EXPOSURE TO ADVERSE CHILDHOOD EXPERIENCES (ACEs) WITHIN RURAL AND UNDERSERVED COMMUNITIES

by

Lauren Sparks, MS

Liberty University

A Dissertation [Proposal] Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

Liberty University

March, 2024

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APPROVED BY:

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ABSTRACT

It can be difficult for residents of rural and underserved communities to express their own experiences involving adverse childhood experiences (ACEs). ACEs cause negative health outcomes to those who are exposed to physical, mental, or behavioral abuse. These negative outcomes can affect the individual's mental health; therefore, it is crucial to create recovery mechanisms for communities that are in dire need of resources. The purpose of this qualitative study was to research the exposure of ACEs throughout three rural and underserved states: Kansas, Oklahoma, and Texas. Each of these states had exposure scenarios which was determined based on the distributed questionnaires and interviews. Findings determined that there was a multitude of adverse childhood experiences reported by the participants of Kansas, Oklahoma, and Texas. Therapy and medication were reported as the most commonly used resources to provide a healthy lifestyle. Throughout the audio interviews, it was acknowledged how it would benefit the participants to know what mental health resources are available within each of their communities. At the conclusion of this study, there are educational resources to bring opportunities for recovery among communities who struggle with limited medical and educational mechanisms.

Keywords: adverse childhood experiences, rural, underserved, development

Copyright Page

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Dedication

This dissertation is dedicated to my parents, sister, brother-in-law, and niece. Thank you all for being the best support system throughout my entire educational path. I couldn't have made it through it without you all cheering me on to the finish line. I also want to thank my friends and colleagues for being understanding throughout my studies, and motivating me throughout the entire process.

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I want to acknowledge the professors and classmates I had throughout my doctoral journey at Liberty University. I greatly appreciate my chair and committee for their knowledge and guidance through my dissertation. I'm extremely thankful for you both taking the time to help me create a successful study.

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CHAPTER 1: INTRODUCTION TO THE STUDY

Introduction

Adverse childhood experiences and mental health are normally spoken in the same sentence. They are intertwined by traumatic experiences that have occurred which are affecting cognitive and mental capacities. It is such a critical task to provide unlimited availability to resources that will allow patients to express their thoughts and feelings. Residents in rural and underserved areas of America face similar experiences to residents of urban areas, but residents in rural and underserved areas may be more likely to experience a lack of education and medical professional availability. Mental health is a crucial area that needs to continually be studied and monitored within different groups of people. There are many people who feel alone and do not feel like they have the help needed to get better. Bringing mental health professionals with proper education to rural and underserved areas could lower statistics of suicidal activity. The purpose of this qualitative case study was to explore the exposure of adverse childhood experiences within rural and underserved residents of Kansas, Oklahoma, and Texas.

Background

There will be different subjects throughout this section discussing the exposure of adverse childhood experiences within rural and underserved communities. Adverse childhood experiences will be defined and how they are affecting individuals from infancy to adulthood will be discussed. Biblical research regarding themes relevant to ACEs will be incorporated, as spirituality can be a crucial factor regarding traumatic time. Screenings of adverse childhood experiences are extremely important but require the proper tools and resources. Research will be discussed regarding how rural and underserved communities screen children and adults who are experiencing ACEs. There will be a discussion regarding the accessibility to resources that could

prevent and subside these traumatic experiences. Access to the resources will be a primary topic because more resources for rural and underserved communities is crucial. At the end of the section, there should be a much better understanding of adverse childhood experiences, and the continuing research that needs to be performed to help bring awareness to the current patients and victims.

Adverse Childhood Experiences

There is development regression found to be present within adverse childhood experiences and assessed through 10 or more questions among the Center for Epidemiologic Student Depression (CESD) scale as explained in Sanderson et al. (2021). The questions regarding ACEs include abuse, neglect, and household dysfunction that are experienced before the age of 18. ACEs are to be associated with health diagnoses which can be correlated to a physical, mental, or behavioral aspect. There are also higher chances of mental and behavioral health problems that are often exposed through substance abuse/misuse, intimate partner violence, and suicide (Crouch, 2020). This exposure to adverse childhood experiences occurs intergenerationally with the child's parents also being exposed to ACEs. The health diagnoses mentioned are various chronic diseases such as depression, hypertension, COPD, diabetes, cancer, stroke and myocardial infection. Hypertension was discovered as the highest report of four more adverse childhood experiences. The lowest report of ACEs were found within stroke patients.

