A QUANTITATIVE EXPLORATION INTO THE SCREENING PRACTICES OF LICENSED MENTAL HEALTH PROVIDERS FOR PARENTAL ADVERSE CHILDHOOD EXPERIENCES WHEN WORKING WITH CHILD AND ADOLESCENT CLIENTS

A Dissertation Proposal

Presented to

The Graduate Faculty of The University of Akron

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

Mindy Armbrust Beach

December, 2021

A QUANTITATIVE EXPLORATION INTO THE SCREENING PRACTICES OF LICENSED MENTAL HEALTH PROVIDERS FOR PARENTAL ADVERSE CHILDHOOD EXPERIENCES WHEN WORKING WITH CHILD AND ADOLESCENT CLIENTS

Mindy Armbrust Beach

Dissertation

Approved:	Accepted:
Advisor Dr. Heather Katafiasz	School Director, School of Counseling Dr. Varunee Faii Sangganjanavanich
Committee Member Dr. David Tefteller	Acting Dean, College of Health and Human Sciences Dr. Timothy McCarragher
Committee Member Dr. Rikki Patton	Interim Director of the Graduate School Dr. Marnie Sanders
Committee Member Dr. Wondimu Ahmed	Date
Committee Member Dr. Delila Owens	

ABSTRACT

Previous research indicates that screening for parental Adverse Childhood Experiences (ACEs) is a significant tool for identifying children at risk for maltreatment, in order to intervene and prevent the long-term effects of ACEs. Pediatricians have been tasked with screening for parental ACEs at well child visits, as first line of defense. Studies show that less than half of pediatricians are screening for ACEs (Szilagyi et al., 2016) and there was no literature found on the screening practices of mental health providers.

The purpose of the current study was twofold, 1) to increase our understanding of licensed mental health provider's familiarity with the seminal ACE study and their endorsement of the impacts of parental adverse childhood experiences (ACEs), and 2) to understand the influence that these factors and licensed mental health provider's personal exposure to ACEs have on their practice of screening for parental ACEs. A total of 277 mental health providers, licensed in the Midwest, completed a web-based survey consisting of a demographic questionnaire, an adapted version of the American Academy of Pediatrics (AAP) 85th Periodic Survey (PS85) (AAP, 2013), and an ACE questionnaire that included both traditional and expanded ACE items for the present study.

Through the employment of three separate simple linear regressions, the results of this study indicated that 1) degree of familiarity with the seminal ACE study was not a significant predictor of frequency of screening for parental ACEs, 2) degree of endorsement of the impacts of parental ACEs is a significant predictor of frequency of

screening for parental ACEs, and 3) personal exposure to ACEs was a significant predictor of frequency of screening for parental ACEs. However, previous literature and descriptive statistics of this study indicate that mental health providers are screening for parental ACEs more than pediatricians, which would indicate an increased awareness of the need to screen, as well as a need for professional collaboration to increase the opportunity for identification of at-risk youth. Clinical, research, and ethical implications are discussed. Limitations and future research recommendations are presented.

ACKNOWLEDGEMENTS

I would like to start by expressing my unending love and gratitude to my beautiful children, Linus, Olive, Ansel, Etta, and Jasper, whose very existence inspires me to learn all that I can about parenting, so that I may be the best mother possible for each of them; my mother, Brenda, who raised me to be a systemic thinker and encourages me to never stop learning and pursuing my dreams; and the best friends a girl could have, Karen, Kristy, and Kristi, who get me to my core and love me unconditionally. Your spirits encourage me to be the best version of myself and your unfailing support made it possible to pursue my dream of a doctorate under unthinkable circumstances. I love you all more than monkeys and pickles.

I would like to express my deepest and sincerest gratitude to my advisor, dissertation committee chair and mentor Dr. Heather Katafiasz as well as committee members Dr. David Tefteller and Dr. Rikki Patton. Thank you for all the time you invested in me and your enduring patience walking beside me and guiding me through my entire graduate school journey. A special thank you to Dr. Wondimu Ahmed for his patience and expertise, as a committee member and methodologist, and for never giving up on me through round after round of feedback and questions. I would like to thank Dr. Delila Owens as a committee member and a professor, for her insight through the years and feedback as I worked my way through this dissertation. I have learned so much from all of you about what it means to be a therapist and an academic.

Last, but not least, I would like to thank my cohort family, Aaron, Brooks, Chase, Emily, Fawn, and Momo. The last three and a half years would have been unbearable without you all. It is unimaginable to find seven people who blend and complement each other so seamlessly. Thank you for feeling my pain and celebrating my victories. Thank you for doing this journey with me and everything that entails. You cannot possibly know how much each of you means to me.

TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

This study intends to start a dialogue surrounding mental health providers' (professional counselors, social workers, and marriage and family therapists) awareness of the intergenerational impacts of childhood trauma. Adverse Childhood Experiences (ACEs) are traditionally understood to be ten experiences separated into three main categories: 1) abuse (physical, emotional, and sexual), 2) neglect (physical and emotional), and 3) household dysfunction (parental separation/divorce, domestic violence exposure, household substance abuse, household mental illness, and household incarceration). The seminal study on ACEs was conducted from 1995 to 1997 (Felitti, 2018; Felitti et al., 1998; Substance Abuse and Mental Health Services Administration [SAMHSA], 2018; Stevens, 2012, Wolfe et al., 2019). The study yielded three main findings. The first was that there is a direct link between ACEs and adult-onset chronic disease, mental health issues, high risk behaviors, injury, infectious disease, maternal health, incarceration, learning, relationship distress and opportunities (Burke Harris, 2014; Centers for Disease Control [CDC], n.d.a; Felitti, 2018; Murphy et al., 2014; SAMHSA, 2018; Schofield et al., 2018; Stevens, 2012; Wolfe et al., 2019). Secondly, ACEs are common (Burke Harris, 2014; CDC, n.d.a; Felitti, 2018; SAMHSA, 2018; Stevens, 2012; Wolfe et al., 2019). The results found that 67% of participants

experienced at least one type of adverse childhood experience (ACE) exposure and of those individuals, 87% experienced two or more types of ACE exposure (Burke Harris, 2014; Felitti, 2018; Felitti et al, 1998; SAMHSA, 2018; Stevens, 2012; Wolfe et al., 2019). Additionally, 12.5% of the overall participants had exposure to at least four types of ACEs (Burke Harris, 2014; Felitti, 2018; Felitti et al, 1998; SAMHSA, 2018; Stevens, 2012). Lastly, the effects of ACE exposure are dose related (Burke Harris, 2014; Felitti, 2018; Felitti et al, 1998; Johnson et al., 2017; Lange et al., 2019; Murphy et al., 2014; SAMHSA, 2018; Stevens, 2012, Wolfe et al., 2019). This means that increased ACE exposure is significantly correlated with increased high-risk behaviors and decreased physical, mental, and social health (Burke Harris, 2014; Felitti, 2018; Johnson et al., 2017; Lange et al., 2019; Murphy et al., 2014; SAMHSA, 2018; Stevens, 2012; Wolfe et al., 2019).

Intergenerational Transmission

The topic of ACEs has been extensively researched, with over 50 peer reviewed articles on the ACE study alone (Wolfe et al., 2019), and expanded upon since the initial findings were published in the late 1990s. You can find research regarding the effects of ACEs in neuroscience, biology, sociology, health care, mental health, public health, education, parenting, policy making, criminal justice, etc. The ACE study findings inspired a movement in these fields to begin being trauma informed (McEwen & Gregerson, 2019). ACEs are common, but they often go unnoticed, and the long-term impacts of ACEs stretch beyond the physical, mental, and behavioral impact on the individual. ACEs also create biological changes in an individual due to the nature of the body's stress system being repeatedly activated and toxic stress hormones continually

being released into the body (Borja et al., 2019; Burke Harris, 2014; Eismann et al., 2019; Jackson Nakazawa, 2015; Lange et al., 2019; McDonald et al., 2019; Szilagyi et al., 2016; Wolfe et al., 2019). More importantly, researchers have found that all these components can be inherited or transmitted from one generation to the next (Cooke et al., 2019; Folger et al., 2018; Gillespie & Folger, 2017; Le-Scherban et al., 2018; McDonald et al., 2019; Plant et al., 2018; Schickedanz et al., 2018; Schofield et al., 2018; Scott & Copping, 2008; Stepleton et al., 2018; Szilagyi et al., 2016). There are several theories for this phenomenon, which all come back to the main concept that a child's physical, mental, and behavioral health is significantly influenced by the childhood trauma history of their parents. It is critical that mental health providers understand the systemic impact of ACEs in order most effectively treat its pediatric clientele. According to the CDC (n.d.a, para. 8), "the economic and social costs to families, communities, and society totals hundreds of billions of dollars each year", making this one of our nation's most basic health problems (Felitti, 2018; Folger et al., 2018). Therefore, if mental health providers only work on remediation later in life, they are simply putting a bandage on the problem. Research has shown that early identification, assessment, and intervention on a multigenerational level, improves the potential outcomes for children (Bernstein et al., 2013; Felitti, 2018; Lange et al., 2019; Scott & Copping, 2008; Szilagyi et al., 2016) and in turn, makes a significant impact on minimizing the long-term effects. In order for that to happen, though, providers need to be familiar with the research, how to identify children at risk, and the specific treatment recommendations identified to mitigate the impact.

Identifying Children at Risk

There is a wide array of current prevention, intervention and treatment recommendations for children who have experienced ACEs. Current recommended prevention strategies include screening for parental ACES to identify children at risk of intergenerational transmission of childhood trauma (Eismann et al., 2019; Folger et al., 2018; Gillespie & Folger, 2017; Johnson et al., 2017; McDonald et al., 2019; Min et al., 2013; Murphy et al., 2014; ; Plant et al., 2018 Schickedanz et al., 2018; Steele et al., 2016; Stepleton et al., 2018; Sun et al., 2017; Szilagyi et al., 2016; Zalewski et al., 2013), as well as increasing positive parenting, improving family dynamics, and increasing emotional support systems (Szilagyi et al., 2016). Since 2012, the American Academy of Pediatrics (AAP) has worked to increase awareness surrounding the long-term effects of ACEs, as well as the intergenerational impact it has on future generations (Szilagyi et al., 2016). Since that time, the AAP has recommended that pediatricians screen for child and parental ACEs during well-child visits (Gillespie & Folger, 2017; Szilagyi et al., 2016). Screening at well-child visits has been considered a first line of defense as pediatricians "are the first professionals with expertise in child development and family dynamics that parents encounter" (Szilagyi et al., 2016, p. 672).

Purpose of the Study

There are over 20 years of literature on ACEs. A keyword search of "adverse childhood experiences" in The University of Akron research database brought 22,871 results, alone. However, all this research means nothing if it is not being read and utilized in some fashion. Currently, the author of this dissertation has found seven studies

exploring physicians' knowledge and implementation of research surrounding ACEs but has found no parallel literature regarding mental health providers. Although, having physicians understand and implement their knowledge of the impacts of ACE exposure is beneficial, Duke and Borowski (2018) found that for each additional ACE exposure a child reported, there was a decreased likelihood of that child receiving a well child visit within that year. Well child visits or preventive visits are where the primary efforts to screen for ACEs are focused, so if children with ACE exposures are less likely to attend a well child visit, society cannot rely solely on physicians' knowledge and practices to ameliorate ACE exposure and its impacts. Therefore, this study will focus on filling the gap in literature by exploring licensed mental health provider's degree of familiarity with the ACE study and their degree of endorsement of the impacts of parental ACEs, as well as the influence that each of these factors and the mental health provider's personal experience with ACEs have on their practice of screening for parental ACEs. This study aims to answer the following research questions:

1. Does licensed mental health providers' degree of familiarity with the ACE study statistically significantly predict their frequency of screening for parental ACEs in their practice?
2. Does licensed mental health providers' degree of endorsement of the impacts of parental ACEs statistically significantly predict their frequency of screening for parental ACEs in their practice?
3. Does licensed mental health providers' personal experience with ACEs statistically significantly predict their frequency of screening for parental ACEs in their practice?

Operational Definitions

- *Adverse Childhood Experiences (ACEs)* – Potentially traumatic events that occur in childhood (0-17 years) (CDC, n.d.a, para. 1).
    - *Traditional ACEs* – Physical abuse, emotional abuse, sexual abuse, physical neglect, emotional neglect, domestic violence exposure, household mental illness, household substance abuse, household incarceration, parental separation/divorce (Murphy et al., 2014).
        - *Abuse* – Harmful treatment of a person (Merriam-Webster, 2021a).
            - *Physical abuse* – A parent, stepparent, or adult living in your home pushed, grabbed, slapped, threw something at you, or hit you so hard that you had marks or were injured ((Murphy et al., 2014).
            - *Emotional abuse* – A parent, stepparent, or adult living in your home swore at you, insulted you, put you down, or acted in a way that made you afraid that you might be physically hurt (Murphy et al., 2014).
            - *Sexual abuse* – An adult, relative, family friend, or stranger who was at least 5 years older than you ever touched or fondled your body in a sexual way, made you touch his/her body in a sexual way, attempted to have any type of sexual intercourse with you ((Murphy et al., 2014).

- *Neglect* – a disregard of duty resulting from carelessness, indifference, or willfulness (Merriam-Webster, 2021c).
    - *Physical neglect* – There was not someone to take care of you, protect you, and take you to the doctor if you needed it[2], you didn't have enough to eat, your parents were too drunk or too high to take care of you, and you had to wear dirty clothes (Murphy et al., 2014).
    - *Emotional neglect* – A parent, stepparent, or adult living in your home swore at you, insulted you, put you down, or acted in a way that made you afraid that you might be physically hurt. (Murphy et al., 2014).
- *Household Dysfunction* – impaired or abnormal functioning as related to interaction within a household (Merriam-Webster, 2021b)
    - *Domestic Violence Exposure* – Your mother or stepmother was pushed, grabbed, slapped, had something thrown at her, kicked, bitten, hit with a fist, hit with something hard, repeatedly hit for over at least a few minutes, or ever threatened or hurt by a knife or gun by your father (or stepfather) or mother's boyfriend (Murphy et al., 2014).
    - *Household Mental Illness* – A household member was depressed or mentally ill or a household member attempted suicide (Murphy et al., 2014).

- *Household Substance Abuse* – A household member was a problem drinker or alcoholic or a household member used street drugs (Murphy et al., 2014).
- *Household Incarceration* – A household member went to prison (Murphy et al., 2014).
- *Parental separation/divorce* – Your parents were ever separated or divorced (Murphy et al., 2014).

- *Expanded ACEs* – other factors for toxic stress not included in the ACE study (ACEs Aware, 2021).
  - *Community Violence* – bullying, assault or other violent actions, war or terrorism (ACEs Aware, n.d.).
  - *Discrimination* – being hassled or made to feel inferior or excluded because of their race, ethnicity, gender identity, sexual orientation, religion, learning differences, or disabilities (ACEs Aware, n.d.).
  - *Food Insecurity* - having limited or uncertain availability of nutritionally adequate and safe foods or ability to acquire foods in socially acceptable ways (Kushel et al., 2006, p. 71).
  - *Housing Instability* - having difficulty paying rent, spending more than 50% of household income on housing, having frequent moves, living in overcrowded conditions, or doubling up with friends and relatives (Kushel et al., 2006, p. 71)
  - *Intimate Partner Violence (IPV)* – verbal or physical abuse or threats from a romantic partner (ACEs Aware, n.d.).

- *Licensed mental health provider* – licensed professional that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals (American Counseling Association, n.d.). For the purpose of this study licensed mental health provider will be restricted to the following licensure types and all of their specific designations, excluding trainee: professional counselor (PC), social worker (SW), and marriage and family therapist (MFT) (Counselor, Social Worker & Marriage and Family Therapist Board, n.d.).
- *Parental ACEs* – traditional and expanded ACEs that a client's parents experienced during their own childhood (Eismann et al., 2019)
    - *Impact of parental ACEs* – factors related to parental ACEs that contribute to the transmission of ACEs across generations (Narayan et al., 2021)
- *Screening* – use of a formal instrument or interview to assess for risk or problem areas (American Academy of Pediatrics, 2013)

Summary

In an effort to explore mental health professionals' understanding of the intergenerational impact of ACEs and the most effective way to work with these children, the concept must be looked at from a tiered perspective. This chapter expressed the importance of mental health professionals keeping abreast of the latest research findings. It explained what ACEs are and the systemic nature of their transmission from one generation to the next. Lastly, it discussed gaps in the literature and the purpose of the current study. Chapter Two provides a comprehensive literature review on parental ACEs, their systemic impact on subsequent generations, research on prevention and

treatment for children and how that information is being implemented into practice. Chapter Three provides an in-depth description of the methodological plan of action for this study. Chapter Four provides a descriptive predictive analysis of the study's results. Lastly, Chapter Five concludes with a discussion of the results, clinical implication, limitations, and future directions for research.

CHAPTER II

LITERATURE REVIEW

The purpose of this literature review was to compile research findings on Adverse Childhood Experiences (ACEs) exposure to examine the multiple layers of results relevant to current knowledge, skills, and methods recommended for counseling children. This chapter will discuss literature on the following topics: 1) the impacts of ACEs to an individual, 2) intergenerational transmission of ACEs, 3) the impact of parental ACEs on parenting, 4) the impact of parental ACEs on the child, 5) identification, assessment, and treatment of child clients at risk for transmission of ACEs. These issues will be connected systemically utilizing the framework of General Systems Theory (GST) as a conceptual guide. The literature review will be concluded with the research questions and related hypotheses.

Adverse Childhood Experiences

Healthy child development is dependent on a secure parent-child attachment, created through a nurturing and supportive social environment, especially in the first five years of life (Bernstein et al., 2013; Cooke et al., 2019; Felitti, 2018; Gillespie & Folger, 2017; Johnson et al., 2017; Molitor & Dvorsky, 2019; Steele et al., 2016; Stepleton et al., 2018; Zvara et al., 2016). This early attachment creates a working model for the child to develop a sense of self and a guide for expectations in relationships (Steele et al., 2016). When a child (age 0-17 years) experiences adversity, especially in those imperative early

years, there is a disturbance in the attachment with their caregiver, which creates a disruption in their developmental trajectory (Borja et al., 2019; Cooke et al., 2019; Folger et al., 2018; Gillespie & Folger, 2017; Lyons-Ruth et al., 2003; Molitor & Dvorsky, 2019; Murphy et al., 2014; Plant et al., 2018; Steele et al., 2016; Stepleton et al., 2018; Wolfe et al., 2019). This disruption can lead to emotional, behavioral and relational challenges; poor school performance; early adoption of high-risk behaviors; substance use and abuse; physical illness and injury; metal illness; and pregnancy complications (Burke Harris, 2014; Eismann et al., 2019; Felitti, 2018; Folger et al., 2018; Gillespie & Folger, 2017; Lange et al., 2019; McDonald et al., 2019; Murphy et al., 2014; Stepleton et al., 2018; Stevens, 2012; Sun et al., 2017)

These early adversities are commonly referred to as "Adverse Childhood Experiences" or "ACEs". ACEs are typically broken down into three categories: Abuse, Neglect, and Household Dysfunction. Those categories are broken down further into ten specific experiences and are listed in Table 2.1. The abuse category is broken down into physical, emotional, and sexual abuse. The neglect category is broken down into physical and emotional neglect. The other five experiences, grouped into the household dysfunction category, are: parental separation/divorce, domestic violence exposure, substance abuse within the household, mental illness within the household and a member of the household being incarcerated.

Table 2.1

Adverse Childhood Experiences Categories

ACE Type	ACE Exposure
Abuse	Physical Abuse
Abuse	Emotional Abuse
Abuse	Sexual Abuse

ACE Type	ACE Exposure
Neglect	Physical Neglect
Neglect	Emotional Neglect
Household Dysfunction	Parental Separation/Divorce
Household Dysfunction	Domestic Violence Exposure
Household Dysfunction	Household Substance Abuse
Household Dysfunction	Household Mental Illness
Household Dysfunction	Household Incarceration

History of ACEs

ACEs were initially studied by Dr. Vincent Felitti, Chief of the Department of Preventative Medicine for Kaiser Permanente (Burke Harris, 2014; Felitti, 2018; Stevens, 2012; Wolfe et al., 2019). In 1985, while running an obesity program, he began to interview participants who had dropped out of the program, even after successfully losing more than 100 pounds (Felitti, 2018; Stevens, 2012). During these interviews, he found that many of these individuals had been sexually abused (Felitti, 2018; Stevens, 2012; Wolfe et al., 2019). Dr. Felitti teamed up with Dr. Robert Anda, an epidemiologist who was studying the relationship between depression and coronary heart disease, to perform a significant study through Kaiser Permanente, a hospital that treats more than 50,000 clients annually (Felitti, 2018; Stevens, 2012). Each patient seen at the hospital is asked to complete a detailed biopsychosocial medical questionnaire, an extensive physical examination and lab tests (Felitti, 2018; Stevens, 2012). Drs. Felitti and Anda approached 26,000 patients to participate in the study, in order to understand how childhood events may impact adult health, and 17,421 agreed (Burke Harris, 2014; Felitti, 2018; Substance Abuse and Mental Health Services Administration [SAMHSA], 2018; Stevens, 2012). The study was conducted from 1995-1997 and the participants were followed for an additional fifteen years (Felitti, 2018; SAMHSA, 2018; Stevens, 2012; Wolfe et al.,

2019). Information from Dr. Felitti's original interviews was used to develop trauma-oriented questions that were added to the already extensive biopsychosocial questionnaire that patients at Kaiser Permanente were asked to fill out when seeing a physician (Felitti, 2018; Stevens, 2012; Wolfe et al., 2019).

ACE Study Findings

There were three main findings from this massive study (Burke Harris, 2014; Felitti, 2018; SAMHSA, 2018; Stevens, 2012). First, they found that there is a direct link between ACEs and adult-onset chronic disease, mental health issues, engagement in high-risk behaviors, injury, infectious disease, poor maternal health, incarceration, learning difficulties, relationship distress and decreased opportunities (Burke Harris, 2014; Felitti, 2018; Murphy et al., 2014; SAMHSA, 2018; Schofield et al., 2018; Stevens, 2012). Second, ACEs are common; 67% of participants experienced at least one type of exposure, 87% of those individuals experienced two or more types of exposure, and 12.5% of the participants had exposure to at least four types of ACEs (Burke Harris, 2014; Felitti, 2018; SAMHSA, 2018; Stevens, 2012; Wolfe et al., 2019). Third, the effects of ACEs are dose related; increased ACE exposure is significantly correlated with increased high-risk behaviors and decreased physical, mental, and social health (Burke Harris, 2014; Centers for Disease Control [CDC], n.d.a; Felitti, 2018; Johnson et al., 2017; Lange et al., 2019; Murphy et al., 2014; SAMHSA, 2018; Stevens, 2012; Wolfe et al., 2019). A person's ACE score provides a measure of cumulative stress in childhood (Murphy et al., 2014), and exposure to each of the ten types of experiences counts as one point. Individuals with a score of at least four, have significant increased risk for negative outcomes (Burke Harris, 2014; Dennis et al., 2019; Felitti, 2018; Lange et al., 2019;

McDonald et al., 2019; Murphy et al., 2014; Schickedanz et al., 2018; Stevens, 2012; Wolfe et al., 2019). Negative outcomes from ACE exposure impact physical health, mental health, and an individual's behavior, which can create a ripple effect throughout their lifetime (Burke Harris, 2014; Felitti, 2018; McDonald et al., 2019; SAMHSA, 2018; Stevens, 2012; Wolfe et al., 2019).

Prevalence

When looking at outcomes and effects of exposure to ACEs, it is wise to look at the prevalence of that exposure. According to the seminal ACE study, around 67% of adults have at least one ACE exposure and 12% of adults have at least four (Burke Harris, 2014; Felitti, 2018; McDonald et al., 2019; SAMHSA, 2018; Stevens, 2012). According to Dennis et al. (2019), 15% of women and 9% of men have at least four ACE exposures. In an analysis of 2500 children for whom researchers had data, 20% had a parent who reported experiencing four or more ACEs during their own childhood (Schickedanz et al., 2018). Another study found that approximately 34% of maltreating parents reported being victims of childhood trauma (Szilagyi et al., 2016). This would imply that there are other important factors, beyond ACEs that determine parenting and child outcomes.

Participants. To critically examine the prevalence, especially in the seminal study, it is important to look at the participants. These participants were predominantly White (75%), with the remainder Latino (11%), Asian/Pacific Islander (7.5%), and Black (5%) (Felitti, 2018; Felitti et al., 1998; SAMHSA, 2018). The average age of participants was 57 years and 40% had a bachelor's degree or higher (Felitti, 2018; Felitti et al, 1998; SAMHSA, 2018). Overall, these participants were white, educated, middle-age, middle-

class individuals that were part of the Kaiser Permanente Insurance Network, so all had jobs with great insurance (Felitti, 2018; SAMHSA, 2018). Research shows that abuse and neglect are five times higher for families with low socioeconomic status (SES) (Burke Harris, 2014). So, if 67% of this privileged population had at least one ACE exposure, what do the numbers look like for families of lesser means? To look more critically at this question, we must turn to multicultural aspects of the seminal survey.

Multicultural Aspects. As stated, the seminal study encompassed a mostly white, educated, middle class population (CDC, n.d.). The ACE categories were based upon the childhood adversities most often reported by this group. However, these "conventional" ACEs, as they are commonly referred to, may not capture the full spectrum of relevant childhood adversities experienced by diverse urban populations (Cronholm et al., 2015; Wade, et.al, 2016). A study conducted by the Philadelphia ACE Task Force Workgroup in 2012 looked at five additional community level childhood adversities, which are dubbed "expanded" ACEs. These are witnessing violence, experiencing racial and/or ethnic discrimination, living in unsafe and/or unconnected neighborhoods, bullying, and living in foster care (Cronholm et al., 2015; Wade, et.al, 2016). This study's sample consisted of a more diverse population that was 45.2% white, 43.6% black (Cronholm et al., 2015; Wade et al, 2016) and while the majority of the sample were employed (87.8%), had insurance (87.7%) and a usual source of healthcare (89.6%), 30% were living below the poverty level (Wade, et.al, 2016). This study found a much higher prevalence of exposure to conventional ACEs than the seminal ACE study, with 20.7% of participants having experienced four or more, while 13.4% experienced at least three expanded ACEs (Cronholm et al., 2015; Wade, et.al, 2016). The study also found that

14% of this diverse urban population experienced no conventional ACEs but did experience at least one expanded ACE exposure, meaning that if only conventional ACEs were assessed, 14% of the population would have been overlooked (Cronholm et al., 2015; Wade, et.al, 2016). However, this study also found evidence that only the conventional ACEs (four or more) are significantly associated with physical health problems, while three or more expanded ACEs are associated with impacts of increased risk behaviors, such as substance use and sexually transmitted infections (Wade, et.al, 2016). Others have looked beyond even these expanded ACEs to include additional adversities that may impact an individual's long-term health. The World Health Organization has created the most comprehensive screening tool for ACEs, the Adverse Childhood Experiences International Questionnaire (ACE-IQ), with 36 items, covering eight categories: marriage, emotional neglect, physical neglect, family environment, abuse, peer violence, witnessing community violence and exposure to war/collective violence (Koita et al., 2018). It is important to understand that there are adverse childhood experiences beyond the ten seminal experiences identified in the seminal ACE study, because our country and our world are made up of a diverse landscape of individuals with vastly different experiences. To help understand what kind of experiences to consider, it is important to understand how ACEs affect the body from a physiological standpoint.

