ample time building

relationships. Teachers can create a haven for students by investing time to build a

community where children feel physically and emotionally safe. Having a safe, stable,

and protective environment is a protective factor against the negative impact of ACEs

(Crouch et al., 2019, Sege & Browne, 2017), and a very important way that teachers can

help children with ACEs.

Social Engagement and Connectedness

Another contributing protective factor for children with ACEs is being connected

to social institutions and feeling connected to others (Sege & Browne, 2017). Creating a

safe, stable, and equitable environment where children can experience connections help

children's intellectual, emotional, and social development (Sege & Browne, 2017). These

types of environments help children feel confident, important, connected, loved, and

valuable, and therefore helps give them an optimistic view of the future (Sege & Browne, 2017). Educators can provide this type of protective factor for all students by creating a strong sense of belonging and community in the classroom and school environment.

One way educators can promote social engagement and connectedness in their classrooms is by incorporating a Morning Meeting in their daily schedule. Morning Meetings allow students to create relationships and shared experiences with their teacher and peers. Morning Meetings can consist of a greeting, morning message, sharing personal news, and community building activities. I know from my own experience that Morning Meeting helps build social relationships and connections in the classroom environment which greatly benefits all children. Specifically, I've noticed children that are usually reserved will take risks by building relationships with new friends during partner activities. Morning Meetings give children the opportunity to discover similarities with one another, and even further to discover their own self. Daily Morning Meetings would be an extremely beneficial strategy for children with ACEs to build positive relationships and develop secure relationships due to the relationship building nature of Morning Meetings.

Another idea to develop social connections for children with ACEs is to incorporate games in the classroom. Charades, jeopardy, and board games are all ways to create social engagement and connections in the classroom. This would be a great way to facilitate social engagement specifically in classrooms of older students who may spend more time focusing on academic content as opposed to building relationships. Games can create an exciting and fun environment for students to play, laugh, and take risks.

Conclusion

In Chapter Two, I conducted a literature review of ACEs. I broke ACEs down into subtopics and discussed what current research has found. I gave an overview of the original ACEs study, the impact ACEs have, ACEs and school, trauma informed practices, and finally discussed ACEs protective factors and resilience. I discussed the original ACEs study and provided a background of how research of multiple exposures to child adversity developed into the term *ACEs* which is now widely known. The section that discussed implications for adulthood discussed ways that ACEs can affect adults later in life and gave a rationale as to why it's important for professionals to work together to create models to address ACEs while children are young. The section around trauma informed practices discussed different strategies to respond to ACEs. Finally, the section around ACEs protective factors and resilience discussed how creating positive social structures in childrens' lives can mitigate effects of ACEs.

My research question is: *How do Adverse Childhood Experiences (ACEs) affect children in school and what protective factors can teachers provide for these students?* The literature review of the subtopics related to my search question help provide a context to understand how ACEs can affect children, and what protective factors educators can provide for children with ACEs. Fortunately, there is a wealth of research around ACEs and the vast extent of subtopics. We know there are protective factors that can help mitigate the long-term effects of ACEs.

In Chapter Three, I will discuss my capstone project methodology and look further into my research question: *How do Adverse Childhood Experiences (ACEs) affect*

children in school and what protective factors can teachers provide for these students? I

will provide an overview of my Capstone Project; a website meant to be a resource for

educators. I will discuss my audience for my project, along with the context for my

project and the framework for my website. I will end with describing the timeline for my

Capstone Project.

CHAPTER THREE

Project Description

Introduction

I began my Capstone research project with the mission to answer my research

question: *How do Adverse Childhood Experiences (ACEs) affect children in school and*

what protective factors can teachers provide for these students? I became captivated with

ACEs after I heard a Ted Talk by Nadine Burke Harris (TED, 2015). I was fascinated by

how easily different variables, both risk factors and protective factors, can have such a

strong influence on a person's life choices and even their health outcomes. I chose this

question because I want to make a difference in my student's lives and share my findings

with other educators. I want to raise awareness of ACEs for teachers and those who work

with children. I believe more universal models to address ACEs are necessary,

specifically in schools, to provide stronger protective factors for students. I am hoping

that my project can be a small step in this direction. I believe educators and those who

work with children need to be trained in ACEs and teaching practices that support all

students.