Conceptualizing the ACE Study Results

The ACE study generated a movement towards understanding the impacts of trauma, which included scientific research on how it affects the developing human body and creates these negative health outcomes. Scientists' conceptualization of this process

begins with the hypothalamic-pituitary-adrenal axis (Burke Harris, 2014; Folger et al., 2018; Jackson Nakazawa, 2015). This is the stress response system and is responsible for the fight/flight/freeze response (Burke Harris, 2014; Felitti, 2018; Jackson Nakazawa, 2015; Stevens 2012). Dr. Burke Harris (2014) uses the metaphor of encountering a bear in the forest to explain this concept. If you encounter a bear in the forest and your life is in imminent danger, "your hypothalamus sends a signal to your pituitary, which sends a signal to your adrenal gland that says, 'Release stress hormones! Adrenaline! Cortisol!'" (Burke Harris, 2014; 8:07). These stress hormones activate the amygdala, the body's primitive fear response system, which shuts down the prefrontal cortex (Burke Harris, 2014; Jackson Nakazawa, 2015; Conn et al., 2018). The prefrontal cortex is responsible for decision making, affective self-regulation, impulse control, and executive functioning (Burke Harris, 2014; Jackson Nakazawa, 2015). This process is an adaptive response that keeps an individual from hesitating in order to logically think through options, which takes precious time when you are trying to survive (Burke Harris, 2014; Jackson Nakazawa, 2015). However, when the body's physiological stress response system is chronically activated, as is the case when children are repeatedly exposed to adverse childhood experiences, the body is prevented from returning to homeostasis (Borja et al., 2019; Burke Harris, 2014; Eismann et al., 2019; Jackson Nakazawa, 2015; Lange et al., 2019; McDonald et al., 2019; Szilagyi et al., 2016; Wolfe et al., 2019), which can lead to impacts on the brain, physical health, mental health, behavior, learning and quality of life.

Impact on the Brain and Biology. When the body's stress response system is repeatedly activated, chemical markers, called methyl groups, adhere to the genes responsible for stress response and alter their function, this is called gene methylation

(Jackson Nakazawa, 2015). The genes are permanently switched to the on position, decreasing the individual's ability to respond appropriately to stressful stimuli (Jackson Nakazawa, 2015). Gene methylation can change the epigenetics of the genome permanently, which explains why individuals with high ACE scores have a tendency to overreact to daily stressors (Jackson Nakazawa, 2015). It may also explain the increase in learning disabilities. If the amygdala is always turned on and the prefrontal cortex is inhibited, an individual cannot learn or think logically due to being in a perpetual heightened state (Jackson Nakazawa, 2015). Chronic toxic stress, from the flooding of stress hormones, also promotes inflammation and disease process that has a significant effect on brain shape and size (Jackson Nakazawa, 2015). Magnetic resonance imaging (MRI) has shown shrinkage and decreased gray matter in several areas of the brain of individuals with high ACE scores (Borja et al., 2019; Jackson Nakazawa, 2015). The hippocampus, which is responsible for processing emotions, memory storage and management of stress, as well as the prefrontal cortex and the amygdala, are shown to have decreased gray matter (Borja et al., 2019; Jackson Nakazawa, 2015). The nucleus accumbens, the body's pleasure/reward system is activated repeatedly with the release of stress hormones (Jackson Nakazawa, 2015). This coupled with the decrease in fear response from a shrunken amygdala may explain why traumatized individuals engage in high-risk behaviors and substance abuse (Burke Harris, 2014; Jackson Nakazawa, 2015). Their brains need more adrenaline to feel the same pleasure, because it has been desensitized from continuous activation. Decreased gray matter and shrinkage in critical areas of the brain are attributed to increased inflammation in the brain (Jackson Nakazawa, 2015). Humans are born with an overabundance of neurons and synaptic

connections (Jackson Nakazawa, 2015), which is what allows children to learn so much faster than adults. However, recent research has discovered that approximately one tenth of brains cells are non-neural cells, called microglia, which are part of the immune system (Jackson Nakazawa, 2015). Each microglia can engulf an entire cell (Jackson Nakazawa, 2015). Chronic stress and the flooding of stress hormones into the body, increase the number of microglia, which prunes away gray matter, weakening the connectivity between the prefrontal cortex and the hippocampus, changing the brain's tone, and likely contributing to the development of mood disorders, as well as poor executive functioning and decision making (Jackson Nakazawa, 2015). Another significant change to the genetic structure happens in the deoxyribonucleic acid (DNA). Telomeres are endcaps (think of the plastic tips on each end of a shoelace), which keep each strand of DNA intact (Jackson Nakazawa, 2015). As individuals age, telomeres begin to erode, and the strand of DNA begins to unravel (Jackson Nakazawa, 2015). Chronic exposure to stress hormones accelerates the erosion of telomeres, which stimulates premature aging on a cellular level and the development of disease at younger ages (Jackson Nakazawa, 2015). All of the changes exacerbated by chronic stress inhibit the brain from entering "default mode" (Jackson Nakazawa, 2015). The default mode is the uniting of hippocampus and prefrontal cortex, which instinctually tell an individual what is relevant and what to do next, without conscious thought (Jackson Nakazawa, 2015). Without this process, an individual has to continuously and consciously decide what is relevant and what to do next, which overloads the body's emotional and cognitive regulation system, decreasing an individual's ability to react in an appropriate manner (Jackson Nakazawa, 2015). Julian et al. (2019) state that oxytocin, which is a

neuropeptide secreted by the pituitary gland and responsible for bonding with others, may increase susceptibility to the biological and emotional impacts of chronic ACE exposure; individuals who have an abnormality in oxytocin gene receptors appear to be protected from the effects of childhood maltreatment.

Another factor that is important in understanding the impact that toxic stress hormones have on the body, is the lymph system (Jackson Nakazawa, 2015). The lymph system is part of the circulatory system that is intended to help keep the body healthy (Jackson Nakazawa, 2015). Lymph fluid carries toxins out of unhealthy areas and carries in immune cells to battle infection (Jackson Nakazawa, 2015). However, as previously discussed, when this protective system in repeatedly stimulated by chronic stress hormones, it goes from being helpful to harmful. Chronic stress is not localized, therefore, when these hormones are repeatedly released into the body, the immune system sends cells throughout the entire brain-body pathway in order to find and treat the cause (Jackson Nakazawa, 2015). Unfortunately, since the cause is external, the immune system's "attack" on the body leaves a biological imprint of that stress, which leads to an array of physical, mental, and behavioral health impacts (Lange et al., 2019; Le-Scherban et al., 2018; McDonald et al., 2019; Murphy et al., 2014; Stepleton et al., 2018).

Impact on Physical Health. Individuals with four or more ACEs are at a higher risk for seven out of ten of the leading causes of death (Burke Harris, 2014; Felitti, 2018). At a score of six or more, individuals have an average life span that is 20 years less than a person with an ACE score of zero (Burke Harris, 2014; Felitti, 2018; Jackson Nakazawa, 2015; Le-Scherban et al., 2018). People with four or more ACE exposures are three times more likely to develop ischemic heart disease and lung disease, two and a half times more

likely to develop sexually transmitted infections, chronic obstructive pulmonary disease and hepatitis (Burke Harris, 2014; Felitti, 2018; Jackson Nakazawa, 2015; Le-Scherban et al., 2018; Stevens 2012). Higher ACE scores also increase the risk for cancer, obesity, diabetes, auto-immune disorders, and fractures (Burke Harris, 2014; Felitti, 2018; Jackson Nakazawa, 2015; Le-Scherban et al., 2018; Stevens 2012). Dennis et al. (2019) found that ACE exposure also increases the likelihood of chronic pain.

Impact on Mental Health. Lyons-Ruth et al. (2003) stated that individuals with exposure to ACEs experience problems with "regulating affective arousal, dissociation, somatization, changes in perception of self and other, and changes in systems of meaning" (p. 333). Murphy et al. (2014) compared a group of individuals with mental health diagnoses to a community sample and found that 84% of the clinical sample had four or more ACE exposures compared to 27% of the community sample. Studies have found that the rates of depression increase by four and a half times, suicide increases by twelve times, and learning disabilities increase by 32 times for individuals with four or more ACEs (Burke Harris, 2014; Felitti, 2018) and these individuals also show increased rates of anxiety, post-traumatic stress disorder (PTSD), and insecure attachment, which may lead to relationship difficulties and parenting issues (Burke Harris, 2014; Felitti, 2018; Stevens 2012). Gillespie and Folger (2017) found that there was a significant increased risk for Attention Deficit/Hyperactivity Disorder (ADHD) in children with three or more ACE exposures and Molitor and Dvorsky (2019) reported a consistent relationship between child sexual abuse and adult depression.

Impact on Behavior. A high ACE score impacts an individual's behavior by increasing rates of engaging in comfort eating, methamphetamine use, inappropriate

and/or high-risk sex, high-risk sports, violence and overworking and/or over-achieving lifestyles (Burke Harris, 2014; Felitti, 2018; Lange et al., 2019; McDonald et al., 2019; Stepleton et al., 2018; Stevens 2012). These individuals are two times more likely to use tobacco products, seven times more likely to use alcohol, and ten times more likely to inject street drugs (Burke Harris, 2014; Felitti, 2018; Lange et al., 2019; Stepleton et al., 2018). Three or more ACEs are correlated with increased aggression and social problems in children (Gillespie & Folger, 2017) and research supports a significant association between childhood trauma and juvenile/adult criminal behavior (Scott & Copping, 2008). Research has also found higher rates of childhood trauma in individuals who have been arrested and/or charged with criminal acts, than those who have not (Scott & Copping, 2008). Many people might see this as a coincidence or an obvious case of bad childhood leading to bad behavior. However, as discussed previously, there is a lot of science that supports a biological cause.

Impact on Learning. Researchers have found that children with increased ACE exposure display a decrease in educational achievement (Gillespie & Folger, 2017; Lange et al., 2019; McDonald et al., 2019; Plant et al., 2018). Gillespie and Folger (2017) found that children with three or more ACEs scored lower on kindergarten readiness score than their counterparts with no ACE exposure. These children were also more likely to have decreased language, literacy and math skills (Gillespie & Folger, 2017).

Impact on Quality of Life. As discussed previously, children are particularly vulnerable to the toxic stress caused by ACE exposure in the first five years of life (Cooke et al., 2019; Felitti, 2018; Gillespie & Folger, 2017; Molitor & Dvorsky, 2019; Steele et al., 2016; Stepleton et al., 2018). Unfortunately, childhood trauma has been

found to occur in bulk during this age frame leaving a lasting impression on an individual's quality of life (Gillespie & Folger, 2017; Molitor & Dvorsky, 2019). ACE exposure has been connected to increased unemployment and decreased social supports (Lange et al., 2019; Plant et al., 2018). These may be mediating factors in the McDonald et al. (2019) study that found that ACEs are associated with a decrease in economic productivity. Molitor and Dvorsky (2019) found that increased ACE exposure, more specifically child sexual abuse, was associated with a 2.21 times increased risk for teen pregnancy and Hillis et al. (2004) found that "teen pregnancy occurred in 16%, 21%, 26%, 29%, 32%, 40%, 43%, and 53% of those with 0, 1, 2, 3, 4, 5, 6," 7 and 8 ACEs respectively (p. 320). Just as the rate of teen pregnancy increased with each additional ACE exposure, so did family problems, financial problems, job problems, high stress, uncontrollable anger (Borja et al., 2019), and fetal death after the first pregnancy (Hillis et al., 2004). Teen pregnancy was not found to be associated with any of these outcomes if there was no history of childhood trauma (Hillis et al., 2004). These findings suggest that childhood trauma is the principal source of these impacts on quality of life, rather than them being consequences of teen pregnancy (Hillis et al., 2004).

Intergenerational Transmission

Understanding the effect that toxic stress has on the brain-body pathway has been significant in beginning to understand the intergenerational impact that ACEs can have. Recent research findings support the idea that the physical, mental, behavioral, and biological effects of ACEs can be inherited or transmitted from one generation to the next (Cooke et al., 2019; Folger et al., 2018; Gillespie & Folger, 2017; Le-Scherban et al., 2018; McDonald et al., 2019; Plant et al., 2018; Schickedanz et al., 2018; Schofield et al.,

2018; Scott & Copping, 2008; Stepleton et al., 2018; Szilagyi et al., 2016). In fact, Schofield et al. (2018) found that every point an individual from generation one (G1) scores on the ACE Questionnaire (ACE-Q) is positively correlated with an ACE score of .34 in generation two (G2). They also found that SES and availability of community services were not statistically significant factors in G2 ACE scores after accounting for G1 ACE scores (Schofield et al., 2018).

Hypotheses

Multiple studies have found that maternal ACE scores have more of an impact on G2 ACE scores than paternal scores (Eismann et al., 2019; Schickedanz et al., 2018). Several hypotheses have been suggested to account for this phenomenon and for intergenerational transmission of ACEs in general, but when all of these explanations are integrated, a more comprehensive conceptualization emerges.

Hypothesis One

One hypothesis for intergenerational transmission is that maternal ACEs are more highly correlated to child ACE scores due to epigenetics and in utero changes (McDonald et al., 2019; Plant et al., 2018; Schickedanz et al., 2018; Sun et al., 2017; Szilagyi et al., 2016; Vagero & Rajaleid, 2017). Studies have hypothesized that the embedding of stress in a parent's biology may affect offspring through physiology or epigenetic pathways (McDonald et al., 2019; Stepleton et al., 2018). This is supported by the findings of Slopen et al. (2018), which showed higher cortisol levels in hair samples of children whose mothers had significant trauma exposure compared to children of mothers with little to no trauma exposure.

Hypothesis Two

Another hypothesis is that mothers are largely the primary caregivers for the subsequent generation, which accounts for their larger impact on their children (McDonald et al., 2019; Schickedanz et al., 2018; Szilagyi et al., 2016). This is important when considering the effects that maternal anxiety and depression may play, both during pregnancy and postnatally on G2 (Cooke et al., 2019; Dennis et al., 2019; Johnson et al., 2017; McDonald et al., 2019; Stepleton et al., 2018; Sun et al., 2017; Zalewski et al., 2013; Zvara et al., 2016). Studies have found maternal anxiety and depression to be a mediating factor between maternal ACEs and internalizing and externalizing behaviors in G2 at the age of 2 years (Dennis et al., 2019; McDonald et al., 2019; Zalewski et al., 2013). This relationship was increased in mothers that experienced exposure to physical abuse (Cooke et al., 2019). Depressed mothers were found to be more likely to engage in negative and withdrawing parenting behaviors (Cooke et al., 2019; Zalewski et al., 2013).

Hypothesis Three

This leads to the next hypothesis that poor attachment and negative parenting behaviors can lead to increased ACE scores in G2 (Cooke et al., 2019; Dennis et al., 2019; Johnson et al., 2017; McDonald et al., 2019; Ozcan et al., 2016; Schickedanz et al., 2018; Stepleton et al., 2018; Sun et al., 2017). Steele et al. (2016) discusses how there is fifty years of Attachment Theory literature which explain how an individual's "early childhood experiences, especially parent-child relationships, influences how adults parent their own children" (p. 32). Researchers believe that children do not develop adequate self-regulation skills when they are not given adequate comfort and support (Stepleton et al., 2018). As we have previously discussed lack of self-regulation leads to decreased

quality of life and decreased social supports, but Cooke et al. (2019) has found that, if women are able to develop secure attachments in adulthood, they are able to parent in a more optimal fashion and can disrupt the intergenerational transmission of ACEs.

Hypothesis Four

Lastly, is the hypothesis of inherited trauma. The basis of the inherited trauma hypothesis is that the negative outcomes of ACEs for G1, become the ACEs for G2 (Gillespie & Folger, 2017; Johnson et al., 2017; Stepleton et al., 2018; Szilagyi et al., 2016; Wiig et al., 2017). Table 2.2 displays a side-by-side comparison of basic ACE outcomes for G1 beside the ACE category exposure that G2 might experience. Each of the above hypotheses seems to add a component to how ACEs are intergenerationally transmitted. To better understand this phenomenon, it is important to review the research on how G1 ACEs impact parenting.

Table 2.2

Comparison of Generation 1 (G1) ACEs Outcomes and Generation 2 (G2) ACEs Categories

G1 ACE Outcomes	G2 ACE Categories
Behavioral Issues	Physical Abuse
Decreased Emotional Regulation	Emotional Abuse
Inappropriate Sex	Sexual Abuse
High Risk Sex	Sexual Abuse
Depression	Emotional Neglect
Decreased Attachment	Emotional Neglect
Vulnerable Living Conditions	Physical Neglect
Food Scarcity	Physical Neglect
Negative Health Outcomes	Loss of a Parent
Suicide Attempts	Loss of a Parent
Divorce	Loss of a Parent
Intimate Partner Violence (IPV)	Domestic Violence Exposure

G1 ACE Outcomes	G2 ACE Categories
Substance Use	Household Substance Abuse
Mental Illness	Household Mental Illness
Sleep Disturbances	Household Mental Illness
Incarceration	Household Incarceration

Impact on Parenting

Intergenerational transmission of ACEs has become a hot topic in recent years. Just as research into G1 ACEs has revealed the unprecedented impact that childhood trauma has on the overall health of an individual, research into intergenerational transmission has revealed the positively correlated impact that G1 ACEs has on the overall health of G2. G1 ACEs have also been found to "predict perinatal mood symptoms, maladaptive parenting cognitions, and problematic parenting of one's own children, including abuse and neglect" (Oosterman et al., 2018, p. 127). This section will give an overview of current research into the negative impact that ACEs have on parenting, through insecure and disorganized attachment, parenting stress, and parental perception of the child.

Attachment

"Infants form patterns of securing comfort and safety in their environments through repeated, dyadic interactions with caregivers" (Cooke et al., 2019, p. 28). Infants receiving reliable, consistent care from autonomous caregivers develop secure attachments, whereas infants experiencing insensitive and inconsistent caregiving are more likely to form representations of unreliable untrustworthy caregivers and develop insecure or disorganized attachment (Bernstein et al., 2013; Cooke et al., 2019; Steele et al., 2016).

Childhood attachments are predictive of attachment in adulthood (Cooke et al., 2019) and tend to be consistent from one generation to the next (Bernstein et al., 2013). Attachment styles are typically classified into four categories: secure, anxious preoccupied, dismissive avoidant, and fearful avoidant. Secure attachment allows an individual to communicate needs in a healthy manner. The other three styles are insecure attachments in which individuals use ineffective means to communicate needs. There are two, commonly referred to, ineffective means of communicating needs: anxiety and avoidance (Cooke et al., 2019).

Avoidance is the method used when the individual fears potential rejection from their object of attachment, in the case of a child, this is the caregiver (Cooke et al., 2019). Avoidance can lead to withdrawal from "engaging in close relationships, masking and controlling of emotions, distancing strategies and a need for independence" (Cooke et al., 2019, p. 28). Anxiety, on the other hand, is used when an individual fears a potential loss of the object of attachment, and "manifest as extreme need for closeness, clinginess, or demandingness" (Cooke et al., 2019, p. 28). Child maltreatment increases the risk of psychological vulnerability and developing an insecure attachment (Bernstein et al., 2013; Cooke et al., 2019; Folger et al., 2018; Plant et al., 2018; Stepleton et al., 2018).

Empirical research has shown that internalizing symptoms, such as anxiety and depression in adulthood are strongly related to childhood exposure to physical abuse, sexual abuse and neglect, via insecure parent-child attachment, especially for mothers (Cooke et al., 2019; Oosterman et al., 2018). These internalizing symptoms are then the mediator between maternal ACEs and a child's behavior at 5 years, most likely via the mother's inability to foster a secure parent child relationship (Cooke et al., 2019; Molitor

& Dvorsky, 2019). Murphy et al. (2014) used the Adult Attachment Interview (AAI) to conduct research into the validity of using an individual's ACE score as an indicator of adult attachment security and Bernstein et al. (2013) used it to conduct research into the intergenerational transmission of insecure attachment, via parental idealization. The AAI involves transcribing an interview verbatim and having trained researchers code 179 points based on the thoughtfulness and coherency with which the individual is able to describe and evaluate childhood experiences (Murphy et al., 2014). This allows the researcher to categorize the individual's state of mind related to their attachment history (Murphy et al., 2014). A secure classification on the AAI has been linked to optimal parenting (Murphy et al., 2014).

The AAI lists five attachment style categories: secure free/autonomous (F), insecure dismissing (D), insecure entangled/preoccupied (E), unresolved regarding past loss or trauma (U), and cannot classify (CC) (Murphy et al., 2014). The first three categories are considered organized, while the last two, Unresolved and Cannot Classify, are considered disorganized (Lyons-Ruth et al., 2003; Murphy et al., 2014). The U category is given to an individual when there is evidence of a loss of reasoning surrounding a loss or traumatic event (Lyons-Ruth et al., 2003). Two examples of this type of evidence would be: 1) an individual focusing, to an extreme, on details of the event, and 2) feeling unrealistically responsible for it (Lyons-Ruth et al., 2003). The CC category is given to an individual that does not fit clearly into one of the other categories (Lyons-Ruth et al., 2003; Murphy et al., 2014).

The study compared a group of individuals with mental health diagnoses to a community sample and found that 76% of the clinical sample were categorized as

disorganized (U/CC) compared to only 9% of the community sample (Murphy et al., 2014). They also found that 65% of individuals who reported 4 or more ACE exposures were classified U/CC and 72% of all individuals classified U/CC reported lack of emotional support as an ACE exposure (Murphy et al., 2014). This supports the idea that increased ACEs and decreased emotional support increases the likelihood of a disorganized classification. This is important because a disorganized classification for a parent is a predictor of the "most troubling infant-parent relationship, in which fear and disorganization predominate" (Murphy et al., 2014, p. 225). Bernstein et al. (2013) similarly found that mothers who experienced maltreatment from a caregiver in conjunction with decreased levels of the caregiver warmth were more likely to have infants with insecure-avoidant attachment at 18 months. This type of relationship is predictive of "externalizing disorders in later childhood, post-traumatic stress disorder in middle childhood, dissociation across teenage years evident from peer, teacher and self-ratings, and borderline symptoms in early adulthood" (Murphy et al., 2014, p. 225). Lyons-Ruth et al. (2003) found that 53% of infants classified as disorganized have a parent with a U classification. Mothers who witnessed IPV in childhood (an ACE highly correlated with a score of four or more), were more likely to have a U/CC classification (Murphy et al., 2014), as were mothers who experienced a loss/death; although, the severity of the loss/death, had no significant impact on the level of disorganization (Lyons-Ruth et al., 2003). Moe et al. (2018) found a significant correlation between attachment-based avoidance and anxiety to parenting stress at 12 months postnatal and that the attachment style was a mediating factor between maternal ACEs and parental

stress. This is significant, because the first year of life is a time when parent-child attachment is being consolidated (Moe et al., 2018).

Parenting Stress

Along with decreases in competent parenting skills, mothers who have experienced childhood trauma, particularly sexual abuse, are more likely to report being less satisfied with their parenting role (Molitor & Dvorsky, 2019; Zalewski et al., 2013). One mediating factor could be the significant positive association between maternal ACE scores and parenting stress (Borja et al., 2019; Lange et al., 2019; McDonald et al., 2019; Min et al., 2013; Plant et al., 2018; Wurster et al., 2019). As discussed, ACEs have a significant influence on quality of life, which may play a role in increased parental stress. For instance, McDonald et al. (2019) reports that mothers with higher ACE scores have been found to have higher instances of single marital status, lower household income, decreased education, decreased optimism, increased neuroticism, increased post-partum depression, increased anxiety, and decreased parenting morale. While lower SES seems to make sense as a cause for this phenomenon, studies show that higher maternal ACE scores are positively correlated with parental stress even after accounting for SES (Steele et al., 2016). This could be due to increased mental health issues and decreased social supports associated with higher maternal ACE scores (Lange et al., 2019; McDonald et al., 2019; Plant et al., 2018; Steele et al., 2016). Women with three or more ACEs are five times more likely to experience postnatal psychosocial risk factors and more likely to have maladaptive coping strategies (McDonald et al., 2019). Studies show that parental stress has a direct impact on parent behavior, child behavior and child outcomes (McDonald et al., 2019; Steele et al., 2016; Stepleton et al., 2018).

Parents with higher reported stress levels are more likely to use authoritarian or permissive parenting styles, which are less effective (Lange et al., 2019). There are four, generally understood, styles of parenting: Authoritative, Authoritarian, Permissive and Neglectful-Uninvolved. (Broderick & Blewitt, 2015; Lange et al., 2019). These parenting styles are leveled combinations of parental warmth and parental demandingness, shown in Figure 2.1. Authoritative parenting style is considered to be the optimal parenting style by creating a positive emotional climate and secure boundaries (Broderick & Blewitt, 2015). Parents with higher reported stress levels are also more likely to share decreased stimulating parent-child interaction and are more likely to respond to their children punitively leading to an increase in child maltreatment (Lange et al., 2019). These parents have a harder time modulating their own emotions, which impedes their ability to create relational security in their children and be able to teach them how to regulate their own emotions and adapt to life stressors (Lange et al., 2019; Steele et al., 2016; Stepleton et al., 2018). The inability to emotionally regulate, leads to an increase in internalizing and externalizing behaviors for children of parents with high levels of parental stress, which leads to behavioral problems and lack of school readiness (Folger et al., 2018; Lange et al., 2019; Steele et al., 2016). Parenting stress is influenced by an individual's perceptions of their own parent's behaviors and their childhood relationship with that parent (Steele et al., 2016). These perceptions inform assumptions about an individual's own parenting behaviors and how their child will respond to those behaviors (Steele et al., 2016).

Lange et al. (2019) used the Parenting Stress Index-Short Form (PSI-SF) to conduct research into how parental ACEs impact parental stress. The PSI-SF is a 36 item self-report tool composed of three subscales: Parental Distress (PD), Difficult Child

(DC), and Parent-Child Dysfunctional Interaction (PCDI) (Steele et al., 2016). The study found that each additional ACE that a mother was exposed to was associated with a 3.19 percentile increase in total score on the PSI-SF, a 2.45 percentile increase on the PD subscale, and a 3.69 percentile increase on the DC subscale (Lange et al., 2019). The DC subscale captures difficulties related to child's behavior (Lange et al., 2019). Parental distress can exacerbate parental negative perceptions about children's behaviors and emotional states (Min et al., 2013; Molitor & Dvorsky, 2019). When this happens, parents are more likely to parent with ineffective and aggressive behaviors (Molitor & Dvorsky, 2019). A parent's perception of their child's behavior is not the only perception affected by childhood trauma. Cunningham and Renk (2018) found that mothers who experienced high levels of childhood trauma may experience an inaccurate perception of their parenting abilities. They found that mother's self-reported levels of self-efficacy were negatively correlated to their self-reported levels of parenting competence, which was contrary to their initial hypothesis, and suggest that programs aimed at increasing self-efficacy to increase parenting competence may only be effective to a point (Cunningham & Renk, 2018). They hypothesized that due to decreased ability to self-regulate, these mothers may experience an increased level of stress and emotional arousal that perpetuates a preoccupation with self (Cunningham & Renk, 2018). Cunningham and Renk (2018), suggest that because of this, interventions such as programs that help parents to learn to respond to their children's emotional cues while, simultaneously, attending to their own emotional states, may be more beneficial in creating lasting change in parent-child dyads, for mothers who have high levels of accumulated ACEs.