In Chapter One, I gave my personal background that developed my interest in this

topic. I described my personal childhood experiences along with my experiences as a

teacher of children with ACEs. In Chapter Two, I conducted a literature review on the

current research around ACEs. I divided my literature into different subtopics that relate

to ACEs. From my literature review I found as the number of ACEs a child has increases,

so does the likelihood for negative effects. Fortunately there are many protective factors

that can help deter the long term negative effects of ACEs. I also discovered that a positive and caring adult along with a safe and secure environment are two important protective factors for children with ACEs. I discussed ways that teachers can help serve as a protective factor for children with ACEs, and that protective factors serve as a shield to help children build resilience.

In Chapter Three, I will provide an overview of my culminating capstone project; a website that presents my findings of ACEs to inform educators, administrators, parents, and others who work with children. My website will educate visitors on ACEs and provide ways that teachers can create classrooms that may help support children with ACEs. I will discuss why I chose to create a website, the steps I took to create this website, the intended audience, a project description of my website, and finally a timeline for my project. In the next section, I will discuss the rationale behind my project.

Rationale

I decided to build a website because in our fast-paced society I felt that a website would be the most accessible way to share my project with the public. Information is easily accessible online, one can click a link and discover the helpful and important information my project provides. Teachers are very busy professionals, and I believe that a website is the most efficient way to share my information and strategies in a timely manner. I plan on spreading awareness for my website in several ways. I will link my website underneath my email signature for my work and personal email to reach those who I communicate with daily. I will also link my website to my social media channels. In addition, I will share my website with the staff at the school where I teach.

My project is important for educators because our daily classroom practices add up over time and have a great impact on the students we serve. Educators have an amazing opportunity to provide an environment where all children can succeed and flourish. If educators are informed on issues that children might be experiencing and understand some simple ways to help by using classroom practices, we can collectively help support children impacted by ACEs. This information is useful to educators because it gives simple practices to implement in classrooms that can provide important protective factors for children that could even help give a child tools that may change the course of their life. Even simple strategies such as Mindful Moments or practicing problem solving by role playing can have a positive impact on a student's ability to regulate their emotions and behaviors. My hope is that my project brings awareness to how ACEs are impacting our students and ways that teachers can support these students with the time that they are given. In the next section I will discuss my project overview in more detail.

Project Overview and Description

My capstone project that I created is a website to inform educators on my research question: *How do Adverse Childhood Experiences (ACEs) affect children in school and what protective factors can teachers provide for these students?* I created this website as a tangible resource for educators, administrators, parents, policymakers, and anyone interested in learning about ACEs who might work directly with children or have a position that influences children. My website will remain live for those to visit and return to. My goal with this website is to spread awareness of the ACEs issue, and to inform

those who work with children of ways that they can serve as a protective factor in children's lives. It is a starting place to learn about ACEs and helpful classroom practices.

My website is organized into the subtopics that I researched in my literature review, so the information that I provided is well researched and backed up by many studies. I created this website as a central space for those who are interested in learning about how Adverse Childhood Experiences affect children in school and protective factors that teachers can provide for students. My intention with this website is to spread awareness of the ACEs issue, and how to best serve children who experience ACEs. There is a section where visitors can view *protective factors for children with ACEs*. This is where I describe ways that adults can help buffer the effect of ACEs. I give specific ways that adults can support children with ACEs that are backed by research. This is a very important part of the project, as my intention is to help educate adults, especially teachers, who work with children on how they can help serve the needs of children with ACEs. Next I will discuss my project framework and website design strategy.

Project Framework

The paradigm that I used for my capstone project is a Wix website. I chose this platform for my website because in our era of technology, most educators are familiar with navigating websites. Further, this is a website that educators can access at their own convenience. I felt that a website would be a more appropriate method of communicating my findings for a couple of reasons. First, it is free and does not cost money such as professional development may gather some costs. Second, this information will remain available at the convenience of the visitor. There will be no scheduling issues in the way

of delivering the information. Also, this is a tangible way to make my content accessible

to all. I will also be able to update my website as I gain new knowledge around this topic.