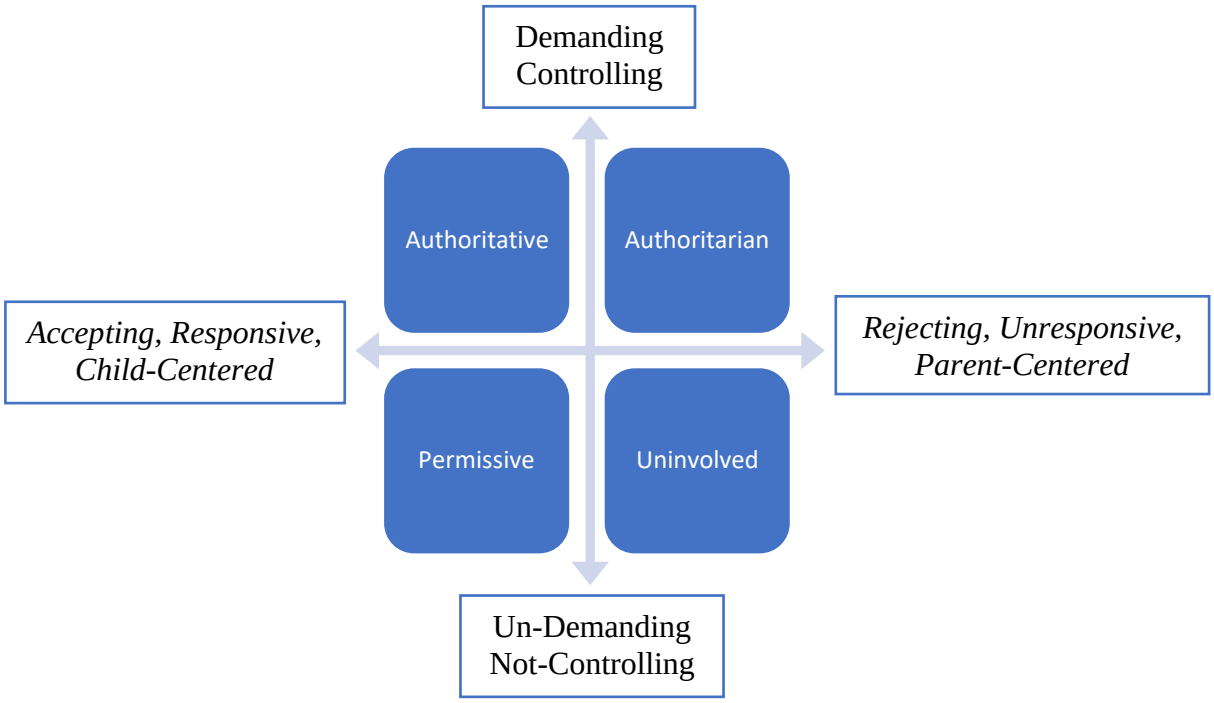

Figure 2.1

Dimensions of Parenting Styles

Parenting Behavior

Maternal ACEs have been significantly, positively correlated with negative parenting behaviors (Borja et al., 2019; Cooke et al., 2019; Lange et al., 2019; Lyons-Ruth et al., 2003; McDonald et al., 2019; Molitor & Dvorsky, 2019; Oosterman et al., 2018; Plant et al., 2018; Steele et al., 2016; Stepleton et al., 2018; Yehuda et al., 2001; Zvara et al., 2015; Zvara et al., 2016). This may be mediated by parental stress and/or parental mental health issues, such as depression, anxiety, and PTSD (Borja et al., 2019; Molitor & Dvorsky, 2019; Plant et al., 2018; Steele et al., 2016; Zvara et al., 2015; Zvara et al., 2016). Research has shown that mothers who have experienced early childhood trauma, especially sexual abuse and violence, are more likely to parent aggressively, be emotionally unavailable, and be less sensitive to emotional cues of their children (Borja

et al., 2019; Lange et al., 2019; Lyons-Ruth et al., 2003; Molitor & Dvorsky, 2019; Plant et al., 2018; Steele et al., 2016; Zalewski et al., 2013; Zvara et al., 2015; Zvara et al., 2016; Zvara et al., 2017), which may give insight into the intergenerational transference of ACEs. Zalewski et al. (2013) stated that these mothers are also more likely to alternate aggressive, hostile, and abusive parenting with overly permissive parenting styles. They are also "significantly more anxious about the intimate aspects of parenting their children", "more self-focused (as opposed to child-focused) in their interactions" with their children and rely "more heavily than non-abused mothers upon their own children for emotional support" (Zvara et al., 2016, p. 3). These mothers may also be more likely to employ the use of psychological control over their children in an attempt to decrease child autonomy, because independent behaviors of their children can be triggering for women who have experienced abuse (Zalewski et al., 2013, p. 793). Zvara et al. (2015) found that the effects of childhood sexual trauma on parenting were more pronounced for mothers with higher incomes, education levels and adult relationship stability. Oosterman et al. (2018) suggest that early abuse is associated with perceptions of lack of control, less self-efficacy and lower self-esteem, which may blunt response patterns, leading to mothers avoiding or quitting difficult parenting tasks, investing less effort and attention to parenting and using harsher discipline practices. Zvara et al. (2016) suggest that prenatal distress may have a causal association with early parenting behaviors.

The emotional and behavioral dysregulation stemming from maternal ACEs, when left unchecked, may become physically or emotionally abusive, such as increased psychological aggression, the increased use of punitive parenting behaviors, and a greater reliance on physical discipline strategies (Borja et al., 2019; Molitor & Dvorsky, 2019;

Steele et al., 2016; Zvara et al., 2016; Zvara et al., 2017). Zvara et al. (2017) found that mothers with a history of sexual abuse were more likely to exhibit aggressive parenting toward their sons than towards daughters and were more sensitive toward their daughter's emotional needs and bids for attention. Symptoms of depression, such as fatigue, distractibility, and preoccupation with negative emotional states are incompatible with nurturing parenting (Molitor & Dvorsky, 2019) and can lead to physical and emotional neglect of children when left unchecked. This can be seen through decreased maternal warmth, failure to decipher emotional cues, and disengagement with their children, such as less talking and/or reading to their children, decreased engagement in functional and symbolic play, being less attentive to health and prevention requirements, food scarcity and overall decreased quality of home environments (Molitor & Dvorsky, 2019). Many of these factors were illustrated in a study that compared rates of childhood adversity reported by children of Holocaust survivors to rates reported by a group of children not raised by Holocaust survivors (Yehuda et al., 2001). In the study, children of Holocaust survivors reported significantly higher levels of all types of abuse and neglect, except physical abuse (Yehuda et al., 2001). "Parents who have experienced adversity are likely to need additional support in understanding and implementing such concepts as positive parenting, appropriate discipline, good self-care, modeling conflict resolution, healthy coping strategies, and developmental promotion" (Gillespie & Folger, 2017, p. 250)

Impact of Parenting on Child

Beyond their effect on parenting capacity, parental ACEs also impact the physical, emotional, and relational development of their children (Le-Scherban et al., 2018; McDonald et al., 2019; Plant et al., 2018; Schickedanz et al., 2018; Stepleton et al.,

2018; Sun et al., 2017; Wurster et al., 2019). Folger et al. (2018) found the threshold of mothers who experienced three or more ACEs and/or fathers who accumulated at least two ACEs to be a marker for significant increased developmental risk for their children. Madigan et al. (2017) found that for mothers who experienced four or more ACEs, their children were twice as likely to experience physical health risks and five times as likely to experience psychosocial risks and the likelihood of these risks were positively correlated with the number of parental ACEs. Other studies suggest that quality of life factors play a compounding part in disadvantaging children of mothers exposed to childhood abuse (Borja et al., 2019; Hillis et al., 2004), while other research has found that these factors play no significant role (Madigan et al., 2017).

Child Development

Increased parental ACEs have been associate with decreased skill achievement in children, such as problem-solving skills, communication skills, personal and social skills, fine and gross motor skills (Folger et al., 2018; Le-Scherban et al., 2018). For each additional parental ACEs, a child is at an 18% increase for these developmental impairments (Folger et al., 2018; Le-Scherban et al., 2018). Children with mothers who have been exposed to three or more ACEs are 2.3 times more likely to have decreases in development and for fathers with two or more ACEs, the children are four times more likely (Le-Scherban et al., 2018). For each additional conventional parental ACEs, their child is also 1.21 times more likely to have a health rating of 3 or less on a 5-point Likert scale, 1.28 times more likely to be considered obese and 1.17 times more likely to develop asthma (Le-Scherban et al., 2018). If the parents have 6 or more ACE exposures, the child is 6 times more likely to be rated as having poor overall health (Le-Scherban et

al., 2018). These health ratings are not associated with differences in the child's diet, physical activity, or healthcare access (Le-Scherban et al., 2018), however, Eismann et al. (2019) found that for each additional maternal ACEs, there was a 12% increase in likelihood of a child missing a preventative, well-child visit. Other poor child health behaviors associated with maternal ACE exposure and stress are decreased "oral health, physical hygiene, and safety practices (e.g., wearing a seatbelt)" (Borja et al., 2019, p. 264). Also, children whose mother have been exposed to ACEs, have been associated with shorter gestational age, low birth weight, differences in newborn brain anatomy, and poorer physical health at 18 months (Johnson et al., 2017; Le-Scherban et al., 2018). These biomedical risks are found to exist regardless of SES (Le-Scherban et al., 2018) and are believed to be mediated by prenatal biological risk and perinatal psychosocial health (McDonald et al., 2019). Vagero and Rajaleid (2017) found that children of males who had experienced a parental death in childhood, had higher prematurity rates and lower birth rates than children born to fathers who did not experience the loss of a parent. These results were not significant for children of mothers who had experienced childhood parental death (Vagero & Rajaleid, 2017).

Child Emotional and Mental Health Issues

Cooke et al. (2019) found that children whose parents were exposed to four or more ACEs were 5.66 times more likely to develop emotional or mental disturbances, regardless of demographics. Schickedanz et al. (2018) reported similar findings of being 5.4 times more likely of developing emotional distress if mothers were exposed to four or more ACEs and 2.3 times if it was their father. McDonald et al. (2019) reported that children of mothers with three or more ACE exposures were associated with increased

anxiety and emotional disorders, separation anxiety, surgency and negative affectivity; and Schickedanz et al. (2018) reported that they are more likely to develop symptoms of ADHD. Overall, research has found that maternal ACEs are correlated with increased depressive symptoms (Dennis et al., 2019), emotional issues and behavioral problems in offspring (Folger et al., 2018; Stepleton et al., 2018) and increase risk of postnatal psychosocial risk, such as poor parent child relationship quality, more insecure attachment classification, decreased relationship schemas, and development of psychopathology (McDonald et al., 2019; Stepleton et al., 2018). Yehuda et al. (2001) reported that children of Holocaust survivors were found to have increased risk for developing PTSD. This was found to be especially true if they experienced emotional or sexual abuse, regardless of parental status of PTSD (Yehuda et al., 2001).

The increase of mental health issues in children of mothers with a history of ACEs, especially those suffering with depression, is complicated by the circular causality induced by child and parenting behaviors (Zalewski et al., 2013). As discussed previously, mothers with child trauma histories are less likely to parent with warmth and encourage autonomy in their children; and they are more likely to experience difficulty with their own emotional regulation (Zalewski et al., 2013). Likewise, their children are more likely to be irritable, withdrawn and display externalizing behaviors, which may both trigger and be triggered by their mother's own emotional reactivity, leading to aggressive parenting found in physical abuse and double bind scenarios common with psychological control and abuse (Zalewski et al., 2013).

Child Behavior

Increased parental ACEs are associated with increased behavioral difficulties in children (Cooke et al., 2019; McDonald et al., 2019; Plant et al., 2017; Plant et al., 2018; Schickedanz et al., 2018; Stepleton et al., 2018). There is a significant association between maternal ACEs and internalizing and externalizing behaviors in children, as well as poor adjustment (Borja et al., 2019; Cooke et al., 2019; Plant et al., 2017; Plant et al., 2018; Stepleton et al., 2018). Plant et al. (2018) reported that 67% of studies they looked at found a positive association between maternal ACEs and child disruptive behavioral disorders. Children with parents who have experienced four or more ACEs score worse on standardized test of child behavior problems, including decreased positive behaviors such as self-control, persistence, self-esteem, social competence, and compliance (Schickedanz et al., 2018). Children whose mothers reported three or more ACEs showed increased hyperactivity, inattentiveness, and physical aggression (McDonald et al., 2019). Schickedanz et al. (2018) conducted a study which compared parental reports on personal ACE exposure and their reports on their child's behavior using the Behavioral Problem Index (BPI). They found a significant correlation between BPI scores and emotional, physical, and sexual abuse, household substance abuse and mental illness, and parental separation/divorce (Schickedanz et al., 2018). Overall, this study showed that children whose mothers reported two to three ACEs were scored 2.3 points higher on the BPI, those whose mothers reported four or more ACEs were scored 2.8 points higher, and those whose fathers reported two to three ACEs were scored 1.1 points higher on the BPI (Schickedanz et al., 2018). There was no difference in score between two to three paternal ACEs and four or more (Schickedanz et al., 2018). This association may be

mediated by a mother's increased parental stress, anxiety, or depression (Cooke et al., 2019; Plant et al., 2018; Sun et al., 2017; Zalewski et al., 2013). Mothers with increased symptoms of anxiety have children with increased physical aggression at age 3, which may result from ineffective or punitive discipline strategies (McDonald et al., 2019).

Systemic Perspective

Understanding the impact that parental ACEs have on parenting and children becomes more relevant for therapeutic purposes if there is a way to intervene in the family system and prevent or minimize the negative impact they have on the next generation. To begin this process, it is important to understand, not only the systemic aspect, but the risk factors and protective factors for maltreatment of children.

General Systems Theory Framework

General Systems Theory (GST) was developed by Ludwig von Bertalanffy in 1969. It is a unifying theory that is based on the concept of interrelatedness between members of a system (Becvar & Becvar, 1999). A system is a defined group of interrelated members with a defined pattern of behaviors (Becvar & Becvar, 1999). When applied to a family, this means that each member of the family system and their behaviors needs to be viewed within the context of their relationship with every other member of the family system (Becvar & Becvar, 1999). If a system dyad is being considered, a systems perspective would look at both individuals and the way they relate to each other. If there is a triad being considered, a systems perspective would look at each of the individuals (A, B, and C), as well as the relationships between subsystems (members A and B, members B and C, and members A and C) and the relationship between the system as a whole (all members A, B, and C together) (Becvar & Becvar, 1999). In

simplified terms, each member has an impact on both the way they treat others, and the way others treat them. Since all members of the system are interrelated, if a change is made on area of the system, it creates a change in the system as a whole (Becvar & Becvar, 1999). This is an important concept when working with children in mental health counseling, because from this perspective, making a change in the parental subsystem, can make a change in the whole system, which affects the child. It is also important to note that when a family system attends mental health counseling, the therapist/counselor becomes a part of that system and may work to make changes from within the system.

Risk Factors

The following are systemic risk factors, at an individual level, for child maltreatment: lack of understanding of child needs, child development, and parenting skills; parental history of child abuse or neglect**;** substance abuse and/or mental health issues**;** parental characteristics of young age, low education, single marital status, multiple children, and low SES; having a nonbiological transient caregiver in the home; and parental thoughts/emotions that justify maltreatment (CDC, n.d.b). On a family level, social isolation, family disorganization, dissolution, violence, parenting stress, poor parent-child relationships, and negative interactions are risk factors (CDC, n.d.b; Min, et al., 2013). Lastly, risk factors on a community level are violence, concentrated neighborhood disadvantage, and poor social connections (CDC, n.d.b). After understanding which factors put a child at risk for maltreatment, it is important to understand what factors help to protect a child.

Protective Factors

The most significant internal protective factor is resiliency (Borja et al., 2019; Sexton et al., 2015). Research on mothers has shown that resiliency plays a prime part in the outcome of childhood trauma when it comes to developing PTSD and depression (Sexton et al., 2015). Of the mothers who scored in the highest quarter for severity of ACE exposure only 8% of those scoring high in resiliency compared to 58% of those that scored low in resiliency met criteria for PTSD (Sexton et al., 2015). For mothers scoring high in resiliency, none of them met criteria for postpartum depression, despite their ACE exposure (Sexton et al., 2015). In contrast, for mothers scoring low in resiliency, 25% of those with the lowest severity of ACE exposure and 65% of those with the highest severity of ACE exposure met criteria for postpartum depression (Sexton et al., 2015). Resiliency scores also predicted a sense of postpartum competence (Sexton et al., 2015). Likewise, Hakansson et al. (2018) found that mothers with substance use disorders that had higher ACE exposure were found to be able to make better sense of their parenting situations if they experienced more adaptive childhood situations such as a sense of competence and/or safety. These factors may influence resiliency, which may help parents with high ACE exposure to protect their children from heightened exposure to adversity (Borja et al., 2019)

The most significant external protective factor is for the child to have social supports (Murphy et al., 2014; Wang, 2021). This mitigating factor can take the form of trusted adults to confide in (Murphy et al., 2014) or high-quality peer relationships (Wang, 2021). Adults with at least one ACE are less likely to report depressed affect and increased health issues if they reported having at least three family members or friends

that they could discuss emotional problems with (Murphy et al., 2014). Wang (2021) found that quality of peer relationships was positively correlated with quality of self-rated health in individuals with family-related ACEs. This study found that these individuals even reported more positive health quality than individuals without family-related ACEs, supporting the concept that high quality friendships can mitigate the negative impact of ACEs (Wang, 2021). Increased emotional support also correlates with decreased U/CC categorization (Murphy et al., 2014). Social support is also imperative at a familial and community level (CDC, n.d.b), because decreased emotional support increases psychological and emotional vulnerability (Cooke et al., 2019; Min et al., 2013; Racine et al., 2018; Stepleton et al., 2018). Other familial protective factors are concrete support for basic needs, nurturing parental skills, stable family relationships, household rules and child monitoring, parental employment, parental education, adequate housing, and access to healthcare and social services (CDC, n.d.b). Research shows that the presence of a marriage or committed relationship positively influences a child's behavior (Stepleton et al., 2018) and a parent's ability to encourage and support autonomy in their child is a strong predictor of self-regulation in young children (McDonald et al., 2019). Overall, research shows that social supports are the greatest mitigating factor against ACEs (Molitor & Dvorsky, 2019; Murphy et al., 2014; Racine et al., 2018). This is where therapy can be beneficial.

Interventions

Therapeutic interventions can promote resilience and mitigate the impact of parental ACEs on their children (Borja et al., 2019; Scott & Copping, 2008; Stepleton et al., 2018). Based on previous research, ways to prevent or minimize the negative impact

parental ACEs have on the next generation include improving family dynamics; increasing positive parenting techniques and emotional support (Szilagyi et al., 2016); and understanding when to refer out for maternal depression (Dennis et al., 2019; McDonald et al., 2019) and/or marriage counseling (Stepleton et al., 2018). Zalewski et al. (2013) states that mothers with depression and a history of childhood trauma are more difficult to treat and clinicians should be mindful of the need for additional or novel approaches. Other interventions may include access to community programs and effective trauma-informed mental health services (Szilagyi et al., 2016). Research shows that although remediation later in life can have some benefit, early identification, assessment, and systemic treatment have better potential outcomes for children (Szilagyi et al., 2016). Scott & Copping (2008) discuss the benefits of the Intergenerational Trauma Treatment Model (ITTM). ITTM is a manualized approach that combines cognitive-behavioral and psychoanalytical informed approaches that focus on the parents as change agents for their child (Scott & Copping, 2008). This method addresses both the child's trauma and the parental childhood trauma, as well as the parents' sensitivity to and ability to engage with their child regarding the child's trauma (Scott & Copping, 2008). Research has shown that completion of ITTM is associated with a significant decrease in "child conduct disorders, problems in social relations, and caregiver depression (Scott & Copping, 2008, p. 281). Zalewski et al. (2013), also discusses that from a transactional perspective, parents and children both contribute to the way a child is parented, therefore a systemic approach should be a priority. Overall, on a macro level, data suggest that there is a need for a national educational campaign around ACEs, toxic stress, and

positive parenting as well as for resources, such as validated ACE screeners (Szilagyi et al., 2016).

Screening

The unexpected high prevalence of ACEs in a relatively low-risk population in the initial studies suggests the need for universal assessment (Szilagyi et al., 2016). McDonald et al. (2019) suggested that a self-report measure would be most beneficial, because the use of observation and coding in community settings is not realistic. Many of the studies referenced throughout this chapter have recommended parental ACE screening to identify at-risk children due to the vast dose-related implications parental ACEs have on child outcomes (Eismann et al., 2019; Folger et al., 2018; Gillespie & Folger, 2017; Johnson et al., 2017; McDonald et al., 2019; Min et al., 2013; Murphy et al., 2014; ; Plant et al., 2018 Schickedanz et al., 2018; Steele et al., 2016; Stepleton et al., 2018; Sun et al., 2017; Szilagyi et al., 2016; Zalewski et al., 2013).

Screening by Pediatricians

In 2012, the American Academy of Pediatrics (AAP) acknowledged the significant impact that ACEs have on lifelong health and more importantly, the impact that parental ACEs play in the health of their children (Szilagyi et al., 2016). They began a concerted effort to raise pediatrician's awareness and in 2013 integrated questions regarding ACEs into their 85th Periodic Survey (PS85), "a national survey of US nonretired AAP members…to inform policy, develop new initiatives, and evaluate current projects and practices", to explore if and how pediatricians were integrating this awareness into their practices (Szilagyi et al., 2016, p. 669). At that time, the AAP recommended that pediatricians begin screening for child and parental ACEs as a

preventative measure against child maltreatment at well child visits (Gillespie & Folger, 2017; Szilagyi et al., 2016), even though validated screening tools were largely unavailable at that time (Szilagyi et al., 2016).

The results of the PS85 study showed that 61% of pediatricians "did not ask most/all parents about any parental ACE", "only 2% were very familiar" with the ACE study, while "76% were not at all familiar with the ACE study" (Szilagyi et al., 2016, p 670). Further, "only 34% of all general pediatricians agreed/strongly agreed that prolonged or excessive physiologic stress in childhood can result in epigenetic modifications of DNA", 57% "agreed/strongly agreed that brief periods of stress can have a positive effect on a child by serving to motivate and build resilience", while 96% " agreed that prolonged or excessive stress can have a negative impact on brain development and educational achievement" and 92% agreed that it had a negative impact on "coping with future stress" (Szilagyi et al., 2016, p 670). Szilagyi and colleagues (2016) reported that "the majority of pediatricians agreed that prolonged or excessive physiologic stress can result in a variety of poor physical health outcomes" (p. 670). The results surrounding parenting showed that 58% agreed that parents with ACE exposures "have a harder time forming stable and supportive relationships with their children", 84% agreed that those types of relationships "can mitigate the negative effects" of ACEs, and "96% disagreed that positive parenting has little influence on a child's life-course trajectory" (Szilagyi et al., 2016, p 670).

The AAP currently recommends a systemic multigenerational approach to prevent and ameliorate the impact of ACEs, as well as the promotion of resiliency "through early identification and management of families at risk, a focus on child and family strengths,

and teaching positive parenting strategies" (Szilagyi et al., 2016, p. 669). As stated previously, ACEs are more common in a therapeutic population than a community population (Murphy et al., 2014). This would suggest a need for mental health providers to screen for parental ACEs in order to identify at-risk-families and those clients in need of a systemic multigenerational treatment approach. However, this study's investigator found no literature that speaks to the screening practices of mental health providers for either individual or parental ACEs, leaving a large gap in the literature.

Pediatric Screening Practices

Screening for parental ACEs can be simple, such as having a parent fill out the standard ACE-Q, which lists the 10 conventional ACEs and asks an individual to check yes or no in response to childhood exposure, or more in depth in the case of a formal interview. Pediatricians have found using an ACE screening tool to be more efficient and comfortable than the interview method (Szilagyi et al., 2016) and they report finding great value in the information provided from ACE screening (Conn et al., 2018; Gillespie & Folger, 2017). They also reported that using an ACE screening tool was a positive experience, and parents seemed receptive to conversations about past trauma and found value in including this information in well child visits (Conn et al., 2018; Gillespie & Folger, 2017). Freeman (2017) found that physicians who had personal exposure to ACEs, were more likely to screen for ACEs in their patients. Conn et al. (2018) reported that parents acknowledged the part their own ACEs play in parenting and wanted to break intergenerational patterns and looked to their pediatricians to help them with these skills. Pediatricians found the most effective question for initiating a conversation about parental ACEs, after using the screening tool, was "how do you think these experiences

affect your parenting today?" (Gillespie & Folger, 2017, p. 255). Likewise, adolescents who were interviewed regarding screening for ACE exposure in the primary care setting reported that they felt inquiring about this knowledge could give physicians a fuller picture of who the patient is (Chokshi & Skjoldager, 2020). Chokshi and Skjoldager (2020) reported that adolescents surveyed were aware of the toll ACEs play in mental health but were not familiar with the physical and long-term effects and those that were familiar with them, could not give an explanation for this. These finding further support the use of screening.

Screening Tools

The standard ACE-Q has its deficits, though. For starters, many individuals do not consider their parents' behaviors or their childhoods to have been abusive or neglectful, so they will mark "no". However, when screening tools integrate questions listing specific behaviors considered abusive or neglectful, individuals are more likely to recognize and report ACEs. Some integrative childhood trauma assessment tools are the Conflict Tactics Scale and the Childhood Trauma Questionnaire (Murphy et al., 2014). As discussed previously, the addition of expanded ACE items to a screening tool may identify at-risk populations missed by the conventional ACE screening tools (Cronholm et al., 2015; Wade et al., 2016, Koita et al., 2018). Some assessments that incorporate expanded ACE items are the ACE-IQ and the Pediatric ACE Screening and Related Life-events Screener (PEARLS), which was developed by studying several adapted ACE screeners used in pediatric primary care (Koita et al., 2018).

Another drawback to the standard ACE-Q is that parents may not be truthful if they are concerned that their answers are not confidential or that they may be used

against them (Szilagyi et al., 2016). The use of an aggregate tool, which reports only the overall score and not individual categories, has been helpful in addressing this concern and research has shown that 2.1% more individuals report experiencing at least one ACE when using this method (Gillespie & Folger, 2017). Expanding on confidentiality, one has to consider all of the ethical implications of inquiring about and integrating parental information into a child's assessment and file.

The Current Study

After conducting a literature review on parental ACEs, several major themes emerged: increased risk of impaired parenting skills, harsher parenting styles, decreased emotional regulation during parenting, impaired emotional and relational development of their children, decreased parent-child relationship quality, impaired schemas for relationships, and a decreased ability to build stable, supportive homes that influence child development and family well-being. The research showed an indirect pathway from childhood trauma through depression to parenting stress, even while simultaneously controlling for household income and general psychiatric distress. Research showed that parents who have experienced adversity are more likely to need additional support in understanding and implementing such concepts as positive parenting, appropriate discipline, good self-care, modeling conflict resolution, healthy coping strategies, and developmental promotion. Most all the research recommended assessing for parental ACEs, which can give significant systemic screening information for working with children and adolescents. The literature search produced only six articles exploring the knowledge and implementation of this information and they all involved physicians and pediatricians. The gap in the literature seems to be about the knowledge and

implementation of this information with mental health providers who work with children and adolescents. Mental health providers who work with pediatric clientele are important because they are the population who would be directly or indirectly treating children affected by ACEs and parental ACEs. They are the first line of defense for prevention of ACEs, via screening for parental childhood trauma and identifying children at increased risk for maltreatment, after pediatricians. To address this gap, the current study will focus on answering the following research questions:

1. Does licensed mental health providers' degree of familiarity with the ACE study statistically significantly predict their frequency of screening for parental ACEs in their practice?
2. Does licensed mental health providers' degree of endorsement of the impacts of parental ACEs statistically significantly predict their frequency of screening for parental ACEs in their practice?
3. Does licensed mental health providers' personal experience with ACEs statistically significantly predict their frequency of screening for parental ACEs in their practice?

Summary

Chapter Two is a literature review on parental ACEs, their impact on the next generation, therapeutic implications, and how pediatricians may be implementing that information. Chapter Three provides an in-depth description of the methodological plan of action for this study. Chapter Four provides a descriptive predictive analysis of the study's results. Lastly, Chapter Five concludes with a discussion of the results, clinical implication, limitations, and future directions.

CHAPTER III

METHODOLOGY

This chapter provides information regarding the current research study. First, the purpose of the study and research questions will be restated. Next, the research design including participant sampling procedure is be presented. Lastly, the study procedures including data collection, research variables, measurement instruments and plan for data analysis will be introduced.

Research Purpose

The purpose of this study is to increase our understanding of licensed mental health provider's familiarity with the Adverse Childhood Experiences (ACEs) study, their endorsement of the impacts of parental ACEs, and their practice of screening for parental ACEs. Prior research has found that parental ACEs have a significant impact on the physical, mental, behavioral, and relational health of their children, as well as intergenerational transmission of ACEs. Screening for parental ACEs allows medical and mental health providers to identify children at greater risk for maltreatment and negative health outcomes. It may also provide a greater insight into familial dynamics at play in child and adolescent clients' lives, which can contribute to the prevention of ACEs. Previous research has explored pediatrician's familiarity with ACEs and its long-term impacts, as well as their screening practices for childhood trauma, however, this study's investigator was unable to find any parallel research regarding mental health providers. In

addition, no research was found regarding medical or mental health provider's familiarity with the impacts of parental ACEs or their practice of screening for them. This study aims to address the gap in research by exploring those factors, as well as the influence that licensed mental health provider's degree of familiarity with the ACE study, degree of endorsement of the impacts of parental ACEs and personal experience with ACEs have on their practice of screening for parental ACEs.

Research Questions

As no prior research was found regarding mental health providers' familiarity with the ACE study, their endorsement of the impacts of parental ACEs, or their practice of screening for parental ACEs, the research questions for the current study are exploratory in nature. This study's research questions are:

1. Does licensed mental health providers' degree of familiarity with the ACE study statistically significantly predict their frequency of screening for parental ACEs in their practice?