The framework that I used to create my project is a web design framework by

Hasan and Abuelrub (2011). In *Assessing the Quality of Web Sites*, Hasan and Abuelrub

(2011) discuss four areas to cultivate a quality web design: content, design, organization,

and user-friendliness. This framework discusses step by step how to create a quality

website using these four constructs. In order to create a high quality and user friendly

design that is easy to navigate, I used this framework to guide my steps in my website

development.

Audience

The audience of my capstone project will primarily be teachers, parents,

administrators, school counselors, social workers, and any others who are interested in

learning about my research question: *How do Adverse Childhood Experiences (ACEs)*

affect children in school and what protective factors can teachers provide for these

students? This is the intended audience for my project because these adults work closely

with children, and they have the opportunity to be protective factors for children with

ACEs. My hopes are that my website will spark an interest in ACEs for my audience, and

to spread awareness which will ultimately help all children succeed.

Project Timeline

My project timeline will take place from June 2022-August 2022. I will create a

website layout, organize and create the content during this time. I will use Wix to create

my website. In June and July 2022, I will create the template, layout, and organization of

content. Then, in July and August 2022 I will create the content for my website. I will use August 2022 to revise and edit my webpage based on *Assessing the Quality of Web Sites*, Hasan & Abuelrub (2011). My website will be ready to publish in mid August 2022.

Summary

My capstone research question asks the question: *How do Adverse Childhood Experiences (ACEs) affect children in school and what protective factors can teachers provide for these students?* The purpose of my Capstone Project is to share the information that I learned from my literature review of ACEs on a well designed and user friendly website to help educate teachers on this complex topic of ACEs. In Chapter Three I discussed how I developed my website, the research framework I used, along with my intended audience and project timeline. In Chapter Four I will reflect upon my experience in creating my capstone project and close my paper with a final reflection.

CHAPTER FOUR

Reflection

Introduction

This Capstone Project asked the question: *How do Adverse Childhood Experiences (ACEs) affect children in school and what protective factors can teachers provide for these students?* ACEs are adverse childhood experiences such as abuse, violent households, parent divorce, neglect, parent substance abuse, among many more. ACEs refers to the accumulation of traumatic childhood experiences, which can have negative long term effects for children.

In this final chapter, I will begin by discussing my personal background. This is where I explain my personal interest that led me to want to create this project. Next, I will discuss how I plan to communicate my results with other professionals along with my future plans on what I'd like to do with my project. I will then reflect upon my personal learnings throughout this experience and discuss important research learnings, as well. I will discuss the benefits my project has to the profession, and the implications and limitations of my project. I will conclude with a final reflection of my project.

Personal Background Review

I became interested in ACEs when I heard a Ted Talk by Nadine Burke Harris while I was earning my undergraduate degree from the University of Minnesota. I felt that the connection between adverse childhood experiences and negative outcomes in life was so devastatingly clear, and I felt a strong pull to try and do something to make a difference in the lives of children. When I became a teacher I knew I wanted my

classroom to be a safe place where children can learn through play, feel that they belong to a community, and develop a love for school. I knew that if I provided a classroom environment with these qualities then I would impact children who may have ACEs, and hopefully their positive experiences in school could help buffer some effects of trauma. When it became time for me to choose a Capstone Project to fulfill my Master of Arts in Teaching, I knew exactly what I wanted to do. I wanted to create a project that spread awareness around ACEs and to inspire educators with ways to make their classroom a safe place where children with ACEs can thrive, and this project has allowed me to do just that. Overall, I've been interested in ACEs since I was introduced to the concept, and I knew that I wanted to create a project that allowed me to spread awareness of this prevalent issue that children face. In the next section I will discuss my future plans for my capstone project and how I will share my project.