   Hypothesis 0: Licensed mental health providers' degree of familiarity with the ACE study does not statistically significantly predict their frequency of screening for parental ACEs in their practice.

   Hypothesis 1: Licensed mental health providers' degree of familiarity with the ACE study statistically significantly predicts their frequency of screening for parental ACEs in their practice.

2. Does licensed mental health providers' degree of endorsement of the impacts of parental ACEs statistically significantly predict their frequency of screening for parental ACEs in their practice?

Hypothesis 0: Licensed mental health providers' degree of endorsement of the impacts of parental ACEs does not statistically significantly predict their frequency of screening for parental ACEs in their practice.

Hypothesis 1: Licensed mental health providers' degree of endorsement of the impacts of parental ACEs statistically significantly predicts their frequency of screening for parental ACEs in their practice.

3. Does licensed mental health providers' personal experience with ACEs statistically significantly predict their frequency of screening for parental ACEs in their practice?

   Hypothesis 0: Licensed mental health providers' personal experience with ACEs does not statistically significantly predict their frequency of screening for parental ACEs in their practice.

   Hypothesis 1: Licensed mental health providers' personal experience with ACEs statistically significantly predicts their frequency of screening for parental ACEs in their practice.

Research Design

This study utilized a cross-sectional survey research design. As stated previously, based on the literature review conducted, there is no prior research regarding the topic for this study. A quantitative approach lends flexibility to the novel nature of this exploratory study, because the underlying values of a quantitative research design include "neutrality, objectivity, and the acquisition of a sizeable scope of knowledge" (Leavy, 2017, p. 9)

Sample

The target population for the current research was licensed mental health providers. For the purpose of this study, licensed mental health provider was defined as a professional with the following licensure types and all of their specific designations, excluding trainee: professional counselor (PC), social worker (SW), and marriage and family therapist (MFT). A convenience sampling frame of mental health professionals licensed in the Midwest was used, because the board of that state oversees the licensing of all three.

Criteria for Participation.

To be included for participation in the study, individuals had to have obtained at least the first level of post-master's licensure as a PC, SW, and/or MFT. Participants also needed to be 18 years of age or older and work to some degree with children and/or adolescents.

Solicitation of Participants.

The investigator of this study sent an electronic request to the licensing board for a list of all licensed mental health providers in that midwestern state. This list contained 36,796 names. An undetermined number of these names were duplicates due to individuals holding multiple licensures. An email advertising the study and containing a Qualtrics link to the informed consent, the study measures: an adapted version of the American Academy of Pediatrics (AAP) 85th Periodic Survey (PS85) (AAP, 2013), a modified version of the Pediatric ACEs Screening and Related Life-events Screener (PEARLS) (Center for Youth Wellness [CYW], n.d.) and a demographic questionnaire, were sent to all licensed professionals on the list over the course of four days (7/27/2021

to 7/30/2021) due to a 10,000-email cap per day. A total of 276 emails were returned as undeliverable and an additional 186 emails responses informed that the individual was out of the office. Volunteer response sampling was used, due to time constraints. This method had the advantage of quick data gathering and the availability of several mental health licensure types as participants. The limitation of this method was that the results may not be generalizable to licensed mental health providers, as a whole, due to the geographical homogeneity of the sample frame. The survey remained open for 10 days (7/27/2021 to 8/7/2021). A total of 431 individuals responded to the survey, a 1.2% response rate. Volunteers who did not meet the eligibility criteria (n = 151) were routed out of the survey and were not given a chance to continue. These responses were removed leaving 280 completed responses for data analysis.

Incentives for Participation.

To encourage participation, individuals were offered an opportunity to enter a drawing to win one of two $50 electronic Amazon gift cards. Each participant that elected to do so, was directed to a separate site on which they were asked to provide their email address. Each email address was assigned a unique number and two numbers were chosen using a random number generator. The two participants were notified via email that included the electronic gift card code. A copy of the drawing entry form can be found in Appendix A.

Sample Size.

A power analysis using G*Power 3.1 revealed that a total of 55 participants were necessary to accurately assess the above hypothesis with a large effect size and an alpha level of $p < .05$ (Faul et al., 2009). However, it was decided, by the dissertation

committee, that a sample of less than 100 participants would not be adequate. Therefore, the investigator chose to gather at least 350 responses to allow room for cases to be removed during data cleaning, if necessary.

Procedure

The investigator of this study was granted approval from the University of Akron Institutional Review Board (IRB), #20210611. A copy of the University of Akron IRB approval can be found in Appendix B. Next, the investigator sent an email to each licensed mental health professional on the list provided by the licensing board, in order to solicit participants for the current study. The email provided information regarding the research investigator, the purpose of the study, estimated time to complete the survey, incentives for completing the survey, informed consent, and a link to the online survey via Qualtrics hosted by The University of Akron.

Informed Consent

An informed consent script was provided to all participants online before proceeding to the online survey. Informed consent included information about The University of Akron IRB approval, the research investigator, the purpose of the study, estimated time to complete the survey, incentives for completing the survey, potential benefits and risks of the study, participant's right to refuse or discontinue participation at any time, information regarding steps taken to ensure confidentiality, how data will be protected, and contact information if participants had further questions regarding the study. Informed consent emphasized the potential mental health risks associated with answering sensitive questions regarding possible childhood maltreatment, participants' right to discontinue participation if they experience discomfort, and information for the

state crisis hotline. A copy of the informed consent can be found in Appendix C. After reading the informed consent, participants were asked to select either "yes, I agree to participate" or "no, I do not agree to participate", in lieu of signing a written informed consent to protect their anonymity. If clients agreed to participate, they were asked to complete the online measures: an adapted PS85 survey, a modified PEARLS, and the demographic questionnaire. Total time to complete the survey measures was estimated to be no longer than 10-15 minutes.

Gift Card Drawing

After completing the survey, participants were given the option to be redirected to a separate site in which they could enter their email address in a drawing to win one of two $50 electronic Amazon gift cards. Participants were reminded at this time that their survey results would not be linked to the provided email address in anyway and that it would be used solely for the purpose of emailing the electronic gift card code if their address was chosen randomly.

Data Analysis Plan

All data was input and analyzed using the Statistical Package for Social Sciences (SPSS) version 28.0, on a password protected computer. After being entered into SPPS, data was recoded based on the scale designations. Next data was screened for inclusion and missing data. Univariate statistics were run on all data, initially, to contextualize the sample. Next, bivariate statistics were used to analyze data for each research questions.

Due to the predictive nature of the research questions, three separate linear regressions were conducted. A bivariate analysis was used since each analysis has only two variables. The criterion variable for all three research questions was frequency of

screening for parental ACEs. The predictive variables for questions one through three were mental health providers' degree of familiarity with the ACE study, degree of endorsement of the impacts of parental ACEs, and personal experience with ACEs, respectively.

Measures and Variables

The measurements administered to collect data for the current study, consisted of three surveys adapted by the researcher: an adapted version of the PS85, a modified PEARLS, and a demographic questionnaire. These survey instruments were administered in addition to and after the informed consent script.

Adapted PS85 Survey

The PS85 survey (AAP, 2013) questionnaire was modified, with permission from the AAP, to meet the needs of the current study. A copy of the written permission from the AAP can be found in Appendix D. The PS85 was distributed nationally in 2013 to survey pediatricians regarding their mental health training, patient mental health management and referrals, and early brain and child development surrounding ACEs (AAP, n.d.). This was subsequently used in studies to examine pediatricians' screening practices and barriers to screening for parental ACEs (AAP, n.d.).

The current study integrated and adapted questions #4 and #19 from the PS85 (AAP, 2013) to explore the frequency of screening for parental ACEs via one self-report question, "In your practice with child and adolescent clients (up to age 17), how frequently do you screen for their parents' experiences with the following adversities as a child". Participants were asked to answer this question regarding each of the 19 combined traditional and expanded ACE items screened for in the PEARLS, using a three-point

rating scale with response choices ranging from “Never” to “Usually”. Frequency of screening was measured by the composite score of these responses.

Question #16 from the PS85 (AAP, 2013) was adapted to assess the degree of mental health providers’ familiarity with the ACE study by asking “How familiar are you with the Adverse Childhood Experience (ACE) Study”. Participant response was measured on a four-point rating scale with response choices ranging from “Not at all familiar” to “Very familiar”. These responses were assigned a number one through four, respectively to create a continuous variable. There were descriptions for each response to improve consistency.

Mental health providers’ degree of endorsement of the impacts of parental ACEs was measured via one self-report question adapted from PS85 (AAP, 2013) survey question #17 and asks, “How strongly do you agree or disagree with the following statements”. Participants were asked to rate their agreement with 16 statements regarding the impact of parental ACEs using a five-point Likert scale with response choices ranging from “Strongly Agree” to “Strongly Disagree.” Degree of endorsement was measured by calculating the sum of statements in which the participants respond with either “Agree” or Strongly Agree”. These responses were dummy coded as a one, while responses of “Neutral” to “Strongly Disagree were dummy coded as a zero to create a dichotomous continuous variable.

The wording of the adapted PS85 was modified to be congruent with surveying mental health professionals rather than pediatricians, as well as to focus on parental ACEs versus individual ACEs. The question used to determine mental health provider’s degree of endorsement of the impacts of parental ACEs used outcomes from research

regarding the intergenerational transmission of ACEs, as noted in relevant literature, that were summarized into one-sentence statements. As all the questions in the adapted PS85 ask for self-reported responses regarding the participant's personal opinions and experiences and as this is a novel tool, validity had not been confirmed. During data analysis, Cronbach's Alpha, a measure of scale's internal reliability was computed and the 19 items that made up the frequency of screening measure had a Cronbach's Alpha of $\alpha = .963$ and the 16 items that made up the endorsement of the impacts of parental ACEs measure had a Cronbach's Alpha of $\alpha = .790$. As familiarity with the seminal ACE study consisted of only one question, internal reliability could not be calculated. The PS85 can be found in Appendix E and the Adapted PS85 Survey used for this study can be found in Appendix F.

PEARLS – Teen Self Report (Teen SR)

The PEARLS is a free, publicly available, 17- and 19-item, self-report tool developed by the Bay Area Research Consortium on Toxic Stress and Health (BARC) to "identify exposure to childhood adversity and events that may increase a child's risk for toxic stress and negative health outcomes" (Department of Health Care Services [DHCS], n.d., p.1). This screening tools has two sections that separate the conventional 10 ACE items from nine expanded ACE items, including exposure to community/peer violence, discrimination, housing instability, food insecurity, separation from a parent, parental illness/disability, parental death, legal involvement, intimate partner violence (IPV). Participants check a box for each ACE item they have experienced. The PEARLS is available in three versions: child – parent/caregiver report (Child P/C), teen – parent/caregiver report (Teen P/C), and teen – self report (Teen SR) (DHCS, n.d.). Each

version is available in three formats: identified, de-identified, and a combination of de-identified for conventional ACEs and identified for expanded ACEs (DHCS, n.d.). Identified sections provide information on which ACE items the respondent experienced, while the de-identified version simply gives a sum score (DHCS, n.d.). The PEARLS Child P/C has been found to demonstrate concurrent validity, an internal consistency that is adequate to high (α=.82) for the 10 conventional ACE items and moderate (α=.61) for the expanded ACE items (Thakur et al., 2020) as well as high face validity (DHCS, n.d.). The Teen SR, which is being used for this study has not formally undergone validity testing, however the questions are identical to the Child P/C, except for the addition of two items: bullying and IPV (DHCS, n.d.). However, these two items have been tested as part of a separate study by the Center for Youth Wellness during the development of the Adverse Childhood Experiences Questionnaire (ACE-Q) (DHCS, n.d.), which was one screening tool used in the development of the PEARLS (Kiota et al., 2018). The original Adverse Childhood Experiences (ACE) Questionnaire, developed by Dr. Vincent Felitti and colleagues, is the base for all subsequent ACE screening tools and shares the same, if not identical wording to many of them. The ACE Questionnaire has been shown to be reliable and valid with an adequate test-retest reliability over 6-to-20 month intervals and adequate internal consistency (α=.88) (Florida State University College of Medicine, n.d.; Karatekin & Hill, 2018), as well as a satisfactory convergent validity with the Childhood Trauma Questionnaire (CTQ) (Karatekin & Hill, 2018).

The variable personal exposure to ACEs was measured by the sum of items checked “Yes” on the PEARLS Teen SR. For this study, the tense of the wording for each item has been modified to reflect asking an adult population about their experiences

before the age of 18, rather than asking adolescents about their past and current experiences. The PEARLS Teen SR may be found in Appendix G and the modified version used for this study may be found in Appendix H.

Demographic Questionnaire

The participants' demographic information was collected via a questionnaire that was developed by the study investigator. The questionnaire asked for information regarding mental health provider work setting, client population, duration of work experience, licensure type, education level, age, race/cultural group identity, and gender identity. These questions were used for univariate descriptive analysis and bivariate analysis with each of the research variables. Additionally, questions, such as client population, licensure type and age were used to determine eligibility for the study. The demographic questionnaire can be found in Appendix I.

Summary

Chapter three outlined the methodology for the current study, including research purpose, research questions, research design, data collection and data analysis. Chapter four will discuss the results of the research study and chapter five will be a discussion of the study as a whole, including results, implication, limitations and possible future directions for research.

CHAPTER IV

RESULTS

The purpose of this study is twofold 1) to increase our understanding of licensed mental health provider's familiarity with the Adverse Childhood Experience (ACE) study and their endorsement of the impacts of parental adverse childhood experiences (ACEs), and 2) to understand the influence that these factors and licensed mental health provider's personal exposure to ACEs have on their practice of screening for parental ACEs. This chapter outlines sample demographics and the details of data cleaning, and then is followed by a detailed summary of the descriptive statistics of the study variables. Finally, the results of the simple linear regression are shared.

Restatement of Research Questions and Hypotheses

This study's research questions are:

1. Does licensed mental health providers' degree of familiarity with the ACE study statistically significantly predict their frequency of screening for parental ACEs in their practice?

   Hypothesis 0: Licensed mental health providers' degree of familiarity with the ACE study does not statistically significantly predict their frequency of screening for parental ACEs in their practice.

Hypothesis 1: Licensed mental health providers' degree of familiarity with the ACE study statistically significantly predicts their frequency of screening for parental ACEs in their practice.

2. Does licensed mental health providers' degree of endorsement of the impacts of parental ACEs statistically significantly predict their frequency of screening for parental ACEs in their practice?

   Hypothesis 0: Licensed mental health providers' degree of endorsement of the impacts of parental ACEs does not statistically significantly predict their frequency of screening for parental ACEs in their practice.

   Hypothesis 1: Licensed mental health providers' degree of endorsement of the impacts of parental ACEs statistically significantly predicts their frequency of screening for parental ACEs in their practice.

3. Does licensed mental health providers' personal exposure to ACEs statistically significantly predict their frequency of screening for parental ACEs in their practice?

   Hypothesis 0: Licensed mental health providers' personal exposure with ACEs does not statistically significantly predict their frequency of screening for parental ACEs in their practice.

   Hypothesis 1: Licensed mental health providers' personal exposure with ACEs statistically significantly predicts their frequency of screening for parental ACEs in their practice.

Data Cleaning and Screening

Missing Data

Data were collected via Qualtrics, and 431 responses were obtained. Response data were exported to IBM SPSS Statistics (Version 28) for data analysis. Participants who did not meet the eligibility criteria (n = 151) were routed out of the survey and were not given a chance to continue; however, these responses were included in the original 431 responses and were removed. A total of 280 participants completed the survey and none of those had missing data for the study variables.

Recoding Variables

The dependent variable, frequency of screening for parental ACEs, was recoded to allow for a score of zero on responses of "Never", when asked how frequently the mental health professional screens for a particular parental ACE. Responses marked as 1=Never, 2=Sometimes, and 3=Usually were recoded to 0, 1, and 2, respectively. Then the sum of the responses was used as indicator of the respondent's frequency of screening for parental ACEs.

The sixteen 5-point Likert scale items assessing the degree of endorsement of the impacts of parental ACEs were recoded to a dichotomous response format. Responses of "Agree" or "Strongly Agree" were considered endorsement of the statement and were recoded as 1, while responses of "Neutral", "Disagree", or "Strongly Disagree" were considered non-endorsement and recoded as 0. Then the sum of responses was used as indicator of their respondent's degree of endorsement of the impacts of parental ACEs.

Similarly, for personal exposure to ACEs, an answer of no to an ACE item was recoded from '2' to '0', while an answer of 'yes' to an item remained coded as 1. Then

the sum of responses was used as indicator of their respondent's personal exposure to ACEs. A second and third column of data were also added to delineate respondents sum score for traditional ACEs and expanded ACEs, separately.

Detecting Outliers

Preliminary regression analyses were conducted including normality probability plots. These plots showed deviation of the accumulated probability of scores at both ends suggesting that there was some violation to normality of residuals. Normal probability plots for each preliminary regression are shown in figures 4.1, 4.2, and 4.3.

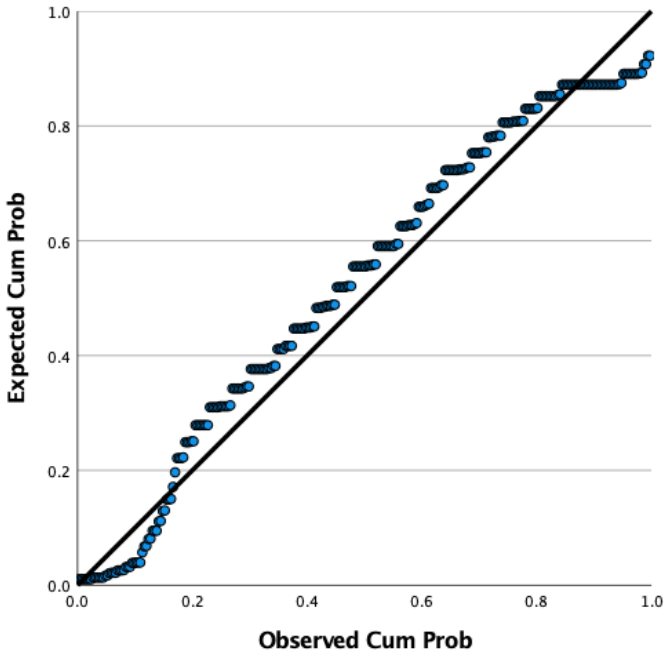

Figure 4.1

Normal Probability Plot for Familiarity with Seminal ACE Study and Frequency of Screening.

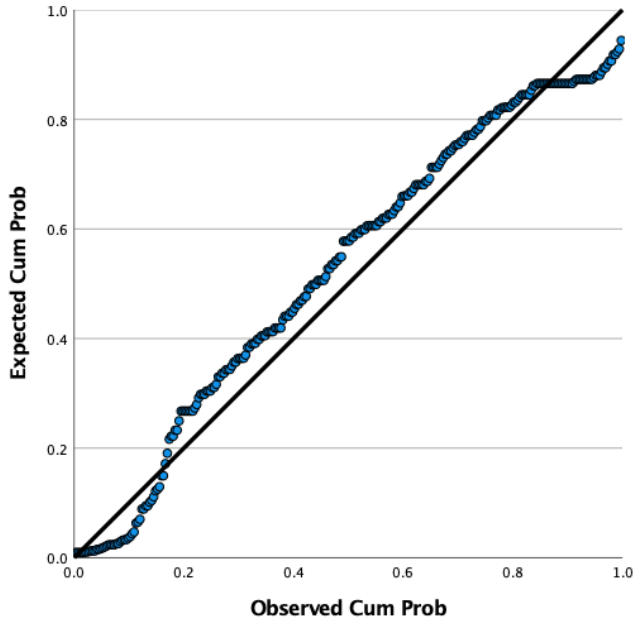

Figure 4.2

Normal Probability Plot for Endorsement of the Impacts of Parental ACEs and Frequency of Screening.

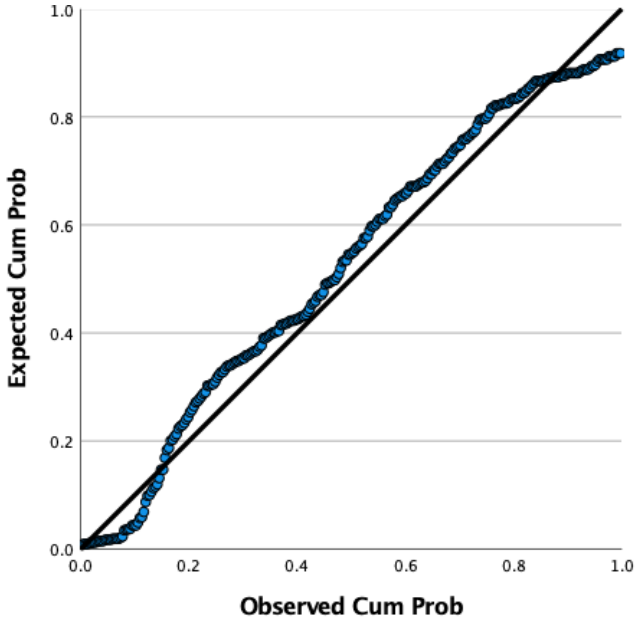

Figure 4.3

Normal Probability Plot for Personal Exposure to ACEs and Frequency of Screening.

An analysis for outliers was conducted to determine any extreme values. Then, an analysis to identify multivariate outliers was conducted using Mahalanobis distance. The value for Mahalanobis distance was then evaluated against a chi-square (χ^2) distribution value with the degrees of freedom equal to three based on the number of predictors. Only three cases met the accepted criterion for outliers, $\chi^2 = 16.266$, $p < .001$, which was outlined by Mertler and Reinhart (2017). These extreme values were removed before the simple regression analyses were run, using case selection in SPSS 28.0, leaving 277 responses.

Testing Assumptions

According to Mertler and Reinhart (2017), "there are three general assumptions involved in multivariate statistical testing: normality, linearity, and homoscedasticity" (p.32). "If one or more assumptions are violated, the results of the analysis may be biased" (Mertler & Reinhart, 2017, p. 32). To avoid these issues, each of the assumptions was tested prior to running the analysis.

Normality

The first of these assumptions looks to see if there is normal distribution of the sample. Normality may be examined through graphical or statistical methods (Mertler & Reinhart, 2017). This study used Kolmogorov-Smirnov to test the multivariate null hypothesis of normal distribution (Mertler & Reinhart, 2017). The results for this test were significant at an alpha level of .001 for each variable, indicating the null hypothesis was rejected and the variables did not meet the assumption of normality (Mertler & Reinhart, 2017). However, these statistical tests are extremely sensitive and require further examination of skewness and kurtosis values to determine normal distribution

(George & Mallery, 2010). According to George and Mallery (2010) skewness and kurtosis values between -/+ 2 are considered acceptable for the assumption of normality. This study's research variables all have a skewness level greater than .7; however, all of the research variables' skewness and kurtosis values fall within the acceptable boundaries of -2 to +2 and can be found in Table 4.1. The subscales of traditional and expanded ACEs were also evaluated and the kurtosis level of the expanded ACEs subscale was beyond the acceptable limit (kurtosis = 2.352); however, this subscale was not used in the regression analysis. Kolmogorov-Smirnov results are shown in Table 4.2.

Table 4.1

Descriptive Statistics of Research Variables

Variable	Min	Max	Mean	Median	SD	Skew	Kurtosis
Frequency of Screening	0.00	38.00	24.71	26.00	11.09	-0.755	-0.235
Familiarity with ACEs Study	1.00	4.00	3.33	4.00	0.95	-1.250	0.418
Endorsement of Parental ACEs	4.00	16.00	13.46	14.00	2.77	-1.133	0.517
Personal Exposure to ACEs - All	0.00	19.00	5.25	5.00	4.00	0.745	-0.025
Personal Exposure to ACEs - Traditional	0.00	10.00	3.65	3.00	2.81	0.362	-0.950
Personal Exposure to ACEs - Expanded	0.00	9.00	1.60	1.00	1.71	1.385	2.352

TABLE 4.2

Kolmogorov-Smirnov Results.

Variable	Statistic	df	Sig,
Frequency of Screening	.115*	277	<.001
Familiarity of ACE Study	.352*	277	<.001
Endorsement of Impacts	.194*	277	<.001
Personal Exposure to ACEs	.121*	277	<.001

Note. * significant at p < .001
a. Lilliefors Significance Correction

Linearity

The second assumption "presupposes that there is a straight-line relationship between the predictor and the mean of the criterion variable" (Mertler & Reinhart, 2017). A scatterplot matrix of research variables indicated that there is not a linear relationship between any of the research variables, as indicated by the absence of an elliptical pattern (Mertler & Reinhart, 2017). The scatterplot matrix is shown in Figure 4.4. In order to verify the lack of normality mean comparison was conducted to test for linearity. The results indicated that familiarity with the seminal ACE study did not have a significant linear relationship (F = 2.303, sig. = .130). However, endorsement of the impacts of parental ACEs (F = 5.845, sig. = .016) and personal exposure to ACEs (F = 5.596, sig. = .019) did have significant linear relationships with frequency of screening for parental ACEs. Results from the test for linearity are shown in Tables 4.3, 4.4, and 4.5.

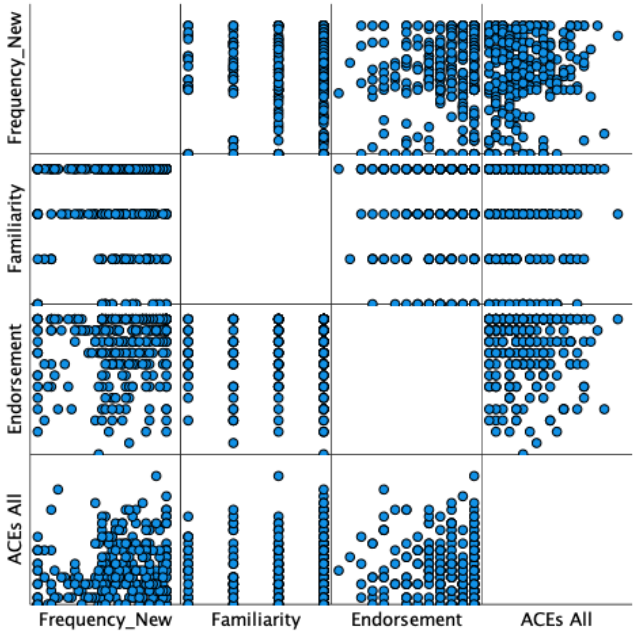

Figure 4.4

Scatterplot Matrix of Research Variables

Table 4.3

Linearity Test Results for Familiarity with ACE Study and Frequency of Screening

Model	F	df	Sig.
Linearity	2.303	1	.130
Deviation from Linearity	0.536	2	.586

Note. * significant at $p < .05$

Table 4.4

Linearity Test Results for Endorsement of the Impacts of Parental ACEs and Frequency of Screening

Model	F	df	Sig.
Linearity	5.845*	1	.016
Deviation from Linearity	0.390	11	.959

Note. * significant at $p < .05$

Table 4.5

Linearity Test Results for Personal Exposure to ACEs and Frequency of Screening

Model	F	df	Sig.
Linearity	5.596*	1	.019
Deviation from Linearity	1.103	17	.351

Note. * significant at $p < .05$

Homoscedasticity

The third assumption indicates that variability of scores, at all values for two variables, are relatively the same (Mertler & Reinhart, 2017). Homoscedasticity is related to the first assumption, normality, in that if normality is met, the two variables must be homoscedastic (Mertler & Reinhart, 2017). Upon examination of the residual scatter plots, distribution of plotted points appears to be heteroscedastic for each research variable pair. This is visualized by residuals being clustered to one side of the figure (Mertler & Reinhart, 2017). Residual scatter plots are shown in Figures 4.5, 4.6., and 4.7.

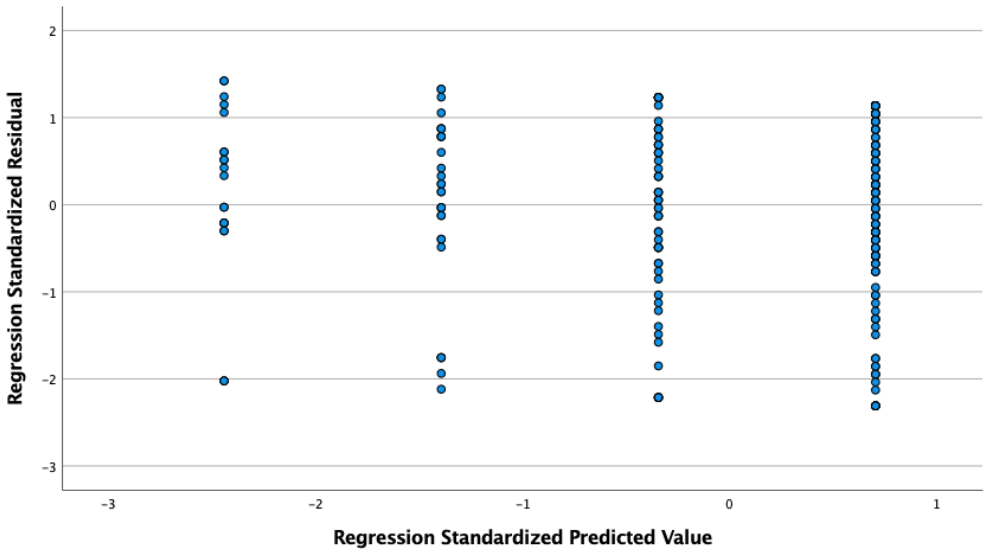

Figure 4.5

Scatter Plot of Frequency of Screening and Familiarity with the Seminal ACE Study

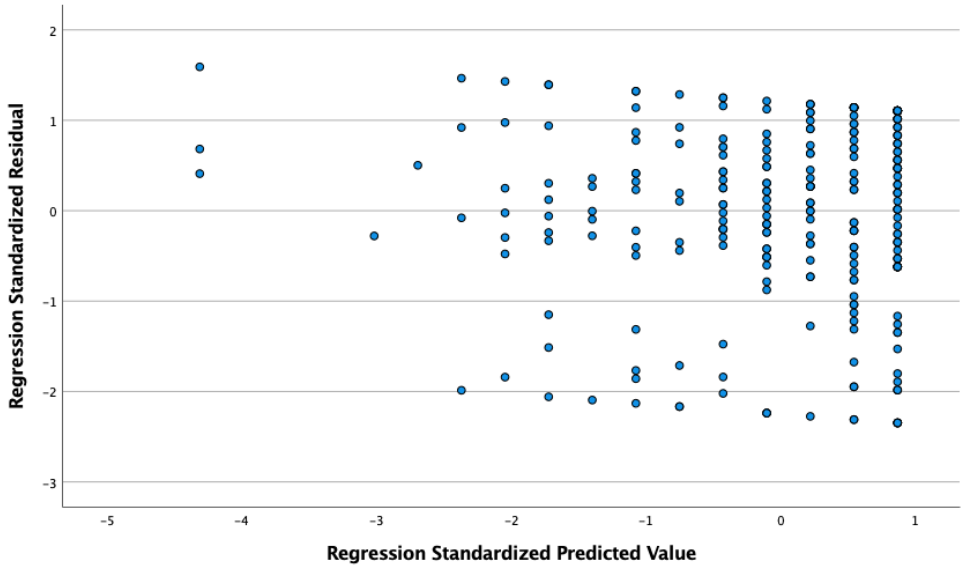

Figure 4.6

Scatter Plot of Frequency of Screening and Endorsement of the Impacts of Parental ACEs

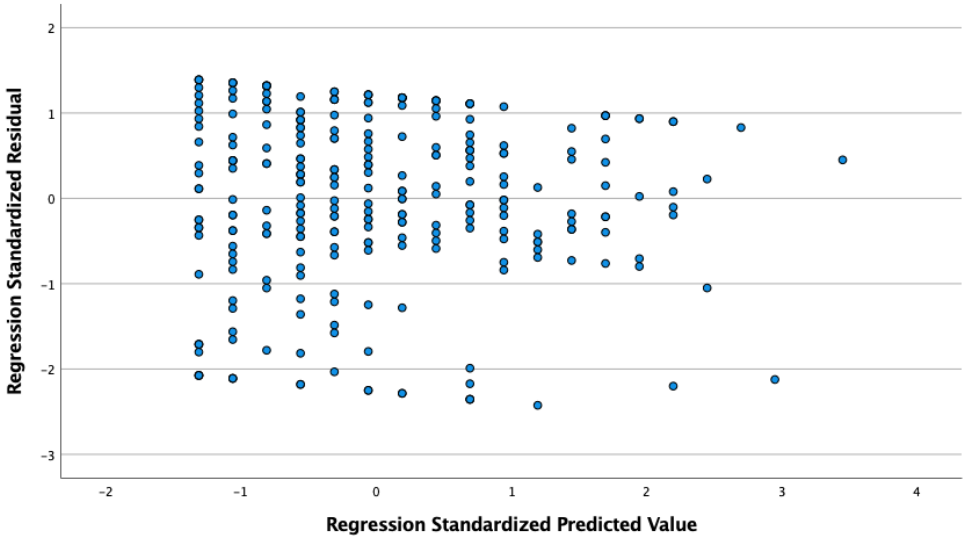

Figure 4.7

Scatter Plot of Frequency of Screening and Personal Exposure to ACEs

Univariate Analyses

Univariate statistics were conducted to contextualize the sample population. Descriptive statistics were also conducted on the four research variables. These statistics were based on the 277 complete normative responses.

Sample Demographics

Personal

The majority of participants (*n* = 232, 83.8%) identified as female, while 39 (14.1%) individuals identified as male, 2 (0.7%) identified as non-binary, 2 (0.7%) identified as gender queer/gender fluid, and 2 (0.7%) chose not to disclose their gender identity. The participants' self-disclosed primary racial/cultural identity was predominantly White Non-Hispanic/Latino (86.3%, *n* = 239), with 6.9% (*n* = 19) Black/African American, 2.5% (*n* = 7) Hispanic/Latino, 0.4% (*n* = 1) Asian, 0.4% (*n* = 1)

Native American/Alaskan Native, 0.7% (*n* = 2) identified as other, and 2.9% (*n* = 8) reported that they identified equally with their multiple racial/cultural groups. There was a wide variety among the age of participants. Eleven (4.0%) reported their age to be between 18-25 years, 66 (23.8%) reported being between 26-35 years, 70 (25.3%) reported being between 36-45 years, 59 (21.3%) reported being between 46-55 years, 53 (19.1%) reported being between 56-65 years, and 18 (6.5%) reported being over the age of 65. Participants' personal demographic information is listed in Table 4.6.

Table 4.6

Frequency Distribution of Participants' Personal Demographic Information

Category		Frequency	Percent (%)
Gender			
	Male	39	14.1%
	Female	233	83.2%
	Non-Binary	2	0.7%
	Gender Queer/Gender Fluid	2	0.7%
	Prefer not to say	4	1.4%
Racial/Cultural Identity			
	White, non-Hispanic/Latino	240	85.7%
	Hispanic/Latino	7	2.5%
	Black/African American	20	7.1%
	Asian	1	0.4%
	Native American/Alaskan Native	1	0.4%
	Other	2	0.7%
	Multi-Racial/Cultural	8	2.9%
	Missing	1	0.4%
Age			
	18 - 25 years	11	4.0%
	26 - 35 years	66	23.8%
	36 - 45 years	70	25.3%

Category	Frequency	Percent (%)
46 - 55 years	59	21.3%
56 - 65 years	53	19.1%
66+ years	18	6.5%

Professional

There was not a large variation in education level of the participants. Most participants (*n* = 234, 84.5%) reported having a master's degree, while 24 (8.7%) reported having a bachelor's degree, and 19 (6.9%) reported having a doctoral degree. Ten (3.6%) out of the 277 participants reported having multiple licensure types. Any participant identified as holding more than one licensure type was asked to delineate a primary licensure identity. Being a social worker accounted for more than half (*n* = 162, 58.5%) of the participants' primary licensure identity, 103 (37.2%) identified primarily as a counselor, and 12 (4.4%) identified as an MFT. Participants had varying degree of experience in practice. Sixty-five participants (23.5%) had been in practice for more than 25 years, 64 (23.1%) less than 5 years, 56 (20.2%) 6-10 years, 31 (11.2%) 11-15 years, 38 (13.7%) 16-20 years, and 23 (8.3%) 21-25 years. An agency was the most common work setting with 136 individuals (49.1%) reporting it as their primary work setting, followed by 58 participants (20.9%) reporting working in private practice and the remaining 30% of participants were practicing in hospitals (*n* = 33, 11.9%), schools (*n* = 26, 9.4%), and other (*n* = 24, 8.7%) settings. Seventy participants (25.3%) reported their primary work setting was within an urban inner-city community, 54 (19.5%) within an urban non-inner-city community, 95 (34.3%) within a suburban community, and 58 (20.9%) within a rural community. Participants' educational and professional demographic information is listed in Table 4.7.

Table 4.7

Frequency Distribution of Participants' Educational and Professional Demographic Information

Category	Frequency	%
Education Level		
Bachelor's Degree	24	8.7%
Master's Degree	234	84.5%
Doctoral Degree	19	6.9%
License Type		
MFT	12	4.4%
Counseling	103	37.2%
Social Work	162	58.5%
Multiple License	*10*	*3.6%*
Years in Practice		
Less than 5	64	23.1%
6 – 10	56	20.2%
11 – 15	31	11.2%
16 - 20	38	13.7%
21 – 25	23	8.3%
More than 25	65	23.5%
Primary Work Setting		
Private Practice	58	20.9%
Agency	136	49.1%
Hospital	33	11.9%
School	26	9.4%
Other	24	8.7%
Primary Work Setting Community		
Urban, inner city	70	25.3%
Urban, not inner city	54	19.5%
Suburban	95	34.3%
Rural	58	20.9%

Client Population

Participants were also asked about their caseload and the demographics of their clients. Fifty-one (18.4%) participants reported seeing less than 10 client cases per week, while 75 (27.1%) reported 10-19 client cases, 81 (29.2%) reported seeing between 20-29

client cases, 47 (17.0%) reported 30-39 client cases, and 23 (8.3%) reported seeing 40 or more client cases per week. Of these client cases, 24.2% (*n* = 67) participants reported that they had no client population under the age of 12 years, 25.6% (*n* = 71) of participants reported children being 1%-10% of their caseload, 17.7% (*n* = 49) reported children being 11%-25% of their caseload, 14.4% (*n* = 40) reported that children made up 26%-50% of their caseload, 10.1% (*n* = 28) reported children being 51%-75% of their caseload, and 7.9% (*n* = 22) reported children as being 75%-100% of their caseload. Only 5.1% (*n* = 14) of participants reported that they had no client population between the ages of 12-17 years, while 26.4% (*n* = 73) reported adolescents being 1%-10% of their caseload, 20.6% (*n* = 57) reported adolescents being 11%-25% of their caseload, 27.1% (*n* = 75) reported that adolescents made up 26%-50% of their caseload,11.9% (*n* = 33) reported adolescents being 51%-75% of their caseload, and 9% (*n* = 25) reported adolescents as being 75%-100% of their caseload. Participant's client population demographics information is listed in Table 4.8.

Table 4.8

Frequency Distribution of Participants' Client Population Demographic Information (Categorical)

Category	Frequency	%
Client Caseload per Week		
Less than 10	51	18.4%
10 – 19	75	27.1%
20 – 29	81	29.2%
30 – 39	47	17.0%
40+	23	8.3%

Category	Frequency	%
Client Child Caseload Percentage		
No clients in this population	67	24.2%
1% - 10%	71	25.6%
11% - 25%	49	17.7%
26% - 50%	40	14.4%
51% - 75%	28	10.1%
75% - 100%	22	7.9%
Client Adolescent Caseload Percentage		
No clients in this population	14	5.1%
1% - 10%	73	26.4%
11% - 25%	57	20.6%
26% - 50%	75	27.1%
51% - 75%	33	11.9%
75% - 100%	25	9.0%

Participants were asked to estimate the percentage of their client population that would be in each racial/cultural group. The mean percentage of participants' client population was predominantly White, Non-Hispanic/Latino (65.6%), 24.1% were Black/African American, 5.3% were identified as Hispanic/Latino, 1.0% Asian, less than 1.0% were identified as each Native American/Alaskan Native, Native Hawaiian/Pacific Islander, Middle Easter, and Asian Indian, and 2.5% were identified as Other. The participants' client population racial/cultural demographic information is shown in Table 4.9.

Table 4.9

Frequency Distribution of Participants' Client Population Racial/Cultural Demographic Information (Continuous)

Category	*M*	*SD*
White, non-Hispanic/Latino	65.6%	29.57
Hispanic/Latino	5.3%	10.17
Black/African American	24.1%	25.67
Asian	1.0%	2.77

Category	*M*	*SD*
Native American/Alaskan Native	0.6%	6.34
Native Hawaiian/Pacific Islander	0.7%	0.53
Middle Eastern	0.5%	1.92
Asian Indian	0.3%	2.23
Other	2.5%	12.03

Descriptive Statistics for Research Variables

Frequency of Screening for Parental ACEs

The criterion variable frequency of screening for parental ACEs had a minimum score of 0 (0 = minimum possible score) and a maximum score of 38 (38 = maximum possible score) for its 19 items. The mean score for respondents was 24.71 (SD = 11.09, Median = 26). The scores were negatively skewed, meaning that the majority of respondents are screening the parents of their child and adolescent clients for their own ACEs in childhood. Although 6.1% (*n* = 17) report never screening for any parental ACEs, 14.4% (*n* = 40) report they usually screen for all 19 items. See Table 4.10 for the descriptive statistics for frequency of screening scores. The most frequently asked about parental ACE was household mental illness (92.0%), followed by household substance abuse (90.6%) and domestic violence exposure (87.4%). Neglect was the least screened for traditional parental ACE; 22% of participants reported that they never ask about one or both items. The most frequently screened expanded ACE item is household instability (83.8%), followed closely by parental death (83.4%). Discrimination was the least asked about parental ACE overall, with 28.9% of participants reporting that they never ask about this item. The frequency statistics for frequency of screening items are shown in Table 4.11.

Table 4.10

Frequency Statistics for Frequency of Screening Scores.

Score	Frequency	%
0.00	17	6.1
2.00	2	0.7
3.00	1	0.4
4.00	7	2.5
5.00	2	0.7
6.00	2	0.7
7.00	1	0.4
8.00	1	0.4
9.00	2	0.7
10.00	1	0.4
11.00	4	1.4
12.00	2	0.7
13.00	2	0.7
14.00	2	0.7
15.00	2	0.7
16.00	1	0.4
17.00	5	1.8
18.00	4	1.4
19.00	1	5.8
20.00	10	3.6
21.00	8	2.9
22.00	13	4.7
23.00	10	3.6
24.00	7	2.5
25.00	8	2.9
26.00	11	4.0
27.00	8	2.9
28.00	15	5.4
29.00	7	2.5
30.00	5	1.8
31.00	7	2.5
32.00	13	4.7
33.00	10	3.6
34.00	6	2.2
35.00	8	2.9

Score	Frequency	%
36.00	7	2.5
37.00	10	3.6
38.00	40	14.4

Table 4.11

Frequency Statistics for Frequency of Screening Items.

Variable	Frequency	%
Emotional Abuse		
Never	50	18.1
Sometimes	96	34.7
Usually	131	47.3
Physical Abuse		
Never	51	18.4
Sometimes	91	32.9
Usually	135	48.7
Sexual Abuse		
Never	56	20.2
Sometimes	105	37.9
Usually	116	41.9
Emotional Neglect		
Never	61	22.0
Sometimes	93	33.6
Usually	123	44.4
Physical Neglect		
Never	61	22.0
Sometimes	96	34.7
Usually	120	43.3
Parental Divorce/Separation		
Never	48	17.3
Sometimes	71	25.6
Usually	158	57.0
Domestic Violence Exposure		
Never	35	12.6
Sometimes	78	28.2
Usually	164	59.2

Variable	Frequency	%
Household Substance Abuse		
Never	26	9.4
Sometimes	68	24.5
Usually	183	66.1
Household Mental Illness		
Never	22	7.9
Sometimes	53	19.1
Usually	202	72.9
Household Incarceration		
Never	53	19.1
Sometimes	97	35.0
Usually	127	45.8
Separation from Parent		
Never	51	18.4
Sometimes	81	29.2
Usually	145	52.3
Parent Death		
Never	46	16.6
Sometimes	93	33.6
Usually	138	49.8
Serious Physical Illness or Disability		
Never	52	18.8
Sometimes	101	36.5
Usually	124	44.8
Community Violence and/or Bullying		
Never	66	23.8
Sometimes	102	36.8
Usually	109	39.4
Detainment, Arrest, or Incarceration		
Never	62	22.4
Sometimes	98	35.4
Usually	117	42.2
Discrimination		
Never	80	28.9
Sometimes	116	41.9
Usually	81	29.2

Variable	Frequency	%
Intimate Partner Violence		
Never	58	20.9
Sometimes	89	32.1
Usually	130	46.9
Housing Instability		
Never	45	16.2
Sometimes	96	34.7
Usually	136	49.1
Food Insecurity		
Never	58	20.9
Sometimes	95	34.3
Usually	124	44.8

Familiarity with the Seminal ACE Study

Almost 60% (*n* = 164) of the respondents reported that they were very familiar with the seminal ACE study and could speak about it in detail, while only 7.6% (*n* = 21) said they had never heard of it. The remaining 33.2% reported being either vaguely or somewhat familiar with the study. This explains the large negative skew (skewness = -1.250) of this predictive variable with a mean score of 3.33. See Table 4.12 for the descriptive statistics for familiarity with ACE study scores.

Table 4.12

Frequency Statistics for Familiarity with ACE Study Scores.

Score	Frequency	%
1.00	21	7.6
2.00	30	10.8
3.00	62	22.4
4.00	164	59.2

Endorsement of the Impacts of Parental ACEs

The results for degree of endorsement of the impacts of parental ACEs showed a minimum score of 4.00 (0 = minimum possible score) and a maximum score of 16 (maximum possible score) with a mean score of 13.46. This variable also had a large negative skew (skewness = -1.122) due to almost 80% of respondents endorsing three-quarters or more of the 16 statements. See Table 4.13 for the descriptive statistics for endorsement of the impacts of parental ACEs scores. Five out of the 16 statements regarding the impacts of parental ACEs were endorsed by more than 90% of participants, "Positive parenting influences a child's life-course trajectory" (97.1%), "Screening for social-emotional risk factors within the family (e.g., parental depression, substance abuse, and/or domestic violence, etc.) is within the scope of a mental health provider working with children/adolescents" (96.8%), "Stable and supportive adult relationships can mitigate the negative effects of persistent childhood stress." (94.9%), "Assessing for Parental ACEs can give relevant systemic/familial screening information for working with children and adolescents." (93.9%), "Parents who have experienced adversity in childhood are more likely to need additional support in understanding and implementing such concepts as positive parenting, appropriate discipline, good self-care, modeling conflict resolution, healthy coping strategies, and developmental promotion" (92.4%). Only one statement was endorsed by less than 60% of participants, "Prolonged or excessive physiologic stress in childhood can result in epigenetic modifications of the DNA" (22.0%). The frequency statistics for endorsement of parental ACEs items are shown in Table 4.14.

Table 4.13

Frequency Statistics for Endorsement of Parental ACEs Scores.

Score	Frequency	%
4.00	1	.4
5.00	1	.4
6.00	4	1.4
7.00	7	2.5
8.00	11	4.0
9.00	6	2.2
10.00	16	5.8
11.00	10	3.6
12.00	25	9.0
13.00	31	11.2
14.00	31	11.2
15.00	46	16.6
16.00	88	31.8

Table 4.14

Frequency Statistics for Endorsement of Parental ACEs Items.

Variable	Frequency	%
Prolonged or excessive physiologic stress in childhood can result in epigenetic modifications of the DNA.	216	22.0%
Screening for social-emotional risk factors within the family (e.g., parental depression, substance abuse, and/or domestic violence, etc.) is within the scope of a mental health provider working with children/adolescents.	268	96.8%
Mothers who have experienced significant adversity in childhood are more likely to suffer from post-partum depression.	208	75.1%
A systemic multigenerational approach to therapy is recommended to prevent and ameliorate the impact of ACEs and promote resiliency in children with a family history of adverse childhood experiences.	247	89.2%

Variable	Frequency	%
Parents who have experienced significant adversity in childhood have a decreased ability to regulate their emotions during parenting and are more likely to utilize harsher discipline methods.	215	77.6%
Stable and supportive adult relationships can mitigate the negative effects of persistent childhood stress.	263	94.9%
Parents who have experienced significant adversity in childhood have a harder time forming stable and supportive relationships with their children than parents who have not experienced such adversity.	199	71.8%
Positive parenting influences a child's life-course trajectory.	269	97.1%
Assessing for Parental ACEs can give relevant systemic/familial screening information for working with children and adolescents.	260	93.9%
Parents who have experienced significant adversity in childhood are more likely to experience parental stress and use ineffective parenting styles (authoritarian or permissive).	225	81.2%
An individual's negative health outcomes from childhood maltreatment can become the adverse childhood experiences for their children.	240	86.6%
Children of parents who have experienced significant adversity in childhood are at an increased risk for developing internalizing and externalizing behavioral problems.	230	83.0%
Advice from a mental health provider can influence positive parenting skills among clients' parents.	246	88.8%
Parents who have experienced adversity in childhood are more likely to need additional support in understanding and implementing such concepts as positive parenting, appropriate discipline, good self-care, modeling conflict resolution, healthy coping strategies, and developmental promotion.	256	92.4%
Children of parents who have experienced significant adversity in childhood are at an increased risk for premature birth, low birth weight and developmental delays.	177	63.9%

Variable	Frequency	%
Increased parental adversity in childhood has been associated with decreased skill achievement in children, such as problem-solving skills, communication skills, social skills, and fine and gross motor skills.	210	75.8%

Personal Exposure to ACEs

The respondent's personal exposure to ACEs was more normally distributed (Mean = 5.2, Skewness = 0.745, Kurtosis = -0.025) than the other research variables. The minimum score for respondents was 0 and the maximum score was 19, which were the maximum possible score for this variable, due to combining the traditional 10 ACEs and an additional 9 expanded ACEs. Forty percent of the respondents score three or less ACEs, which is important to note as four or more ACEs is the cutoff for significant increased risk of long-term impacts of childhood trauma. See Table 4.15 for the frequency statistics for personal exposure to ACEs scores. More than half of participants experienced household mental illness (55.2%) and/or emotional abuse (54.5%). The least experienced ACE item among participants was separation from a parent (3.6%). Frequency statistics for personal exposure to ACEs items are shown in Table 4.16.

Table 4.15

Frequency Statistics for Personal Exposure to ACEs Scores.

Score	Frequency	%
0.00	27	9.7
1.00	30	10.8
2.00	20	7.2
3.00	34	12.3
4.00	27	9.7
5.00	25	9.0
6.00	22	7.9

Score	Frequency	%
7.00	15	5.4
8.00	22	7.9
9.00	14	5.1
10.00	7	2.5
11.00	8	2.9
12.00	10	3.6
13.00	5	1.8
14.00	6	2.2
15.00	2	.7
16.00	1	.4
17.00	1	.4
19.00	1	.4

Table 4.16

Frequency Statistics for Personal Exposure to ACEs Items.

Variable	Frequency	%
Emotional abuse	151	54.5%
Physical abuse	82	29.6%
Sexual abuse	87	31.4%
Emotional neglect	146	52.7%
Physical neglect	60	21.7%
Parental divorce/separation	100	36.1%
Domestic violence exposure	124	44.8%
Household substance abuse	86	31.0%
Household mental illness	153	55.2%
Household incarceration	22	7.9%
Separation from parent (foster care, immigration, deportation)	10	3.6%
Parental death	30	10.8%
Serious physical illness or disability of a parent	43	15.5%
Community Violence and/or bullying	76	27.4%
Detainment, arrest, or incarceration	20	7.2%
Discrimination	89	32.1%
Verbal abuse/threats from intimate partner	103	37.2%
Housing instability	30	10.8%
Food insecurity	41	14.8%

Bivariate Analyses

Relationship Between Demographics and Research Variables

Bivariate correlation analyses were conducted to determine if there was a significant relationship between any of the demographic and research variables. Pearson's correlation was conducted on ordinal demographic variables and an analysis of variance (ANOVA) was conducted for nominal demographic variables. There were six demographic variables that had no significant relationship or difference with any of the research variables. These variables were race/cultural group, education level, licensure type, work setting environment (Table 4.18), and weekly caseload (Table 4.17). Analyses results indicated that the rest of the demographic variables had a significant relationship or difference, between groups, with one or more research variables at the $p < .05$ level, except percentage of child clients on participant's caseload with familiarity with the seminal ACE study, which was significant at the $p < .001$ level.

Personal Demographics

Participants' personal exposure to ACEs ($F_{(4, 272)} = 3.201$, $p = .014$) statistically significantly differed for participants' gender. Their age had a significant negative relationship ($r = -.129$, $p = .032$) with familiarity with the seminal ACE study. This means that the younger participants were, the more familiar they were with the study. See Table 4.17 for results from the correlation analysis of ordinal demographic and research variables. See Table 4.18 for results from the ANOVA analysis of nominal demographic and research variables.

Professional Demographics

The number of years a participant has been in practice, their experience, has a significant positive correlation (r = .119, p = .048) with frequency of screening and a significant negative correlation (r = -.120, p = .046) with familiarity with the seminal ACE study. This means that the more years they have been a practicing mental health professional, the more likely they are to screen for parental ACEs and the less likely they are to be familiar with the ACE study. See Table 4.17 for results from the correlation analysis of ordinal demographic and research variables. See Table 4.18 for results from the ANOVA analysis of nominal demographic and research variables.

Caseload Demographics

The percentage of child clients for a participant's weekly caseload was significantly positively correlated with familiarity with the seminal ACE study (r = -.200, p < .001) and endorsement of the impacts of parental ACEs (r = -.149, p = .013). This means that the higher the percentage of child clients they had on their caseload, the more likely they were to be familiar with the ACE study and endorse the impacts of parental ACEs. Likewise, the percentage of adolescent clients on a participant's caseload significantly positively correlated (r = -.137, p = .023) with familiarity with the seminal ACE study. See Table 4.17 for results from the correlation analysis of ordinal demographic and research variables. See Table 4.18 for results from the ANOVA analysis of nominal demographic and research variables.

Table 4.17.

Relationship Between Ordinal Demographic Variables and Research Variables.

Demographic Variable	Frequency of Screening		Familiarity with Seminal ACE Study		Endorsement of the Impacts of Parental ACEs		Personal Exposure to ACEs	
	r	Sig.	*r*	Sig.	*r*	Sig.	*r*	Sig.
Personal								
Age	.088	.146	-.129*	.032	-.116	.053	.020	.743
Professional								
Experience	.119*	.048	-.120*	.046	-.038	.523	-.041	.499
Client Pop.			.					
Caseload – Total	-.053	.378	-.093	.121	-.099	.101	.105	.082
Caseload – Child	.015	.803	.200**	<.001	.149*	.013	-.018	.771
Caseload – Adolescent	.104	.085	.137*	.023	.117	.052	-.042	.486

Note. * significant at $p < .05$, ** significant at $p < .001$

Table 4.18

Relationship Between Nominal Demographic Variables and Research Variables.

Demographic Variable	Frequency of Screening		Familiarity with Seminal ACE Study		Endorsement of the Impacts of Parental ACEs		Personal Exposure to ACEs	
	F	Sig.	F	Sig.	F	Sig.	F	Sig.
Personal								
Gender	2.079	.084	1.285	.276	1.350	.252	3.201*	.014
Race/Cultural Group	.781	.585	.492	.814	1.681	.126	1.639	.136
Professional								
Education	.464	.629	2.530	.082	.090	.914	1.299	.275
Licensure	.327	.955	1.549	.141	.315	.960	1.006	.431
Setting	.808	.565	.984	.436	.664	.679	.798	.572
Setting-Environment	2.137	.096	1.448	.229	1.133	.336	1.229	.300

Note. * significant at $p < .05$

Research Questions

A bivariate analysis using simple linear regression was conducted for each of the three research questions. This is the appropriate analysis as each research question has one criterion variable and one predictor variable. The criterion variable for all of the research questions is frequency of screening for parental ACEs, while the predictor variables for questions one, two and three are degree of familiarity with the seminal ACE study, degree of endorsement of the impacts of parental ACEs, and personal exposure to ACEs, respectively.