Communicating Results and Future Plans

This capstone project will allow me to contribute professionally to my school community, and evenmore, the educational field. My website is a source for educators, administrators, and parents to be informed on ACEs' connection to negative effects across the lifespan. My website can be found at mmoorer01.wixsite.com/aces4educators. An important goal of mine is for educators to visit my website and be inspired by ways to create a trauma informed classroom by including mindful moments, community building activities, guided imagery, play, and a calming corner to name a few ideas that I share. If my website can inspire an educator to include just one of these practices, I will feel as though it is a step towards success in the benefit of children's wellbeing.

I plan on sharing my website with others by providing a link to my website in my email signature. Every time I send an email the recipient will be able to look at my website. I believe that this will help spread my message to the public. I will also share my website with my colleagues and open up a discussion of how our school could implement different practices that help provide protective factors for children with ACEs. Overall, my strategies in sharing my website are to share it with my colleagues along with linking my website on my email signature to reach a larger audience.

This project will be an ongoing professional endeavor for me. I plan on continuously updating my website as I learn and try new ways to create a trauma informed classroom. I will get ideas from professional developments, my colleagues, and more research that I do independently. As I collect more resources I will update my website to reflect my new learnings and teaching strategies. I hope to become involved in creating a professional development committee on trauma informed practices at my school in the future, as well. This team would meet to discuss ways that our school can develop strong relationships with students by creating more practices that support building relationships and the trauma informed practices stated in my Capstone Project. This way, my project can become an entire school wide initiative. In the next section, I will discuss what major learnings I've made throughout this process.

Major Learnings

Personal Process. This project taught me many valuable lessons. I've learned how to develop patience and commitment towards a long term goal. I began my capstone research in the Fall of 2020 and am finishing my project in the Summer of 2022. This

project has taken two years, and I've learned that small increments over a long period of time are what helps you reach a goal. This is a lesson from this project that I can apply in many other aspects of my life, and something I can even share with my students.

As a researcher, I've learned that it's very important to be thorough in your work. I spent many hours finding and reading research articles and cross examining findings from different sources to determine what research has found across the field. At times this process was tedious and time consuming, but it allowed me to create a quality project with reliable information. This process as a researcher was challenging and therefore extremely rewarding. This experience will help me be thorough in my future work endeavors.

I've also learned that having a community of support is extremely important. Luckily, I had very helpful support between my professors and my reviewers that have given me constructive feedback on my work. Having these supports was incredibly helpful when I had questions and needed help with a certain direction to go. Overall, the major learnings that I am able to take away from this process is that sticking with a goal over a long period of time isn't easy but it's worth it, being thorough in your work will help create quality work, and having a community of support is crucial. Next, I will reflect upon my literature review and discuss the most important findings that have influenced my project.

Research. Adverse Childhood Experiences (ACEs) are traumatic experiences that occur before the age 18 (Felitti et al., 1998). These traumatic experiences are defined into the following categories: psychological abuse, physical abuse, sexual abuse, living in a

household with dysfunction such as substance abuse, mental illness, a mother being treated violently, and criminal behavior (Felitti et al., 1998). I narrowed my research by creating a literature map with the categories: ACEs, ACEs and brain development, ACEs and life opportunities, and protective factors. This helped create categories for me to sort the information I found.

One of the most important findings of my literature review is the strong connection between ACEs and negative health and life outcomes. There is a general agreement that having ACEs is connected to engaging in risky health behaviors that may be used to cope with trauma. The most prevalent coping behaviors are smoking, alcohol and drug abuse, overeating, or sexual behaviors, which can be used as a psychological relief to alleviate the stress from ACEs. Research has shown that ACEs negatively affect children into adulthood and that childhood adversities commonly co-occur. Research shows that ACEs is connected to having a substance use disorder, food addiction, diabeties, anxiety, suicide, and an impact on psychological wellbeing and life satisfaction. I also found it important that children with ACEs may have increased learning and behavioral difficulties. There's an increased risk of having problems in school and repeating a grade level. This research serves as a large part of my rationale for my project. Since there are so many possible negative outcomes associated with ACEs, it's extremely important that educators become trained on this issue and learn ways to support children in the classroom.