Research Question One Results

The regression results for research question one show that degree of familiarity is not a statistically significant predictor of frequency of screening for parental ACEs (β = .09, t = 1.52, p = .130). The results also showed that the degree of familiarity explained a very small amount (0.8%) variance in frequency of screening for parental ACEs (R^2 = .008, $F_{(1, 275)}$ = 2.311, p = .130). The null hypothesis was supported for research question one. See Table 4.19 for results from the linear regression analysis for research question one. See Table 4.20 for the regression coefficients for research question one.

Table 4.19

Regression Analysis Results for Research Question One.

Variable	R^2	R^2_{adj}	F	df	Sig.
Familiarity with ACEs Study	.008	.005	2.311	275	.130

Table 4.20

Regression Coefficients for Research Question One.

Variable	B	Std. Error	β	t	Sig.
Familiarity with ACEs Study	1.069	.703	.091	1.520	.130

Research Question Two Results

The results of the linear regression indicated that degree of endorsement of the impacts of parental ACEs explained 2.1% of the variance in frequency of screening (R^2 = .021, R^2_{adj} = .018, $F_{(1, 275)}$ = 5.991, p = .015). It was found that degree of endorsement statistically predicted frequency of screening at the $p < .05$ level (β = .146, t = 2.448, p = .015). The strength of this regression relationship is very weak, though, as it is less than 0.2 (Salkind, 2017). The null hypothesis for research question two was rejected and the alternative hypothesis was retained. See Table 4.21 for results from the linear regression analysis for research question two. See Table 4.22 for the regression coefficients for research question two.

Table 4.21

Regression Analysis Results for Research Question Two.

Variable	R^2	R^2_{adj}	F	df	Sig.
Endorsement of the Impacts of Parental ACEs	.021	.018	5.991	275	.015*

Note. *significant at p < .05

Table 4.22

Regression Coefficients for Research Question Two.

Variable	B	Std. Error	β	t	Sig.
Endorsement of the Impacts of Parental ACEs	.584	.239	.146	2.448	.015*

Note. *significant at p < .05

Research Question Three Results

Personal exposure to ACEs also significantly, though weakly, predicted frequency of screening at the p < .05 level (β = .141, t = 2.358, p = .019). According to the linear

regression, parental exposure to ACEs explained 2.0% of the variance in frequency of screening (R^2 = .020, R^2_{adj} = .016, $F_{(1, 275)}$ = 5.561, p = .019). The null hypothesis was rejected to research question three and the alternative hypothesis was retained. See Table 4.23 for results from the linear regression analysis for research question three. See Table 4.24 for the regression coefficients for research question three. Traditional and expanded ACEs were also explored due to the use of traditional ACEs being the standard of practice and lack of formal research on expanded ACEs. Results indicated that traditional ACEs were not a significant predictor (β = .108, t = 1.808, p = .072) for frequency of screening, but expanded ACEs were a significant predictor (β = .151, t = 2.541, p = .012).

Table 4.23

Regression Analysis Results for Research Question Three.

Variable	R^2	R^2_{adj}	F	df	Sig.
Personal Exposure – All ACEs	.020	.016	5.561	275	.019*
Personal Exposure – Traditional ACEs	.012	.008	3.270	275	.072
Personal Exposure – Expanded ACEs	023	.019	6.457	275	.012*

Note Regressions were conducted separately
*significant at p < .05

Table 4.24

Regression Coefficients for Research Question Three.

Variable	B	Std. Error	β	t	Sig.
Personal Exposure – All ACEs	.391	.166	.141	2.358	.019*
Personal Exposure – Traditional ACEs	.428	.237	.108	1.808	.072
Personal Exposure – Expanded ACEs	.985	.388	.151	2.541	.012*

Note Regressions were conducted separately
*significant at p < .05

Summary

Chapter four provided a summary of the findings of the current study. This chapter includes sample demographic information and an examination of data cleaning, including procedures for missing data, recoding data, and extreme variables. Research variables were contextualized using univariate statistics to explore mental health professionals' screening practices for parental ACEs, familiarity with the seminal ACE study, endorsement of the impacts of parental ACEs, and their personal exposure to ACEs in childhood. This study includes three research questions that were answered by conducting three separate linear regressions. The results for research question one showed that familiarity with the seminal ACE study is not a significant predictor of frequency for screening for parental ACEs. The results for research questions two and three indicated that endorsement of the impacts of parental ACEs and personal exposure to ACEs were significant, yet weak, predictors of frequency of screening.

CHAPTER V

DISCUSSION

Research has shown that screening for parental adverse childhood experiences (ACEs) is an effective step in the prevention of child maltreatment through the identification of youth at-risk for experiencing ACEs (Eismann et al., 2019; Folger et al., 2018; Gillespie & Folger, 2017; Johnson et al., 2017; McDonald et al., 2019; Min et al., 2013; Murphy et al., 2014; ; Plant et al., 2018 Schickedanz et al., 2018; Steele et al., 2016; Stepleton et al., 2018; Sun et al., 2017; Szilagyi et al., 2016; Zalewski et al., 2013). Studies have been conducted, although they are scarce, to explore medical providers' screening practices for parental ACEs and the factors that influence those practices (Gillespie & Folger, 2017; Szilagyi et al., 2016). However, this study's investigator was unable to find any parallel research regarding mental health providers. The purpose of this study was to fill the gap by increasing our understanding of licensed mental health provider's familiarity with the Adverse Childhood Experience (ACE) study and their endorsement of the impacts of parental adverse childhood experiences (ACEs) by exploring the screening practices of mental health providers for parental ACEs and the factors that influence them.

Summary of Results

This study was conducted with 277 complete survey responses. The participants were asked to complete a questionnaire that was adapted, with permission, from the

American Academy of Pediatrics (AAP) 85th Periodic Survey (PS85) (AAP, 2013) to measure the criterion variable, frequency of screening for parental ACEs, and the predictor variables, familiarity with the seminal ACE study and endorsement of the impacts of parental ACEs. An ACE questionnaire that included both traditional and expanded ACEs was used to measure the predictor variable personal exposure to ACEs.

A separate linear regression was conducted for each of the three research questions. The results for research question one found that degree of familiarity with the seminal ACE study does not statistically significantly predict frequency of screening for parental ACEs ($\beta = .09$, $t = 1.52$, $p = .130$). However, with almost 60% of participants reporting being very familiar with the study, there was very little variance in the predictor. The results for research questions two and three indicated that the independent variables (degree of endorsement: $\beta = .146$, $t = 2.448$, $p = .015$ and personal exposure to ACEs: $\beta = .141$, $t = 2.358$, $p = .019$, respectively) were statistically significant, although very weak, predictors of frequency of screening for parental ACEs. Again, this could be due to the degree of skewness level for these variables.

Comparison of Results to Previous Research

The study investigator found no previous research regarding screening for parental ACEs by mental health providers. However, one article by Szilagyi and colleagues (2016) was found regarding pediatrician screening practices and familiarity with the seminal ACE study. This article was based on results from the PS85 (Szilagyi et al., 2016). Results from this study will be discussed in relation to the PS85 results for pediatricians. Readers should also keep in mind that the current study was conducted eight years after the PS85 (AAP, n.d.) which can have a significant impact on results.

Frequency of Screening for Parental ACEs

Results from this study indicate that mental health providers are more likely to screen for parental ACEs with over 60% of pediatricians not screening for any parental ACEs (Szilagyi et al., 2016), compared to only 6.1% of mental health providers. In this study, more than 90% of participants asked about three or more parental ACEs, compared to only 15% of pediatricians (Szilagyi et al., 2016). As stated previously, this is an important cutoff point, because individuals reporting more than three to four ACEs are at a much greater risk for experiencing the negative impacts of toxic stress (Burke Harris, 2014; Felitti, 2018; Gillespie & Folger, 2017; Jackson Nakazawa, 2015; Le-Scherban et al., 2018; McDonald et al.,, 2019; Stevens 2012; Wade, et.al, 2016), as are children of parents reporting three or more ACEs (Folger et al., 2018; Le-Scherban et al., 2018; McDonald et al., 2019; Schickedanz et al., 2018).

Szilagyi and colleagues (2016) reported that the most frequently asked about parental ACE item by pediatricians was household mental illness (30%), followed by household substance abuse (21%), parental divorce/separation (20%), and exposure to domestic violence (11%). Pediatricians asked about child maltreatment (abuse and neglect), household incarceration, and food insecurity with less than half their patients' parents (Szilagyi et al., 2016). Results from this study indicated that mental health providers were most likely to screen for the same top four ACE items.

Familiarity with the Seminal ACE Study

Results from this study also indicated that mental health providers are more familiar with the seminal ACE study than pediatricians. Szilagyi et al. (2016) reported that 2% of pediatricians were very familiar with the study, 8% were somewhat familiar,

13% were vaguely familiar, 76% were not at all familiar. Whereas, in this study, 59.2% of mental health providers reported that they were very familiar with the study, while only 7.6% were not at all familiar.

Endorsement of the Impacts of Parental ACEs

The statements regarding the impacts of ACEs were not fully congruent between the PS85 (AAP, 2013) and the current study. The PS85 focused more on the impacts of ACEs to the individual (AAP, 2013), while the current study focused more on the impacts of parental ACEs. However, six statements, with congruent focus, were used for both studies and this section will compare the results for those statements. Results indicated that like other research variables, mental health providers were more likely to endorse impact statements than pediatricians, although the differences are less pronounced for this variable (Szilagyi et al., 2016). Comparative results for the percentage of participants that endorsed each of these impact statements are shown on Table 5.1.

Table 5.1

Endorsement of Impact Statement Results from PS85 and Current Study.

Impact Statement	PS85	Current Study
Prolonged or excessive physiologic stress in childhood can result in epigenetic modifications of the DNA.	33.7%	78.0%
Screening for social emotional risk factors within the family (e.g., parental depression, substance abuse, and/or domestic violence, etc.) is within the scope of a *mental health provider/pediatrician* working with children/adolescents.	81.1%	96.8%

Impact Statement	PS85	Current Study
Stable and supportive adult relationships can mitigate the negative effects of persistent childhood stress.	83.6%	94.9%
Parents who have experienced significant adversity in childhood have a decreased ability to regulate their emotions during parenting and are more likely to utilize harsher discipline methods.	58.3%	71.8%
Positive parenting influences a child's life-course trajectory	95.6%	97.1%
Advice from a *mental health provider/pediatrician* can influence positive parenting skills among *clients'/patients'* parents	78.8%	88.8%

Note. PS85 results from Szilagyi et al., 2016.

Personal Exposure to ACEs

The PS85 did not address personal exposure to ACEs (AAP, 2013), and this study's investigator found no research surrounding the relationship between medical or mental health providers exposure to ACEs and their frequency of screening for parental ACEs. However, prior research did indicate that physicians were more likely to screen for individual ACEs if they had personal exposure to ACEs (Freeman, 2017). These results were the inspiration for the current study to explore the influence a mental health provider's personal ACE exposure has on their parental ACE screening practices. As stated previously, results from this study indicated that mental health providers' personal exposure to ACEs was a weak, significant predictor of their frequency of screening for parental ACEs.

Another study that looked at physicians' exposure to ACEs found that the average ACE score for physicians across all specialties was 1.0 (Stork et al., 2020), whereas the current study indicated that mental health providers' mean score for all 19 ACEs was

5.25 and 3.65 for traditional ACEs only, which is a more accurate comparison to previous studies. For individual specialties, two specialties stood out as having a higher average ACE score. These were pediatrics (*M* = 2.7) and psychiatry (*M* = 4.0) (Stork et al., 2020). The next highest mean ACE score was urology (*M* = 1.8) (Stork et al., 2020).

The most frequent ACE reported for pediatricians was parental separation/divorce (20.5%), followed by household mental illness (20.0%), and the next most common ACEs were emotional abuse and household substance abuse (12.3% each) (Stork et al., 2020). For mental health provider's the most frequent ACE reported was household mental illness (55.2%), followed by emotional abuse (54.5%), and emotional neglect (52.7%). Comparative results for pediatrician's and mental health professional's personal exposure to ACEs is shown in Table 5.2.

Table 5.2

Comparison of Personal Exposure to ACEs for Pediatricians and Mental Health Providers.

ACE Item	Pediatricians	Mental Health Providers
Emotional Abuse	12.3%	54.5%
Physical Abuse	11.4%	29.6%
Sexual Abuse	10.5%	31.4%
Emotional Neglect	10.5%	52.7%
Physical Neglect	1.8%	21.7%
Parental Separation/Divorce	20.5%	36.1%
Domestic Violence Exposure	2.7%	44.8%
Household Substance Abuse	12.3%	31.0%
Household Mental Illness	20.0%	55.2%
Household Incarceration	2.3%	7.9%

Note. Pediatrician results from Stork et al., 2020.

Implications, Limitations, and Future Research

This study was informed by the literature review, which displayed a gap surrounding the intersection of mental health providers and parental ACEs. Previous research primarily focused on medical professionals' knowledge and understanding of the impacts of ACEs and parental ACEs, as well as screening practices for each of these. In this section, the limitations of the current study will be explored, as well as the implications of the results from a clinical and research perspective. Due to the unique nature of this topic, ethical implications of screening for parental ACEs will also be explored. This section will also introduce possible directions for future research.

Clinical

Pediatricians have been tasked by the AAP to screen for parental ACEs as a first line of defense for the identification of youth-at-risk for maltreatment (Duke & Borowski, 2018; Kerker et al., 2016; Szilagyi et al., 2016). Previous research would indicate that pediatricians might not be doing this. This trend may be due to children who have experienced ACEs being more likely to miss annual well child visits, which can significantly limit the opportunity to identify families-at-risk (Duke & Borowski, 2018; Eismann et al., 2019). Another factor may be pediatricians' lack of confidence in their ability to deal with emotional and mental health issues (Gillespie & Freeman, 2016). If society cannot rely on the first line of defense for identifying youth-at-risk, it may fall to mental health providers to do so. Fortunately, the current study indicates that mental health providers may be up to the task as they are actively screening for parental ACES. In the future, mental health providers may look to partner with obstetricians,

pediatricians, and family physicians to encourage screening for parental ACEs and referral of families to mental health treatment once identified as at-risk.

Another clinical implication is for professionals to understand that educating parents about their own ACEs and the impacts those may have on many aspects of their life, could create mental and emotional distress for them (Molitor & Dvorsky, 2019). Clinicians should be prepared, and prepare parents, for this possibility (Molitor & Dvorsky, 2019). They should ensure that they are able to connect parents to any needed resources (Molitor & Dvorsky, 2019).

Another clinical implication is the potential significance of expanded ACEs. Results from the current study indicate that expanded ACEs are a significant predictor for frequency of screening. Previous research indicates that conventional ACEs were based on a homogenous, white, educated, middle-class, population and that these items may not capture the full spectrum of relevant childhood adversity experienced by diverse urban populations (CDC, 2018; Cronholm et al., 2015; Wade et al, 2016). Although results from this study do not focus on the impacts that expanded ACEs have on an individual or their children, further research in that area could inform practitioners if they do, indeed, need to be screening beyond the traditional ACEs, to adequately care for more diverse populations.

Research

The literature review for this study would indicate that more research is needed regarding mental health providers knowledge of impacts of parental ACEs and their implementation of this knowledge into their practice with children and adolescents. Future research might explore how screening for parental ACEs impacts treatment of

clients and/or perceptions of parents/parenting skills. Another avenue may be to explore the correlation between knowledge of the impacts of ACEs/parental ACEs and competency surrounding trauma.

Previous research highlights the importance of screening for parental ACEs (Eismann et al., 2019; Folger et al., 2018; Gillespie & Folger, 2017; Johnson et al., 2017; Kercher et al., 2016; McDonald et al., 2019; Min et al., 2013; Murphy et al., 2014; Plant et al., 2018 Schickedanz et al., 2018; Steele et al., 2016; Stepleton et al., 2018; Sun et al., 2017; Szilagyi et al., 2016; Zalewski et al., 2013). The AAP has made strong recommendations that pediatricians implement this practice to identify youth at risk for maltreatment and help prevent exposure to ACEs, as they have the most opportunity to screen, due to earlier access to families with small children (Kercher et al., 2016; Szilagyi et al., 2016). Yet, studies show pediatricians have minimal familiarity with the seminal ACE study, are not likely to follow the recommendations for parental ACE screening (Kercher et al., 2016; Szilagyi et al., 2016), and do not feel confident in handling emotional and mental health discussions (Gillespie & Freeman, 2017). The results of this study, however, indicate that mental health providers are screening for parental ACEs at a much greater frequency than pediatricians and therefore may be more likely to be a family's first line of defense in the identification of youth at risk. Future research might explore how accurate this study's results are across a broader and more diverse population and if so, how best to partner with physicians for early detection, as well as how to better access underserved populations, which are already at a higher risk.

The need to confirm the generalizability of the current study is necessary due to the representativeness of the study sample. The use of convenience sampling using

mental health providers licensed in one midwestern state, created a geographically homogenous sample. For study results to be generalizable across all mental health providers and settings, it is important to have a more diverse population represented in the sample (Heppner et al., 2016). Beyond the geographical homogeneity of the sample, there is also a potential overrepresentation of participants from the following demographic categories: female, White, master's degree, and social worker licensure. The study investigator was unable to find data regarding these demographic categories for licensed mental health professionals across the United States, so verification of overrepresentation was not possible. Future research may look to expand the pool of participants to increase the generalizability of the results.

A second potential limitation of this study is low response rate (1.17%). Due to time constraints placed on the current study, the survey was only open for 10 days. Additionally, caps placed on the number of emails allowed to be sent per day, necessitated invitations being sent out across the span of four days, meaning those individuals who were not contacted on the first day had even less time to participate. This would indicate that participants were more proactive than non-responders and the effect of this volunteer bias cannot be known. Future research should aim to leave surveys open for several weeks to allow participants adequate time to respond. Future researchers may also want to send reminder emails at certain intervals to increase likelihood of participation.

A third potential limitation is the methodology of the study. As there was no previous research regarding mental health providers related to screening for parental ACEs, a structure that first looked to explore the frequency of each of the research

variables rather than the impact of each independent variable on frequency of screening would have been more beneficial. This study made assumptions that mental health providers results would be similar to those of pediatricians, which in hindsight, was not advisable. As the study currently stands, most of the research variables were significantly skewed, which most likely impacted the sensitivity of independent variable influences. Future research may look to explore the generalizability of these finding, understand why mental health providers may be screening at a much higher frequency and what impact this could have for families. One direction for future research might explore whether families of child and adolescent clients in mental health treatment have ever been screened for parental ACEs by their pediatricians. This may inform researcher who is most likely to identify at-risk-families, as well as how to improve upon these practices to increase the likelihood of preventing exposure to ACEs for these children.

A fourth potential limitation to the current study is the inclusion of expanded ACEs. As most of the previous research does not include expanded ACEs and focuses solely on the ten traditional ACEs, the current study is less directly comparable. Future research may want to focus more on traditional ACEs. Another direction for future researcher may be to explore the impacts of expanded ACEs to understand if their impacts are as significant as found with traditional.

Ethics

To fully consider ethical implications for integrating parental ACEs into the assessment of child clients, the author turned to an article by Molitor and Dvorsky (2019) entitled Ethical Considerations for Assessing Parent Mental Health during Child Assessment Services, which addresses this issue from each of the main ethical tenets.

According to Molitor and Dvorsky (2019) the first ethical question revolves around duty to the client (Molitor & Dvorsky, 2019). As the child is the client, the clinician needs to make sure that any work with the parent is in direct service to the child (Molitor & Dvorsky, 2019). In this case, research strongly supports the inclusion of parental ACEs as a screening tool for identifying at-risk children and family dynamics (Gillespie & Folger, 2017; McDonald et al., 2019; Murphy et al., 2014; Schickedanz et al., 2018; Steele et al., 2016; Stepleton et al., 2018; Szilagyi et al., 2016). This information should then be used to inform treatment for the child client, for example incorporation of family therapy, referrals for parents to individual counseling, and/or parent education programs, all of which work to improve the child's familial environment. The information is not intended as a springboard to moving the focus of treatment to the parents' mental health, except again where it would directly benefit the child client.

Next, clinicians need to consider stigma surrounding mental health issues and the role of a parent (Molitor & Dvorsky, 2019). Parents may be concerned with being blamed for difficulties their children are experiencing and clinicians need to be sensitive to this concern (Molitor & Dvorsky, 2019). The seminal ACEs study has become widely known and accepted across many disciplines. The hope is that most professionals in the medical and mental health field understand how common and complex ACEs are and therefore would be unlikely to associate ACEs score alone with detrimental parenting practices. To be safe, however, use of parental ACEs screening should be limited to clinicians working from a trauma informed lens with a competent understanding of ACEs and their impact on individuals and parenting (Molitor & Dvorsky, 2019). The family context should be

evaluated and considered (Molitor & Dvorsky, 2019). How might this information be used against the parent by other family members or the court system.

Another ethical consideration is the maintenance of parental privacy (Molitor & Dvorsky, 2019). Parents may be concerned about their child or other caregivers learning personal information that they are not ready to disclose (Molitor & Dvorsky, 2019). Some potential solutions to this dilemma, may include separate informed consent, separate linked files, and using aggregate score instead of categorical score. Documentation of how parental ACEs inform client treatment needs to be done in a way that protects the privacy of the parent (Molitor & Dvorsky, 2019). Suggestions for addressing this issue are limiting documentation of this information to assessments only and discussing with all parties involved how this information will be handled (Molitor & Dvorsky, 2019).

Conclusion

The purpose of the current study was twofold 1) to increase our understanding of licensed mental health provider's familiarity with the Adverse Childhood Experience (ACE) study and their endorsement of the impacts of parental adverse childhood experiences (ACEs), and 2) to understand the influence that these factors and licensed mental health provider's personal exposure to ACEs have on their practice of screening for parental ACEs. The results indicated that licensed mental health providers are more familiar with the seminal ACE study and more likely to endorse the impacts of parental ACEs than pediatricians. Licensed mental health professionals are also more likely to screen for parental ACEs when working with child and adolescent clients. The study results indicated that licensed mental health providers' degree of endorsement and

personal exposure to ACEs are significant, if weak, predictors of their frequency of screening.

This study's contribution to the literature lies in the descriptive statistics. Results of this study indicate that licensed mental health professionals are significantly more likely to screen for parental ACEs compared to pediatricians. This is important as pediatricians have been tasked as the first line of defense for identification of at-risk-youth and prevention of ACEs. Early detection and treatment have been shown to be the best offensive interventions to prevent ACEs from occurring and therefore eliminate the detrimental impacts on children as they grow into adulthood. This study would indicate a need to highlight the importance of screening by mental health professionals in order to intervene and suggests that they begin to partner with physicians such as obstetricians, pediatricians, and family physicians, who are better positioned to identify youth-at-risk during gestation and infancy. This partnership may encourage physicians to screen more often as it provides a direct treatment route once families are identified.

REFERENCES

ACEs Aware. (2021). The science of ACEs and toxic stress. Retrieved May 14, 2021, from https://www.acesaware.org/ace-fundamentals/the-science-of-aces-toxic-stress/

ACEs Aware. (n.d.). PEARLS in English: Teen (parent-caregiver report – identified. https://www.acesaware.org/wp-content/uploads/2019/12/PEARLS-Tool-Teen-Parent-Caregiver-Report-Identified-English.pdf

American Academy of Pediatrics. (n.d.). Periodic Survey Results. https://www.aap.org/en-us/professional-resources/Research/pediatrician-surveys/Pages/periodic-survey-details.aspx?liid=102

American Academy of Pediatrics (AAP). (2013). Periodic Survey 85. Can be found in Appendix A

American Counseling Association. (n.d.). 20/20 census definition of counseling. https://www.counseling.org/about-us/about-aca/20-20-a-vision-for-the-future-of-counseling/consensus-definition-of-counseling

Becvar, D. S., & Becvar, R. J. (1999). Systems theory and family therapy: A primer (2nd ed.). University Press of America.

Bernstein, R. E., Laurent, H. K., Musser, E. D., Measelle, J. R., & Ablow, J. C. (2013). In an idealized world: Can discrepancies across self-reported parental care and high betrayal trauma during childhood predict infant attachment avoidance in the next generation? *Journal of Trauma & Dissociation, 14(5),* 529-545. https://doi.org/10.1080/15299732.2013.773476

Borja, S., Nurius, P. S., Song, C., & Lengua, L. J. (2019). Adverse childhood experiences to adult adversity trends among parents: Socioeconomic, health, and developmental implications. *Children & Youth Services Review, 100,* 258-266. https://doi.org/10.1016/j.childyouth.2019.03.007

Broderick, P. C., & Blewitt, P. (2015). *The life span: Human development for helping professionals* (4th ed.). Pearson.

Burke Harris, N. (TEDMED 2014). How Childhood Trauma Effects Health Across A Lifetime [Video file].https://www.ted.com/talks/nadine_burke_harris_how_childhood_trauma_affects_health_across_a_lifetime?language=en#t-497053

Centers for Disease Control (CDC). (n.d.a). Violence prevention: Fast facts. https://www.cdc.gov/violenceprevention/aces/fastfact.html

Centers for Disease Control (CDC). (n.d.b). Violence prevention: Risk and prevention factors. https://www.cdc.gov/violenceprevention/aces/riskprotectivefactors.html #anchor _1609868101867

Center for Youth Wellness (CYW). (n.d.). ACE-Q Teen (self-report). https://centerforyouthwellness.org/aceq-pdf/

Chokshi, B., & Skjoldager, K. (2020). Adolescent patient perspectives on addressing childhood adversity in the primary care setting. *Clinical Pediatrics, 59(11),* 1014-1018. https://doi.org/10.1177/0009922820928056

Conn, A. M., Szilagyi, M. A., Jee, S. H., Manly, J. T., Briggs, R., & Szilagyi, P. G. (2018). Parental perspectives of screening for adverse childhood experiences in pediatric primary care. *Families, Systems & Health: The Journal of Collaborative Family HealthCare, 36(1),* 62-72. https://doi.org/10.1037/fsh0000311

Cooke, J. E., Racine, N., Plamondon, A., Tough, S., & Madigan, S. (2019). Maternal adverse childhood experiences, attachment style, and mental health: Pathways of transmission to child behavior problems. *Child Abuse & Neglect, 93,* 27-37. https://doi.org/10.1016/j.chiabu.2019.04.011

Counselor, Social Worker & Marriage and Family Therapist Board. (n.d.). Consumer Information. https://cswmft.ohio.gov/wps/portal/gov/cswmft/for-the-public/resources-for-the-public/consumer-information

Cronholm, P. F., Forke, C. M., Wade, R., Bair-Merritt, M. H., Davis, M., Harkins-Schwarz, M., & Fein, J. A. (2015). Adverse childhood experiences – expanding the concept of adversity. *American Journal of Preventative Medicine, 49(3),* 354-361. http://doi.org/10.1016/j.amepre.2015.02.001

Cunningham, A., & Renk, K. (2018). Parenting in the Context of Childhood Trauma: Self-Efficacy as a Mediator between Attributions and Parenting Competence. *Journal of Child & Family Studies, 27(3),* 895-906. https://doi.org/10.1007/s10826-017-0899-x

Dennis, C. H., Clohessy, D. S., Stone, A. L., Darnall, B. D., & Wilson, A. C. (2019). Adverse childhood experiences in mothers with chronic pain and intergenerational impact on children. *The Journal of Pain.* https://doi.org/10.1016/j.jpain.2019.04.004

Department of Health Care Services (DHCS). (n.d.). The Pediatric ACEs and Related Life-events Screener (PEARLS): Frequently asked Questions (FAQs). https://www.dhcs.ca.gov/provgovpart/Documents/PEARLS_FAQ_1.15.19.pdf

Duke, N. N., & Borowsky, I.W. (2018). Adverse childhood experiences: Evidence for screening beyond preventive visits. *Child Abuse & Neglect, 81*, 380-388. https://doi.org/10.1037/fsh0000311

Eismann, E. A., Folger, A. T., Stephenson, N. B., Brownrigg, M. E., Shapiro, R. A., Macaluso, M., & Gillespie, R. J. (2019). Parental Adverse Childhood Experiences and Pediatric Healthcare Use by 2 Years of Age. *The Journal of Pediatrics, 211,* 146-151. https://doi.org/10.1016/j.jpeds.2019.04.025

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41,* 1149-1160. https://doi.org/10.3758/BRM.41.4.1149

Felitti, V. (2018, April 18). *The repressed role of adverse childhood experiences in addiction, disease, and premature death: turning gold into lead* [Close-up session]. Close-up on the effects of childhood trauma on the family, Greek Community Center, Akron, OH, United States.

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading cause of death in adults: The adverse childhood experiences (ACE) study. American Journal of Preventive Medicine, 14(4). 245-258. https://doi.org/10.1016/S0749-3797(98)00017-8

Florida State University College of Medicine. (n.d.). Screening Measures: Adverse Childhood Experiences (ACE) Questionnaire. https://med.fsu.edu/childStress/measures

Folger, A. T., Eismann, E. A., Stephenson, N. B., Shapiro, R. A., Macaluso, M., Brownrigg, M. E., & Gillespie, R. J. (2018). Parental Adverse Childhood Experiences and Offspring Development at 2 Years of Age. *Pediatrics, 141(4),* 1-9. https://doi.org/10.1542/peds.2017-2826

Freeman, J. (2017). The child is the father of man: Family Physician's screening for Adverse Childhood Experiences. *Family Medicine, 49(1),* 5-6. https://fammedarchives.blob.core.windows.net/imagesandpdfs/pdfs/FamilyMedicineVol49Issue1Freeman5.pdfj0

George, D. & Mallery, M. (2010). *SPSS for Windows step by tep: A simple guide and reference, 17.0 update* (10th ed.). Pearson.

Gillespie, R., & Folger, A. (2017). Feasibility of Assessing Parental ACEs in Pediatric Primary Care: Implications for Practice-Based Implementation. *Journal of Child & Adolescent Trauma, 10(3),* 249-256. https://doi.org/10.1007/s40653-017-0138-z

Hakansson, U., Watten, R., Soderstrom, K., Skarderud, F., & Oie, M. G. (2018). Adverse and adaptive childhood experiences are associated with parental reflective functioning in mothers with substance use disorder. *Child Abuse & Neglect, 81,* 259-273. https://doi.org/10.1016/j.chiabu.2018.05.007

Heppner, P., Wampold, B., Owen, J., Thompson, M., & Wang, K. (2016). Research design in counseling (4th edition). Cengage Learning.

Hillis, S. D., Anda, R. F., Dube, S. R., Felitti, V. J., Marchbanks, P. A., & Marks, J. S. (2004). The Association Between Adverse Childhood Experiences and Adolescent Pregnancy, Long-Term Psychosocial Consequences, and Fetal Death. *Pediatrics, 113(2),* 320-327. https://doi.org/10.1542/peds.113.2.320

Jackson Nakazawa, D. (2015). *Childhood disrupted: how your biography becomes your biology, and how you can heal*. Atria Paperback.

Johnson, K., Woodward, A., Swenson, S., Weis, C., Gunderson, M., Deling, M., Cristiani, V., & Lynch, B. (2017). Parents' adverse childhood experiences and mental health screening using home visiting programs: A pilot study. *Public Health Nursing, 34(6),* 522-530. https://doi.org/10.1111/phn.12345

Julian, M. M., King, A. P., Bocknek, E. L., Mantha, B., Beeghly, M., Rosenblum, K.L., & Muzik, M. (2019). Associations between oxytocin receptor gene (OXTR) polymorphisms, childhood trauma, and parenting behavior. *Developmental Psychology, 55(10),* 2135-2146. https://doi.org/10.1037/dev0000783

Karatekin, C., & Hill, M. (2018). Expanding the original definition of adverse childhood experiences (ACEs). Journal of Child and Adolescent Trauma, 12(3). 289-306. https://doi.org/10.1007/s40653-018-0237-5

Kerker, B. D., Storfer-Isser, A., Szilagyi, M., Stein, R. E., Garner, A. S., O'Connor. K. G., Hoagwood, K. E., & Horwitz, S. M. (2016). Do pediatricians ask about adverse childhood experiences in pediatric primary care? *American Pediatrics, 16(2).* 154-160. https://doi.org/10.1016/j.acap.2015.08.002.

Koita, K., Long, D., Hessler, D., Benson, M., Daley, K., Bucci, M., Thakur, N, & Burke Harris, N. (2018). Development and implementation of the adverse childhood experiences (ACEs) and other determinants of health questionnaire in the pediatric medical home: A pilot study. PLoS One, 13(12). https://doi.org/10.1371/jounal.pone.0208088

Kushel, M. B., Gupta, R., Gee, L., & Haas, J. S. (2006). Housing instability and food insecurity as barriers to health care among low-income Americans. *Journal of General Internal Medicine, 21(1),* 71-77. https://doi-org/10.1111/j.1525-1497.2005.00278.x

Lange, B. C., Callinan, L. S., & Smith, M. V. (2019). Adverse Childhood Experiences and Their Relation to Parenting Stress and Parenting Practices. *Community Mental Health Journal, 55(4),* 651-662. https://doi.org/10.1007/s10597-018-0331-z

Leavy, P. (2017). *Research design: quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches.* Guilford Press.

Le-Scherban, F., Xi Wang, Boyle-Steed, K. H., & Pachter, L. M. (2018). Intergenerational associations of parent adverse childhood experiences and child health outcomes. *Pediatrics, 141(6),* 1-9. https://doi.org/10.1542/peds.2017-4274

Lyons-Ruth, K., Yellin, C., Melnick, S., & Atwood, G. (2006). Childhood experiences of trauma and loss have different relations to maternal unresolved and Hostile-Helpless states of mind on the AAI. *Attachment & Human Development, 5(4),* 330-414. https://doi.org/10.1080/14616730310001633410

Madigan, S., Wade, M., Plamondon, A., Maguire, J. L., & Jenkins, J. M. (2017). Maternal adverse childhood experience and infant health: Biomedical and psychosocial risks as intermediary mechanisms. *The Journal of Pediatrics, 187*, 282-289. https://doi.org/10.1016/j.jpeds.2017.04.052

McDonald, S.W.; Madigan, S.; Racine, N.; Benzies, K.; Tomfohr, L.; & Tough, S. (2019). Maternal adverse childhood experiences, mental health, and child behaviour at age 3: The all our families community cohort study. *Preventive Medicine, 118*, 286-294. https://doi.org/10.1016/j.ypmed.2018.11.013

McEwen, C. A., & Gregerson, S. F. (2019). A critical assessment of the Adverse Childhood Experiences Study at 20 Years. *American Journal of Preventative Medicine, 56(6),* 790-794. https://doiorg.ezproxy.uakron.edu:2443/10.1016/j.amepre.2018.10.016.

Merriam-Webster. (2021a). Abuse. In *Merriam-Webster.com.* Retrieved February 18, 2021 from https://www.merriam-webster.com/dictionary/abuse

Merriam-Webster. (2021b). Dysfunction. In *Merriam-Webster.com.* Retrieved February 18, 2021 from https://www.merriam-webster.com/dictionary/dysfunction

Merriam-Webster. (2021c). Neglect. In *Merriam-Webster.com.* Retrieved February 18, 2021 from https://www.merriam-webster.com/dictionary/neglect

Mertler, C. A., & Reinhart, R. V. (2017). *Advanced and multivariate statistical methods: practical application and interpretation* (Sixth edition.) Routledge, Taylor & Francis Group.

Min, M. O., Singer, L. T., Minnes, S., Kim, H., & Short, E. (2013). Mediating Links Between Maternal Childhood Trauma and Preadolescent Behavioral Adjustment. *Journal of Interpersonal Violence, 28(4),* 831-851. https://doi.org/10.1177/0886260512455868

Moe, V., von Soest, T., Fredriksen, E., Olafsen, K. S., & Smith, L. (2018). The Multiple Determinants of Maternal Parenting Stress 12 Months After Birth: The Contribution of Antenatal Attachment Style, Adverse Childhood Experiences, and Infant Temperament. *Frontiers in Psychology, 9,* 1987. https://doi.org/10.3389/fpsyg.2018.01987

Molitor, S. J., & Dvorsky, M. R. (2019). Ethical Considerations for Assessing Parent Mental Health during Child Assessment Services. *Ethics & Behavior, 29(2),* 87-100. https://doi.org/10.1080/10508422.2018.1482746

Murphy, A., Steele, M., Dube, S. R., Bate, J., Bonuck, K., Meissner, P., Goldman, H., & Steele, H. (2014). Adverse Childhood Experiences (ACEs) Questionnaire and Adult Attachment Interview (AAI): Implications for parent child relationships. *Child Abuse & Neglect, 38(2),* 224-233. https://doi.org/10.1016/j.chiabu.2013.09.004

Narayan, A. J., Lieberman, A. F., & Masten, A. S. (2021). Intergenerational transmission and prevention of adverse childhood experiences (ACEs). *Clinical Psychology Review, 85.* https://doi.org/10.1016/j.cpr.2021.101997

Oosterman, M., Schuengel, C., Forrer, M. L., & De Moor, M. H. (2018). The impact of childhood trauma and psychophysiological reactivity on at-risk women's adjustment to parenthood. *Development and Psychopathology,* 1-15. https://doi.org/10.1017/S0954579418001591

Ozcan, N. K., Boyacioglu, N. E, Enginkaya, S., Bilgin, H., & Tomruk, N. B. 2016). The relationship between attachment styles and childhood trauma: A transgenerational perspective – A controlled study of patients with psychiatric disorders. *Journal of Clinical Nursing, 25(15-16),* 2357-2366. https://doi.org/10.1111/jocn.13274

Plant, D. T., Jones, F. W., Pariante, C. M., & Pawlby, S. (2017). Association between maternal childhood trauma and offspring childhood psychopathology: mediation analysis from the ALSPAC cohort. *British Journal of Psychiatry, 211(3),* 144-150. https://doi.org 10.1192/bjp.bp.117.198721

Plant, D. T., Pawlby, S., Pariante, C. M., & Jones, F. W. (2018). When one childhood meets another - maternal childhood trauma and offspring child psychopathology: A systematic review. *Clinical Child Psychology & Psychiatry, 23(3),* 483-500. https://doi.org/10.1177/1359104517742186

Racine, N., Madigan, S., Plamondon, A., Hetherington, E., McDonald, S., & Tough, S. (2018). Maternal adverse childhood experiences and antepartum risks: the moderating role of social support. *Archives of Women's Mental Health, 21(6),* 663-670. https://doi.org/10.1007/s00737-018-0826-1

Salkind, N. J. (2017). *Statistics for people who (think they) hate statistics (Sixth edition.) Sage.*

SAMHSA. (2018). Adverse Childhood Experiences. Retrieved August 26, 2019, from https://www.samhsa.gov/capt/practicing-effective-prevention/prevention-behavioral-health/adverse-childhood-experiences

Schickedanz, A., Halfon, N., Sastry, N., & Chung, P. J. (2018). Parents' Adverse Childhood Experiences and Their Children's Behavioral Health Problems. *Pediatrics, 142(2),* 1-9. https://doi.org/10.1542/peds.2018-0023

Schofield, T. J., Donnellan, M. B., Merrick, M. T., Ports, K. A., Klevens, J., & Leeb, R. (2018). Intergenerational Continuity in Adverse Childhood Experiences and Rural Community Environments. *American Journal of Public Health, 108(9),* 1148-1152. https://doi.org/10.2105/AJPH.2018.304598

Scott, K. L., & Copping, V. E. (2008). Promising directions for the treatment of complex childhood trauma: The Intergenerational Trauma Treatment Model. *The Journal of Behavior Analysis of Offender and Victim Treatment and Prevention, 1(3),* 273-283. https://doi.org/10.1037/h0100449

Sexton, M. B., Hamilton, L., McGinnis, E. W., Rosenblum, K. L., & Muzik, M. (2015). The roles of resilience and childhood trauma history: Main and moderating effects on postpartum maternal mental health and functioning. *Journal of Affective Disorders, 174,* 562-568. https://doi.org/10.1016/j.jad.2014.12.036.

Slopen, N. Roberts, A. L., Lewinn, K. Z., Bush, N. R., Rovnaghi, C. R., Tylavsky, F., & Anand, K. (2018). Maternal experiences of trauma and hair cortisol in early childhood in a prospective cohort. *Psychoneuroendocrinology, 98,* 168-176. https://doi.org/10.1016/j.psyneuen.2018.08.027

Steele, H., Bate, J., Steele, M., Danskin, K., Knafo, H., Nikitiades, A., Dube, S. R., Bonuck, K., Meissner, P., & Murphy, A. (2016). Adverse Childhood Experiences, Poverty, and Parenting Stress. *Canadian Journal of Behavioural Science, 48(1),* 32-38. https://doi.org/10.1037/cbs0000034

Stepleton, K., Bosk, E. A., Duron, J. F., Greenfield, B., Ocasio, K., & MacKenzie, M. J. (2018). Exploring associations between maternal adverse childhood experiences and child behavior. *Children & Youth Services Review, 95,* 80-87. https://doi.org/10.1016/j.childyouth.2018.10.027

Stevens, J. E. (2012). The Adverse Childhood Experiences Study – the largest, most important public health study you never heard of – began in an obesity clinic. Retrieved from https://acestoohigh.com/2012/10/03/the-adverse-childhood-experiences-study-the-largest-most-important-public-health-study-you-never-heard-of-began-in-an-obesity-clinic/

Stork, B. R., Akselberg, N, J., Qin, Y., & Miller, D. C. (2020). Adverse Childhood Experiences (ACEs) and Community Physicians: What We've Learned. *The Permanente Journal, 24(19).* https://doi.org/10.7812/TPP/19.099

Sun, J., Patel, F., Rose-Jacobs, R., Frank, D. A., Black, M. M., & Chilton, M. (2017). Mothers' Adverse Childhood Experiences and Their Young Children's Development. *American Journal of Preventive Medicine, 53(6),* 882-891. https://doi.org/10.1016/j.amepre.2017.07.015.

Szilagyi, M., Kerker, B. D., Storfer-Isser, A., Stein, R. E., Garner, A., O'Connor, K. G., Hoagwood, K. E., & McCue Horwitz, S. (2016). Factors Associated with Whether Pediatricians Inquire About Parents' Adverse Childhood Experiences. *Academic Pediatrics, 16(7),* 668-675. https://doi.org/10.1016/j.acap.2016.04.013

Thakur, N., Hessler, D., Koita, K., Ye, M., Benson, M., Gilgoff, R., Bucci, M., Long, D., & Burke Harris, N. (2020). Pediatrics adverse childhood experiences and related life events screener (PEARLS) and health in a safety-net practice. *Child Abuse & Neglect, 108.* https://doi.org/10.1016/j.chiabu.2020.104685

Vagero, D., & Rajaleid, K. (2017). Does childhood trauma influence offspring birth characteristics? *International Journal of Epidemiology, 46(1),* 219-229. https://doi.org/10.1093/ije/dyw048

Wade, R., Jr., Cronholm, P. F., Fein, J. A., Forke, C. M., Davis, M. B., Harkins-Schwarz, M., Patcher, L. M., & Bair-Merritt, M. H. (2016). Household and community-level adverse childhood experiences and adult health outcomes in a diverse urban population. *Childhood Abuse & Neglect, 52,* 135-145. https://doi.org/10.1016/j.chiabu.2015.11.021

Wang, D. (2021). Effect of family-related adverse childhood experiences on self-rated health in childhood and adulthood – childhood friendship as moderator. *SSM – Population Health,* 14. https://doi.org/10.1016/j.ssmph.2021.100762

Wiig, E. M., Haugland, B. S., Halsa, A. & Myhra, S. M. (2014). Substance-dependent women becoming mothers: Breaking the cycle of adverse childhood experiences. *Child & Family Social Work, 22(1),* 26-35. https://doi.org/10.1111/cfs.12190

Wolfe, J., Smith, J., Stowe, D., & Elder, T. (2019). Adverse Childhood Experiences: Research, effects, and tools for change. The Hearing Journal, 72(9), 36-39. https://doi.org/10.1097/01.HJ.0000582460.24645.02

Wurster, H. E., Sarche, M., Trucksess, C., Morse, B., & Biringen, Z. (2019). Parents' adverse childhood experiences and parent-child emotional availability in an American Indian community: Relations with young children's social-emotional development. *Development and Psychopathology, 32(2),* 425-436. https://doi.org/10.1017/S095457941900018X

Yehuda, R., Halligan, S. L., & Grossman, R. (2001). Childhood trauma and risk for PTSD: Relationship to intergenerational effects of trauma, parental PTSD, and cortisol excretion. Development and Psychopathology, 13(3), 733-753. https://doi.org/10.1017/S0954579401003170

Zalewski, M., Cyranowski, J. M., Cheng, Y., & Swartz, H. A. (2013). Role of maternal childhood trauma on parenting among depressed mothers of psychiatrically ill children. *Depression & Anxiety, 30(9),* 792-799. https://doi.org/10.1002/da.22116

Zvara, B. J., Meltzer-Brody, S., Mills-Koonce, W. R., Cox, M., & The Family Life Investigators. (2016). Maternal childhood sexual trauma and early parenting: Prenatal and postnatal associations. *Infant and Child Development, 26(3).* https://doi.org/10.1002/icd.1991

Zvara, B. J., Mills-Koonce, W. R., Appleyard Carmody, K., & Cox, M. (2015). Childhood sexual trauma and subsequent parenting beliefs and behaviors. *Child Abuse & Neglect, 44,* 87-97. https://doi.org/10.1016/j.chiabu.2015.01.012

Zvara, B.; Mills-Koonce, R.; & Cox, M. (2017). Maternal Childhood Sexual Trauma, Child Directed Aggression, Parenting Behavior, and the Moderating Role of Child Sex. *Journal of Family Violence, 32(2),* 219-229. https://doi.org/10.1007/s10896-016-9839-6

APPENDICES

APPENDIX A

DRAWING ENTRY FORM

If you wish to be entered into a drawing for one of two (2) $50 Amazon electronic gift cards, enter your email address. Please note that your email address will be kept separate from your questionnaire responses and will not be used for anything other than emailing your gift card code should your entry be randomly chosen.

1. Text Box for Email

APPENDIX B

IRB APPROVAL

Office of Research Administration
Akron, OH 44325-2102

NOTICE OF APPROVAL

Date: 7/27/2021

To: Mindy Ambrust Beach

From: Kathryn Watkins Associate Director and IRB Administrator

IRB Number: 20210611

Title: A Quantitative Exploration into the Screening Practices of Mental Health Providers for Parental Adverse Childhood Experiences when Working with Child and Adolescent Clients

Approval Date: 7/22/2021

Thank you for submitting your Request for Exemption to the IRB for review. Your protocol represents minimal risk to subjects and qualifies for exemption from the federal regulations under the category below:

- ☐ **Exemption 1** – Research conducted in established or commonly accepted educational settings, involving normal educational practices.
- ☐ **Exemption 2** – Research involving the use of educational tests, survey procedures, interview procedures, or observation of public behavior.
- ☐ **Exemption 3** - Research involving the use of benign behavioral interventions in conjunction with the collection of information from adult subjects through verbal or written responses (including data entry) or audiovisual recordings, and subjects have prospectively agreed to the intervention.
- ☑ **Exemption 4** – Research involving the collection or study of existing data, documents, records, biospecimens specimens, pathological specimens, or diagnostic specimens.
- ☐ **Exemption 5** – Research and demonstration projects conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine public programs or benefits.
- ☐ **Exemption 6** – Taste and food quality evaluation and consumer acceptance studies.
- ☐ **Exemption 7** – Research involving the use of a broad consent for the storage or maintenance of identifiable information and/or biospecimens for future research.
- ☐ **Exemption 8** – Research involving the use of a broad consent for the use of identifiable information and/or biospecimens for future research.

Annual continuation applications are not required for exempt projects. If you make changes to the study's design or procedures that increase the risk to subjects or include activities that do not fall within the approved exemption category, please contact the IRB to discuss whether or not a new application must be submitted. Any such changes or modifications must be reviewed and approved by the IRB prior to implementation.

Please retain this letter for your files. This office will hold your exemption application for a period of three years from the approval date. If you wish to continue this protocol beyond this period, you will need to submit another Exemption Request. If the research is being conducted for a master's thesis or doctoral dissertation, the student must file a copy of this letter with the thesis or dissertation.

☐ Approved consent form/s enclosed

APPENDIX C

INFORMED CONSENT

You are invited to participate in a research project being conducted by Mindy Armbrust Beach, a doctoral student in the School of Counseling at The University of Akron. The purpose of this research is to explore the practice of screening for child/adolescent clients' parental adverse childhood experiences by licensed mental health providers. While there are no tangible benefits for the participants of this study, your participation will assist in the collection and analysis of data to address an important issue in the mental health field. This study asks about sensitive topics related to childhood maltreatment. This may cause discomfort and/or possibility of re-traumatization. Participants have the right to refuse participation or end participation at any time. If participants experience discomfort or re-traumatization, they should call the SAMHSA's National Hotline at 1-800-662-HELP (4357) or seek counseling. If you decide to participate, you will be asked to complete an anonymous web-based survey. The survey should take approximately 20 minutes to complete.

The survey will not collect any identifiable information and no one will be able to connect your responses to you. Your anonymity is further protected by not asking you to sign and return a consent form. Instead, you will be asked for your consent prior to being allowed to move on to the survey. In order to be included for participation in the study, individuals must be licensed as a Professional Counselor, Social Worker, and/or Marriage and Family Therapist. Participants will also need to be 18 years of age or older and work, to some degree, with children and/or adolescents. Please print this introduction for future reference.

At the end of the survey, you will be given an opportunity to opt-in to an Amazon gift card giveaway, as an incentive for participating in the survey. If you opt in, you will be directed to a site where you will be asked to provide your email address as a means of contacting you. Two winners will be chosen at random, from participants included in the study that have opted in and will each be sent a $50 Amazon gift card electronically via the email address you provide. Please note that your email address will be kept separate from your survey responses and will not be used for anything other than contacting you, should you be selected to win a gift card.

If you have any questions about this study, you may email me at maa192@uakron.edu, or my advisor, Dr. Heather Katafiasz, at hkatafiasz@uakron.edu. This project has been reviewed and approved by The University of Akron Institutional Review Board.

If you have any questions about your rights as a research participant, you may call the IRB at (330) 972-7666. Please click on the link below to access the survey. Thank you.

APPENDIX D

AAP PERMISSION TO USE AND AMEND PS85

RE: Inquiry regarding Periodic Survey #85

RA

Research, AAP <aapresearch@aap.org>

Monday, June 7, 2021 at 10:55 AM

To: Mindy Armbrust; Cc: Member & Customer Care

CAUTION: This email originated from outside of The University of Akron.

Hi Mindy,

Thank you for your message. I understand you are interested in using and adapting the PS85 survey for your dissertation and we do grant you permission to use. If you do use any of the questions (or adaptations of the questions) for your own survey, please remember to credit the AAP Periodic Survey.

Please do not hesitate to let me know if you need an additional survey copy or if you have any further questions.

Thank you!

Chloe Somberg
Health Services Research
American Academy of Pediatrics
345 Park Blvd. Itasca, IL 60143
csomberg@aap.org | 630.626.6619

APPENDIX E

PERIODIC SURVEY 85

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

PERIODIC SURVEY OF FELLOWS #85

This survey asks for information on issues surrounding (1) patient mental health management and referrals, and (2) early brain development.
Please answer the questions by circling the number of the appropriate response or by filling in the blanks.

1. **During a typical complete work week, how many hours per week do you spend in the following professional activities?**
If you do not spend any time in a particular activity, please indicate this by entering zero (0) hours in the appropriate space.

Activity:	Hours:
Direct patient care (DPC)	_____
Administration	_____
Academic medicine	_____
Research	_____
Fellowship training	_____
Other (specify)_____	_____
TOTAL HOURS/WEEK	_____

1a. About how many of these DPC hours per week are spent delivering:
Outpatient care _____(hours)
Inpatient care _____(hours)

1b. Are you currently in a pediatric residency training program?
Yes.....1 → **1c. Please check if you are PL1-3 ☐ or PL4 or greater ☐**
No.....2 → **1d. In what year did you complete your residency training?_____**

The following questions are for pediatricians who provide some DIRECT PATIENT CARE.
If you do NOT provide patient care, we still need your response. Would you please check this box ☐ and answer the demographic questions #27 – 33 on page 8, and return the survey? THANK YOU!

MENTAL HEALTH MANAGEMENT/REFERRALS

2. **(A) In column A please mark which of the following mental health providers are located ON SITE at your primary practice, that is, the practice where you spend most of your time?** *Please check Yes or No for each provider*

(B) In column B, please indicate for each type of practitioner that is NOT located on site, how available would you say mental health services are within your practice community? *Circle one response for each service not located on site*

	(A) Located ON SITE at Practice		(B) If not on site, how available are these providers within your practice community?		
	Yes	No	Very Available	Somewhat Available	Not at all Available
Child psychiatrists	☐	☐ →	1	2	3
Child psychologists	☐	☐ →	1	2	3
Developmental-behavioral pediatricians	☐	☐ →	1	2	3
Developmental services, i.e., Early Intervention (EI), etc.	☐	☐ →	1	2	3
Substance abuse counseling	☐	☐ →	1	2	3
Social workers	☐	☐ →	1	2	3
Adult psychiatrists/psychologists	☐	☐ →	1	2	3
Child life specialists	☐	☐ →	1	2	3

3. **In general, how difficult is it for patients who need routine or emergency mental health services to be seen by mental health providers in your practice community?** *Please circle ONE response for each type of service*

	Very Difficult	Moderately Difficult	Somewhat Difficult	Not at all Difficult	Don't Know
Routine services	1	2	3	4	5
Emergency services	1	2	3	4	5

4. **In your practice, how frequently do you inquire about, screen for, treat/co-manage and refer each of these problems/ conditions?** *For EACH problem/condition, circle the one number that comes closest to how often you inquire, screen, treat and refer.*

How frequently do you: →	Inquire about this problem/condition in your practice?			Routinely screen (i.e., use formal instrument) for this problem/ condition in your practice?			Treat/manage/co-manage those identified with this problem/condition in your practice?			Refer those identified with this problem/condition to other providers?		
Problems/Conditions	Never	Some-times	Usually	Never	Some-times	Usually	Never	Some-times	Usually	Never	Some-times	Usually
ADHD	1	2	3	1	2	3	1	2	3	1	2	3
Child depression	1	2	3	1	2	3	1	2	3	1	2	3
Adolescent depression	1	2	3	1	2	3	1	2	3	1	2	3
Behavior management problems (e.g., conduct disorder, oppositional defiant disorder)	1	2	3	1	2	3	1	2	3	1	2	3
Bullying	1	2	3	1	2	3	1	2	3	1	2	3
Learning disabilities	1	2	3	1	2	3	1	2	3	1	2	3
Anxiety disorders (e.g., separation anxiety, social anxiety, school phobia)	1	2	3	1	2	3	1	2	3	1	2	3
Substance abuse (includes alcohol and other drug abuse)	1	2	3	1	2	3	1	2	3	1	2	3
Disordered eating, body image concerns and eating disorders	1	2	3	1	2	3	1	2	3	1	2	3
Maternal depression	1	2	3	1	2	3	1	2	3	1	2	3
Parental alcohol/drug use	1	2	3	1	2	3	1	2	3	1	2	3
Parental separation/divorce	1	2	3	1	2	3	1	2	3	1	2	3
Incarcerated relative	1	2	3	1	2	3	1	2	3	1	2	3
Domestic violence exposure	1	2	3	1	2	3	1	2	3	1	2	3
Physical or sexual abuse	1	2	3	1	2	3	1	2	3	1	2	3
Hostile/Rejecting parenting by mothers	1	2	3	1	2	3	1	2	3	1	2	3
Food scarcity	1	2	3	1	2	3	1	2	3	1	2	3

5. **Within the past 12 months, approximately what percent of your patients with mental health problems have you co-managed with any mental health care provider?** *Please enter a number or "0" if none* _____%

5a. **If you have co-managed patients with mental health problems, please indicate with which providers:** *Check all that apply*

- Child psychiatrist ☐
- Child psychologist ☐
- Developmental-behavioral pediatrician ☐
- Developmental services provider, i.e., Early Intervention, etc. ☐
- Substance abuse counselor ☐
- Social worker ☐
- Other mental health practitioner ☐
- (specify) _____

6. **Within the past 12 months, have you referred any children/adolescents for mental health services?**

Yes ..... 1 → **If Yes: 6a.** Approximately how many did you refer? _____(number)

No ..... 2 → Go to Q#7

6b. Of those who had a visit to a mental health provider, on what percentage did you receive any feedback from the mental health provider? _____%

2

7. **How strongly do you agree or disagree that the following are barriers to your identifying, referring and treating/co-managing child/adolescent mental health problems?** *Circle one response for each item*

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Lack of training in identifying child/adolescent mental health problems	1	2	3	4	5
Lack of training in the treatment of children/adolescents with mental health problems by counseling	1	2	3	4	5
Lack of training in the treatment of children/adolescents with mental health problems by medication	1	2	3	4	5
Lack of confidence in my ability to diagnose child/adolescent mental health problems	1	2	3	4	5
Lack of confidence in my ability to treat child/adolescent mental health problems with counseling	1	2	3	4	5
Lack of confidence in my ability to treat child/adolescent mental health problems with medication	1	2	3	4	5
Lack of time to treat child/adolescent mental health problems	1	2	3	4	5
Inadequate reimbursement for treating child/adolescent mental health problems	1	2	3	4	5

MENTAL HEALTH TRAINING

8. **(A) Did you complete a residency rotation in any of the following?** *Please check 'Yes' or 'No'*

   (B) If yes, how many actual weeks were spent by you on this rotation (not including vacation time or illness)? *Please circle one number for each rotation*

	(A) Residency Rotation		(B) Number of Weeks					
	No	Yes						
a. Behavioral/Developmental Pediatrics	☐	☐ →	1	2	3	4	5	≥6
b. Child Psychiatry	☐	☐ →	1	2	3	4	5	≥6
c. Adolescent Medicine	☐	☐ →	1	2	3	4	5	≥6
d. Behavioral Sciences	☐	☐ →	1	2	3	4	5	≥6

9. **Did you have Fellowship or other formal training in any of the areas listed in question # 8, above?**

   Yes .....1 → Which one (s)? (please specify)_____
   No 2

10. **During your residency or fellowship, did you receive training in the following areas of mental health assessment, education and/or treatment for children, adolescents or adults?** *Please circle all that apply for each area*

Areas of Training:	Children	Adolescents	Adults	Have Had No Training
Motivational Interviewing technique	1	2	3	4
Other types of interviewing techniques	1	2	3	4
DSM diagnostic criteria for depression	1	2	3	4
DSM diagnostic criteria for anxiety	1	2	3	4
DSM diagnostic criteria for ADHD	1	2	3	4
Dosing with antidepressant/anxiety medication	1	2	3	4
Dosing with ADHD medication	1	2	3	4
Strategies for managing/treating depression through counseling	1	2	3	4
Strategies for managing/treating depression through Cognitive Behavioral Therapy (CBT)	1	2	3	4
Strategies for managing/treating depression with medication	1	2	3	4
Strategies for preventing abuse/misuse/diversion of ADHD medications	1	2	3	4

11. During your residency or fellowship, did you receive any training in positive parenting techniques for parents of children or adolescents?