Another important piece of my literature review is the influence that protective factors have. A protective factor is a support that can help buffer the impact of ACEs.

Protective factors can occur in different contexts; relationships, community, and society. Examples of protective factors for children with ACEs include safe, stable, nurturing relationships, safe, stable, protective environments, and social connectedness. There is an incredible opportunity for schools and teachers to create protective environments for all children, especially those that experience ACEs.

Teachers may feel that they are not trained enough to work with children with trauma. However, my project encourages teachers to try one or two simple trauma informed practices that I provide on my website. Teachers do not have to be therapists, my goal is to make it simple and easy for educators to include practices that help children with ACEs thrive in school. The research shows that childhood adversity has direct negative effects. Teachers and administrators would greatly benefit from implementing trauma informed practices into their schools and classrooms to help mitigate these effects.

Benefits to Profession

My website takes the large issue of ACEs and suggests practical ways for teachers to create classroom environments that serve as protective factors for all students. My website encourages teachers to create strong classroom communities and build relationships with students. I suggest quick activities that teachers can try that may only take five minutes or less. I hope that my website opens up a larger conversation in schools around teaching strategies that respond to trauma. I also hope that teachers implement strategies from the calm corner to mindful moments at their own pace and comfort level. I want to make trauma informed practices manageable for busy teachers, and I believe I did that with the layout and design of my website. This benefits the

profession by giving teachers quick and easy ideas on how to create a more trauma

informed classroom at their own pace. I believe that my project will help teachers begin

by trying one or two strategies, and after noticing the benefits these activities may have,

they continue in their professional development journey.

Implications and Limitations

My hope is that my website inspires teachers to create more trauma informed

classrooms by prioritizing student wellbeing and building meaningful relationships, and

seeing a child as a whole person as opposed to a behavior problem. I hope that my

website encourages teachers to reserve time for social and emotional learning and

activities such as mindful moments, role playing, and community building activities. My

website may inspire a school community to embark on a professional development

journey around ACEs and to create a trauma-informed school. My website could help

encourage people to support programs which help train schools around ACEs. With the

research that we have, it is clear that ACEs is an issue that is worthy of investing time

and resources towards.

There are limitations in finding ways to address trauma in the classroom. One

limitation is that all children are very different. All children do not respond to certain

trauma informed practices the same. This issue is very complex, and although a teacher

may use the strategies that could help address trauma, these practices are not expected to

reverse the effects of trauma. Children may experience trauma so deep that therapy is

needed to address the severity of the trauma. This website does not substitute the need for

therapy or counseling services, just as teachers are not expected to be therapists.

Summary

My research question was *How do Adverse Childhood Experiences (ACEs) affect children in school and what protective factors can teachers provide for these students?* The goal of my capstone project was to design a website that served as a resource for teachers of children with ACEs to create classrooms that include trauma informed practices. I conducted a literature review to synthesize what researchers have found across the field. I researched the negative effects that ACEs can have on children and adults, along with protective factors that can help buffer these negative impacts. I summarized several trauma informed practices that teachers should consider using to address trauma in the classroom.

In this final reflective chapter, I gave a review on my personal background and why I chose to create my project on ACEs. I communicated my future plans for my project and reflected upon my capstone process on a personal level and on the research. Then, I discussed the benefits to the profession and concluded with implications and limitations of my project. Chapter Four allowed me to reflect upon the capstone process from start to finish.

Through this process it became increasingly clear that children are coming to our classrooms with both positive and negative experiences that they cannot shut off when they are at school. It solidified the importance of looking at the whole child and asking, "What *happened* to you?" My mission of my Capstone Project is to improve classrooms through trauma informed practices, and this is just the beginning in my professional work. A safe school environment for children with trauma is critical. The need for

teachers to have the time and resources to be educated around ACEs and trauma informed practices is urgent. My hope is that my project serves as an entry point for teachers to understand ACEs and how it affects children, and how they can create classroom environments that serve the needs of all children.

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