	Yes	No
For parents of children	1	2
For parents of adolescents	1	2

12. In the last two years, have you attended a lecture or conference where the main topic was:

	Yes	No
Child mental health	1	2
Adolescent mental health	1	2

13. How interested are you in receiving further education in: *Circle one response for each item*

	Very Interested	Somewhat Interested	Not at all Interested
Identifying depression and other mental health problems in children	1	2	3
Managing/treating mental health problems in children	1	2	3
Co-managing mental health problems in children	1	2	3
Medication management of mental health problems in children	1	2	3
Identifying depression and other mental health problems in adolescents	1	2	3
Managing/treating mental health problems in adolescents	1	2	3
Co-managing mental health problems in adolescents	1	2	3
Medication management of mental health problems in adolescents	1	2	3

14. How familiar are you with (A) the AAP 2010 Mental Health Toolkit, "Addressing Mental Health Concerns in Primary Care: A Clinicians Toolkit" and (B) the AAP "ADHD Resource Toolkit for Clinicians"? *Please circle one response for 'A' and one response for 'B'*

	(A) Mental Health Toolkit	(B) ADHD Toolkit
Very familiar (I could describe it fairly accurately)	1	1
Somewhat familiar (I have a general concept of the content)	2	2
Vaguely familiar (I think I've heard of it, but I'm not sure I know the details)	3	3
Not at all familiar (I haven't heard of it before)	4	4

14a. Have you ever used any component of the Mental Health Toolkit or ADHD Toolkit in your practice?

	(A) Mental Health Toolkit	(B) ADHD Toolkit
Yes	1	1
No	2	2

14b. If yes, in general, how useful would you say the toolkit has been in your practice?

	(A) Mental Health Toolkit	(B) ADHD Toolkit
Very useful	1	1
Moderately useful	2	2
Somewhat useful	3	3
Not at all useful	4	4

15. **Does your practice have/do any of the following?** *Please circle ALL that apply*

A current list of mental health resources in the community to which you can refer patients	01
A current list of Early Intervention resources in the community to which you can refer patients	02
A collaborative relationship with key mental health providers in the practice community	03
A collaborative relationship with key Early Intervention providers in the practice community	04
A practice registry of children/adolescents with mental health problems	05
A protocol for monitoring children/adolescents on psychopharmacologic medications	06
An office protocol for managing psychiatric emergencies	07
Use standardized surveillance/screening tools to routinely elicit parent/patient mental health concerns	08
Assist families in the mental health referral process (i.e., provide telephone numbers of providers or make referral appointments)	09
Assist families in the Early Intervention referral process (i.e., provide telephone numbers of providers or make referral appointments)	10
A system to track patients referred for mental health care	11
A system to track patients referred for Early Intervention care	12
My practice does not have/do any of the above	13

EARLY BRAIN AND CHILD DEVELOPMENT

16. **How familiar are you with the Adverse Childhood Experiences (ACE) Study, an ongoing study conducted by the Centers for Disease Control and Prevention (CDC) and Kaiser Permanente to assess the associations between childhood stressors and later-life health and well-being?** *Please circle ONE response*

Very familiar (I could describe it fairly accurately)	1
Somewhat familiar (I have a general concept of the content)	2
Vaguely familiar (I think I've heard of it, but I'm not sure I know the details)	3
Not at all familiar (I haven't heard of it before)	4

17. **How strongly do you agree or disagree with the following statements?** *Please circle ONE response for each item*

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Prolonged or excessive physiologic stress in childhood can result in epigenetic modifications of the DNA	1	2	3	4	5
Prolonged or excessive physiologic stress in childhood can disrupt brain development and impair educational achievement	1	2	3	4	5
Persistent physiologic stress in childhood can make children less capable of coping with future stress	1	2	3	4	5
Brief periods of stress can have a positive effect on a child by serving to motivate and build resilience	1	2	3	4	5
Screening for social emotional risk factors within the family (e.g., parental depression or substance abuse, domestic violence, etc.) are beyond the scope of the pediatric medical home	1	2	3	4	5
Stable and supportive adult relationships can mitigate the negative effects of persistent childhood stress	1	2	3	4	5
Parents who have experienced significant adversity in childhood have a harder time forming stable and supportive relationships with their children than parents who have not experienced such adversity	1	2	3	4	5
Positive parenting has little influence on a child's life-course trajectory	1	2	3	4	5
Advice from pediatricians has little effect on influencing positive parenting skills among patients' parents	1	2	3	4	5

18. **Which, if any, of the following health and developmental outcomes would you say are associated with significant adversity in childhood?** *Please circle ONE response for each item*

	Yes	No	Don't know
Obesity	1	2	3
Liver disease	1	2	3
Cancer	1	2	3
Lung disease	1	2	3
Sexually transmitted infections	1	2	3
Heart disease	1	2	3
Diabetes	1	2	3

19. **With what proportion of parents in your practice do you ask about their experience with the following adversities as a child?** *Please circle ONE response for each experience*

I ask about parents' childhood experience with:	All Parents	Most parents	Some parents	None/No Parents
Physical or sexual abuse	1	2	3	4
Emotional abuse	1	2	3	4
Physical or emotional neglect	1	2	3	4
Domestic violence exposure	1	2	3	4
Parental mental illness	1	2	3	4
Parental substance abuse	1	2	3	4
Incarcerated caregiver	1	2	3	4
Raised by one parent	1	2	3	4
Food scarcity	1	2	3	4

20. **How much of a barrier are the following to your ability as a pediatrician to address early brain and child development in your practice?** *Please circle ONE response for each item*

	Not at all a barrier	Some-what a barrier	A moderate barrier	A significant barrier
An incomplete understanding of how genetic predispositions and early childhood experiences interact to determine lifelong behavior and health	1	2	3	4
Lack of knowledge regarding what toxic stress is	1	2	3	4
Lack of practice-friendly tools to assess the family environment for social and emotional risk factors (e.g., parental depression or substance abuse, domestic violence, food scarcity, etc.)	1	2	3	4
Inadequate reimbursement or time for screening for social and emotional risk factors that exist within the family	1	2	3	4
Parental reluctance to discuss the social and emotional risk factors that exist within the family	1	2	3	4
Lack of local resources available to help address the familial social and emotional risk factors identified	1	2	3	4
Lack of care coordination services to link families in distress with the available community resources	1	2	3	4
Lack of comfort in asking parents about their own childhood experiences	1	2	3	4
Parental reluctance to discuss their adverse experiences as a child	1	2	3	4
Lack of training in positive parenting techniques that promote healthy child-parent relationships	1	2	3	4
Lack of practice-friendly tools (handouts, activities, web-based resources, etc.) to promote healthy child-parent relationships	1	2	3	4
Inadequate reimbursement or time for counseling parents on healthy child-parent relationships	1	2	3	4

21. **For each of the following resources for the pediatric medical home, please indicate if you have never heard of the resource, never used the resource, use the resource at times, or use the resource routinely.**
Please circle ONE response for each resource

Resource:	Never Heard of Resource	Never Use	Use at Times	Use Routinely
Anticipatory guidance per Bright Futures preventive care guidelines/materials	1	2	3	4
Anticipatory guidance per Connected Kids	1	2	3	4
Parenting Programs (like Triple-P or Incredible Years)	1	2	3	4
Reach Out and Read	1	2	3	4
Screening tools for parental depression	1	2	3	4
Screening tools for parental substance abuse	1	2	3	4
Screening tools for the parents' adverse childhood experiences (ACEs)	1	2	3	4
Screening tools for the child's adverse childhood experiences (ACEs)	1	2	3	4
Screening tools for domestic violence	1	2	3	4
Screening tools for food scarcity	1	2	3	4
Group well child visits	1	2	3	4
Videotaping of parent-child interactions	1	2	3	4

22. **For each of the following community resources, please indicate if the resource is (A) not available/never heard of the resource, or if you have (B) never used the resource, (C) use the resource at times, or (D) use the resource routinely.**
Please circle ONE response for each resource

Local resources for:	(A) Not available/ Never Heard of Resource	(B) Never Use	(C) Use at Times	(D) Use Routinely
Addressing weak or harsh parenting	1	2	3	4
Addressing parental illiteracy	1	2	3	4
Home visiting	1	2	3	4
Intensive behavioral interventions	1	2	3	4
Addressing poor child-parent attachments / relationships	1	2	3	4
Addressing parental depression	1	2	3	4
Addressing parental substance abuse	1	2	3	4
Addressing domestic violence	1	2	3	4
Addressing food scarcity	1	2	3	4
Early childhood mental health assessments	1	2	3	4
Child care quality assessments	1	2	3	4
Formalized school readiness assessments	1	2	3	4

PATIENT INFORMATION

23. **During a typical work week, approximately how many ambulatory visits do you provide?**
Enter a number or "0" if none _____ (number)

24. **Approximately how many of these ambulatory visits are for health supervision (well-child care)?** *Enter a number or "0" if none* _____ (number)

25. **Approximately what percentage of your patients are covered by the following insurance sources and systems?**
Please enter a number or "0" if none; percentages should sum to 100%

Private insurance, traditional fee-for-service ..... _____ %
Private insurance, managed care (HMO, IPA, PPO, POS, etc) ..... _____ %
Public insurance (Medicaid, SCHIP or other), fee-for-service ..... _____ %
Public insurance (Medicaid, SCHIP or other), managed care ..... _____ %
TRICARE (military insurance) ..... _____ %
Uninsured ..... _____ %
100%

Don't know patients' insurance sources ☐

26. What proportion of your patients would you estimate to be in the following racial or cultural groups?
If you have no patients in a specific group, please enter a "0" in that space. *(Note: Percents should sum to 100%)*

White, non-Hispanic/Latino _____%
Hispanic/Latino _____%
Black/African American _____%
Asian _____%
Native Hawaiian/other Pacific Islander _____%
American Indian/Alaska Native _____%
Other (specify)_____ _____%
100%

PRACTICE/PERSONAL CHARACTERISTICS

27. Approximately what percentage of your professional time is spent in the following areas?

General Pediatrics _____%
Other specialty/subspecialty (specify)_____ _____%
100%

28. Please describe the community in which your primary practice/position is located. *Circle One*

Urban, inner city ... 1
Urban, not inner city ... 2
Suburban ... 3
Rural ... 4

29. Please indicate your primary employment setting, that is, the setting where you spend <u>most</u> of your time.
Please circle only ONE response

Self-employed solo practice ... 01
Two physician practice ... 02
Pediatric group practice, 3-10 pediatricians ... 03
Pediatric group practice, >10 pediatricians ... 04
Multispecialty group practice with primary care only 05
Multispecialty group practice with specialty care only ... 06
Multispecialty group practice with primary and specialty care ... 07
Health Maintenance Organization (staff model) ... 08
Medical School or parent university ... 09
Non-government hospital/clinic ... 10
Non-profit community health center ... 11
City/county/state government hospital or clinic ... 12
US government hospital or clinic ... 13
Other _____ ... 98

29a. Do you precept residents? Yes ... 1 No ... 2

30. Following your basic pediatric residency, how many years have you been in practice? _____Years

Not currently in practice ☐

31. What is your gender? Male ... 1 Female ... 2

32. In what year were you born? ... 19_____

33. With what racial or cultural group(s) do you identify yourself? *Circle all that apply*

White, non-Hispanic/Latino ... 1
Hispanic/Latino ... 2
Black/African American ... 3
Asian ... 4
Native Hawaiian/other Pacific Islander ... 5
American Indian/Alaska Native ... 6
Other (specify) _____ 8

THANK YOU.
Please return in the enclosed envelope to:
Periodic Survey,
Division of Health Services Research, American Academy of Pediatrics,
PO Box 927, Elk Grove Village, IL 60009-0927

APPENDIX F

ADAPTED PS85 SURVEY

1. *In your practice with child and adolescent clients (up to age 17), how frequently do you screen for their parents' experiences with the following adversities as a child? FOR EACH problem/condition, choose one number that comes closest to how often you screen.*

How Frequently do you:	*Routinely Screen for (i.e. use interview or formal instrument)*		
Problem/Conditions	*Never*	*Sometimes*	*Usually*
Emotional abuse	1	2	3
Physical abuse	1	2	3
Sexual abuse	1	2	3
Emotional neglect	1	2	3
Physical neglect	1	2	3
Parental divorce/separation	1	2	3
Domestic violence exposure	1	2	3
Household substance abuse	1	2	3
Household mental illness	1	2	3
Household incarceration	1	2	3
Separation from parent (foster care, immigration, deportation)	1	2	3
Parental death	1	2	3
Serious physical illness or disability of a parent	1	2	3
Community violence and/or bullying	1	2	3
Detainment, arrest, or incarceration	1	2	3
Discrimination	2	3	3
Verbal abuse/threats from intimate partner	1	2	3
Housing insecurity	1	2	3
Food insecurity	1	2	3

2. *How familiar are you with the Adverse Childhood Experiences (ACE) Study, a study conducted by the Centers for Disease Control and Prevention (CDC) and Kaiser Permanente to assess the associations between childhood stressors and later-life health and well-being? Please choose ONE response*

Not at all familiar (I haven't heard of it before)	1
Vaguely familiar (I think I've heard of it, but I'm not sure I know the details)	2
Somewhat familiar (I have a general concept of the content)	3
Very familiar (I could describe it fairly accurately)	4

3. *How strongly do you agree or disagree with the following statements? Please choose ONE response*

	Strongly Agree	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
Prolonged or excessive physiologic stress in childhood can result in epigenetic modifications of the DNA.	1	2	3	4	5
Screening for social emotional risk factors within the family (e.g., parental depression, substance abuse, and/or domestic violence, etc.) is within the scope of a mental health provider working with children/adolescents.	1	2	3	4	5
Mothers who have experienced significant adversity in childhood are more likely to suffer from post-partum depression.	1	2	3	4	5
A systemic multigenerational approach to therapy is recommended to prevent and ameliorate the impact of ACEs and promote resiliency in children with a family history of adverse childhood experiences.	1	2	3	4	5
Parents who have experienced significant adversity in childhood have a decreased ability to regulate their emotions during parenting and are	1	2	3	4	5

more likely to utilize harsher discipline methods.					
Stable and supportive adult relationships can mitigate the negative effects of persistent childhood stress.	1	2	3	4	5
Parents who have experienced significant adversity in childhood have a harder time forming stable and supportive relationships with their children than parents who have not experienced such adversity.	1	2	3	4	5
Positive parenting influences a child's life-course trajectory	1	2	3	4	5
Assessing for parental ACEs can give relevant systemic/familial screening information for working with children and adolescents	1	2	3	4	5
Parents who have experienced significant adversity in childhood are more likely to experience parental stress and use ineffective parenting styles (authoritarian or permissive).	1	2	3	4	5
An individual's negative health outcomes from childhood maltreatment can become the adverse childhood experiences for their children.	1	2	3	4	5
Children of parents who have experienced significant adversity in childhood are at an increased risk for developing internalizing and externalizing behavioral problems.	1	2	3	4	5

Advice from a mental health provider can influence positive parenting skills among clients' parents	1	2	3	4	5
Parents who have experienced adversity are more likely to need additional support in understanding and implementing such concepts as positive parenting, appropriate discipline, good self-care, modeling conflict resolution, healthy coping strategies and developmental promotion.	1	2	3	4	5
Children of parents who have experienced significant adversity in childhood are at an increased risk for premature birth, low birth weight and developmental delays.	1	2	3	4	5
Increased parental adversity in childhood has been associate with decreased skill achievement in children, such as problem-solving skills, communication skills, social skills, and fine and gross motor skills.	1	2	3	4	5

APPENDIX G

PEARLS TEEN SR

Pediatric ACEs and Related Life Events Screener (PEARLS)

TEEN (Self-Report)- To be completed by: **Patient**

At any point in time since you were born, have you seen or been present when the following experiences happened? Please include past and present experiences.

Please note, some questions have more than one part separated by "OR." If any part of the question is answered "Yes," then the answer to the entire question is "Yes."

PART 1:	Please check "Yes" where apply. ☒
1. Have you ever lived with a parent/caregiver who went to jail/prison?	☐
2. Have you ever felt unsupported, unloved and/or unprotected?	☐
3. Have you ever lived with a parent/caregiver who had mental health issues? *(for example, depression, schizophrenia, bipolar disorder, PTSD, or an anxiety disorder)*	☐
4. Has a parent/caregiver ever insulted, humiliated, or put you down?	☐
5. Has your biological parent or any caregiver ever had, or currently has a problem with too much alcohol, street drugs or prescription medications use?	☐
6. Have you ever lacked appropriate care by any caregiver? *(for example, not being protected from unsafe situations, or not being cared for when sick or injured even when the resources were available)*	☐
7. Have you ever seen or heard a parent/caregiver being screamed at, sworn at, insulted or humiliated by another adult? Or have you ever seen or heard a parent/caregiver being slapped, kicked, punched beaten up or hurt with a weapon?	☐
8. Has any adult in the household often or very often pushed, grabbed, slapped or thrown something at you? Or has any adult in the household ever hit you so hard that you had marks or were injured? Or has any adult in the household ever threatened you or acted in a way that made you afraid that you might be hurt?	☐
9. Have you ever experienced sexual abuse? *(for example, has anyone touched you or asked you to touch that person in a way that was unwanted, or made you feel uncomfortable, or anyone ever attempted or actually had oral, anal, or vaginal sex with you)*	☐
10. Have there ever been significant changes in the relationship status of your caregiver(s)? *(for example, a parent/caregiver got a divorce or separated, or a romantic partner moved in or out)*	☐

How many "Yes" did you answer in Part 1?: ☐

UCSF Benioff Children's Hospital Oakland

This tool was created in partnership with UCSF School of Medicine.

Please continue to the other side for the rest of questionnaire →

Teen (Self Report) - Identified

PART 2:	Please check "Yes" where apply.	√
1.	Have you ever seen, heard, or been a victim of violence in your neighborhood, community or school? *(for example, targeted bullying, assault or other violent actions, war or terrorism)*	☐
2.	Have you experienced discrimination? *(for example, being hassled or made to feel inferior or excluded because of their race, ethnicity, gender identity, sexual orientation, religion, learning differences, or disabilities)*	☐
3.	Have you ever had problems with housing? *(for example, being homeless, not having a stable place to live, moved more than two times in a six-month period, faced eviction or foreclosure, or had to live with multiple families or family members)*	☐
4.	Have you ever worried that you did not have enough food to eat or that food would run out before you or your parent/caregiver could buy more?	☐
5.	Have you ever been separated from your parent or caregiver due to foster care, or immigration?	☐
6.	Have you ever lived with a parent/caregiver who had a serious physical illness or disability?	☐
7.	Have you ever lived with a parent or caregiver who died?	☐
8.	Have you ever been detained, arrested or incarcerated?	☐
9.	Have you ever experienced verbal or physical abuse or threats from a romantic partners? *(for example, a boyfriend or girlfriend)*	☐

How many "Yes" did you answer in Part 2?: ☐

A

APPENDIX H

MODIFIED PEARLS FOR THIS STUDY

At any point in time since you were born until you turned 18 years, did you see or were you present when the following experiences happened?

Please note, some questions have more than one part separated by "OR." If any part of the question is answered "Yes," then the answer to the entire question is "Yes."

		Yes	No
1.	Did you ever live with a parent/caregiver who went to jail/prison?	☐	☐
2.	Did you ever feel unsupported, unloved and/or unprotected?	☐	☐
3.	Did you ever live with a parent/caregiver who had mental health issues? *(for example, depression, schizophrenia, bipolar disorder, PTSD, or an anxiety disorder)*	☐	☐
4.	Did a parent/caregiver ever insult, humiliate, or put you down?	☐	☐
5.	Did your biological parent or any caregiver ever have a problem with too much alcohol, street drugs, or prescription medications use?	☐	☐
6.	Did you ever lack appropriate care by any caregiver? *(for example, not being protected from unsafe situations, or not being cared for when sick or injured even when the resources were available)*	☐	☐
7.	Did you ever see or hear a parent/caregiver being screamed at, sworn at, insulted, or humiliated by another adult? OR did you ever see or hear a parent/caregiver being slapped, kicked, punched, beaten up or hurt with a weapon?	☐	☐
8.	Did any adult in the household often or very often push, grab, slap, or throw something at you? OR did any adult in the household ever hit you so hard that you had marks or were injured? OR did any adult in the household ever threaten you or act in a way that made you afraid that you might be hurt?	☐	☐
9.	Did you ever experience sexual abuse?	☐	☐

	(for example, did anyone touch you or ask you to touch that person in a way that was unwanted, or made you feel uncomfortable, or anyone ever attempt or actually have oral, anal, or vaginal sex with you)		
10.	Were there ever significant changes in the relationship status of your caregiver(s)? *(for example, a parent/caregiver got a divorce or separated, or a romantic partner moved in or out)*	☐	☐
11.	Did you ever see, hear, or were a victim of violence in your neighborhood, community, or school? *(for example, targeted bullying, assault or other violent actions, war or terrorism)*	☐	☐
12.	Did you ever experience discrimination? (for example, being hassled or made to feel inferior or excluded because of your race, ethnicity, gender identity, sexual orientation, religion, learning differences, or disabilities)	☐	☐
13.	Did you ever have problems with housing? *(for example, being homeless, not having a stable place to live, moved more than two times in a six-month period, faced eviction or foreclosure, or had to live with multiple families or family members)*	☐	☐
14.	Did you ever worry that you did not have enough food to eat or that food would run out before you or your parent/caregiver could buy more?	☐	☐
15.	Were you ever separated from your parent or caregiver due to foster care, or immigration?	☐	☐
16.	Did you ever live with a parent/caregiver who had a serious physical illness or disability?	☐	☐
17.	Did you ever live with a parent or caregiver who died?	☐	☐
18.	Were you ever detained, arrested, or incarcerated?	☐	☐
19.	Did you ever experience verbal or physical abuse or threats from a romantic partner? *(for example, a boyfriend or girlfriend)*	☐	☐

APPENDIX I

DEMOGRAPHIC QUESTIONNAIRE

Demographic Questionnaire

1. *During a typical work week, approximately how many client cases do you provide service for? Please choose ONE response*

   Less than 10
   10 - 19
   20 - 29
   30 - 39
   40+

2. *Approximately what percentage of these client cases involve a child (under 12)? Please choose ONE response*

   Less than 10%
   11% - 25%
   26% - 50%
   51% - 75%
   76% - 100%

3. *Approximately what percentage of these client cases involve an adolescent (12-17 years)? Please choose ONE response*

   Less than 10%
   11% - 25%
   26% - 50%
   51% - 75%
   76% - 100%

4. *What percentage of your clients would you estimate to be in the following racial or cultural groups? If you have no clients in a specific group, please enter a "0" in that space.*

White, non-Hispanic/Latino	*Text Box*
Hispanic/Latino	*Text Box*
Black/African American	*Text Box*

Asian	*Text Box*
Native Hawaiian/other Pacific Islander	*Text Box*
American Indian/Alaska Native	*Text Box*
Middle Eastern	*Text Box*
Asian Indian	*Text Box*
Other (specify)	*Text Box*

5. *Please describe, most closely, the community in which your primary work setting is located. Please choose ONE response*

Urban, inner city
Urban, not inner city
Suburban
Rural

6. *Please indicate your primary work setting, that is, the setting where you spend most of your time. Please choose ONE response*

Solo practice/private practice
Multiple provider private practice (less than 5)
Multiple provider private practice (more than 5)
Agency
Hospital
School
Other (specify)

7. *How many years have you been in practice? Please choose ONE response*

Less than 5
6-10
11-15
16-20
21-25
More than 25

8. *What is your highest level of education? Please choose ONE response*

Bachelors
Masters
Doctoral

9. *What are your licensing credentials? Mark all that apply or "None of the Above" if none apply*

MFT under supervision (MFT)
Independent MFT (IMFT)
Independent MFT with Supervisor Designation (IMFT-S)
Professional Counselor under supervision (LPC)
Independent Professional Clinical Counselor (LPCC)
Independent Professional Clinical Counselor with Supervisor Designation (LPCC-S)
Social Worker under supervision (LSW)
Independent Social Worker (LISW)
Independent Social Worker with Supervisor Designation (LISW-S)
None of the above

10. *If you have multiple licensing credentials, which credential do you most closely identify with? Please choose ONE response*

MFT under supervision (MFT)
Independent MFT (IMFT)
Independent MFT with Supervisor Designation (IMFT-S)
Professional Counselor under supervision (LPC)
Independent Professional Clinical Counselor (LPCC)
Independent Professional Clinical Counselor with Supervisor Designation (LPCC-S)
Social Worker under supervision (LSW)
Independent Social Worker (LISW)
Independent Social Worker with Supervisor Designation (LISW-S)

11. *How old are you? Please choose ONE response*

<25 years
25-35 years
36-45 years
46-55 years
55-65 years
>65 years

12. *With what racial/cultural group(s) do you identify? Mark all that apply*

White, non-Hispanic/Latino
Hispanic/Latino
Black/African American

Asian
Native Hawaiian/other Pacific Islander
American Indian/Alaska Native
Middle Eastern
Asian Indian
Other (specify)

13. If you identify with multiple racial/cultural groups, is there one racial/cultural group that you most closely identify with? Please choose ONE response

White, non-Hispanic/Latino
Hispanic/Latino
Black/African American
Asian
Native Hawaiian/other Pacific Islander
American Indian/Alaska Native
Middle Eastern
Asian Indian
Other (specify)
No, I identify equally with my multiple *racial/cultural groups*

14. With what gender do you identify most closely? *Please choose ONE response*

Male
Female
Male to female transgender
Female to male transgender
Non-binary
Genderqueer/gender fluid
Other (specify)