Regarding rural and underserved communities and adverse childhood experiences, various races have been exposed to the unfortunate health outcomes that are faced through ACEs. American Indians investigated throughout the Warne et al. (2017) study who experienced drinking problems, suicide, and posttraumatic stress disorder (PTSD) have higher risks of

exposure to childhood trauma. The American Indian communities normally suffer higher rates of adverse social conditions which involve poverty, unemployment, and lower high school graduation rates affecting their behavioral health conditions (Warne et al., 2016, p. 1560).

Schofeld et al. (2018) recruited families residing in Iowa with seventh graders who attended public or private schools. The mission of the research was to study the intergenerational aspect of adverse childhood experiences within rural communities in Iowa. The results indicated that the seventh-grade adolescents with higher ACE scores were more likely to have been exposed to alcoholism within the household. The adolescents who were found to have lower ACE scores had families with zero experiences of alcoholism nor had the parents also experienced ACEs in their lifetime. There has been research that has shown exposure to these certain risk factors stretch across numerous future generations within rural communities (Schofeld et al., 2018, p. 1152).

Goldstein et al. (2019) created a study involving low-income, Black primary care patients that addressed their adverse childhood experiences and health risk behaviors. This is a crucial study because it brings another sociodemographic perspective regarding Black and African American patients who are enduring ACEs and health risk behaviors. There were 40 participants, but only 36 completed the intervention. Sixty-five percent of the Black participants reported they have endured four or more ACEs while 58% had positive PTSD screenings. Nearly two-thirds of the participants had at least one health risk behavior.

After the post-intervention, participants documented improvements within their stress levels, alcohol intake, risky sex, and nutritional habits. There was a two-month follow-up requested for each of the participants, which determined the unhealthy behaviors had been

occurring again. This meant one-third of the participants were referred to their local behavioral health services.

Biblical Research of ACEs and Trauma

"So do not fear, for I am with you; do not be dismayed, for I am your God. I will strengthen you and help you; I will uphold you with my righteous right hand" (*New International Version*, 2011, Isaiah 41:10). There are different aspects of spirituality that are either often encouraged or discouraged when trauma occurs. Severe chronic trauma, mixed with sexual, physical, and emotional abuse, causes the individual to feel at fault and deserving of these heinous acts that causes them mentally to feel unloved and unworthy (Colin, 2016, p. 2). It is extremely crucial to have some aspect of spirituality intact that can be a source of comfort during troubled times.

There can often be feelings of betrayal by the survivors of ACEs and trauma, which causes these individuals to feel alone and vulnerable. These survivors of severe chronic childhood trauma were often found to be severely angry at God because he did not stop or prevent the abuse from happening (Colin, 2016, p. 2). This research being conducted will allow different religious leaders to gain a better understanding of how they can incorporate faithful resources for those struggling. These resources are scarce within rural and underserved communities because these communities are not always able to provide the required resources due to limited knowledge of adverse childhood experiences and trauma.

Negative core self-beliefs are often found within survivors of severe, chronic childhood trauma which includes mental distortions about God. Ross (2016) addresses in their study about the intellectual mistakes that are found within these trauma survivors feeling like they are not worthy of God's love and that God wants to punish them. This can be difficult to read or

research, but it is crucial because these survivors need to have resources available to them in their own religion for confiding and protection.

Screening for Adverse Childhood Experiences

There has been found to be a lack of education occurring within the screening purposes of Adverse Childhood Experiences (ACEs) within an Emergency Department (ED). Bhattarai et al. (2021) conducted a study that involves addressing the lack of knowledge within clinicians and providing potential resources that could help clinical decisions to be made available to these adolescent patients and their parents. The Alberta Health System used the Child and Adolescent Addiction and Mental Health and Psychiatry Program (CAAMHPP) to determine the inpatient, outreach, community, and outpatient services such as the ACE questionnaire to children and adolescents within the community.

The sample from the Bhattarai et al. (2021) study consisted of children and adolescents between the ages of 0 and 17 years old who were currently enrolled in the Alberta CAAMHPP program undergoing intensive inpatient and outpatient services between 2016 and 2018. Sixty-one hundred observations were found within the time range while 2545 were matched with Emergency Department visits throughout their enrollment period. The ED visits could consist of one day to one-year post-first enrollment in the CAAMHPP program.

The average age of the sample was 12.1 years old; most of the participants (54.2%) were female. Most of the residents were from urban areas with 89.5% experiencing anxiety, whereas 24.3% of the sample found anxiety to be dominant at the admission process of the mental health services.

In the Chanlongbutra et al. (2018) study, the mission was to figure out the increased odds of adult activity limitations within ACE exposure in rural areas of nine different states, which

were Iowa, Minnesota, Montana, North Carolina, Oklahoma, Tennessee, Vermont, Washington, and Wisconsin. There were 982,154 participants who were interviewed from the Behavioral Risk Factor System (BRFSS): 29,521 rural participants participated in the ACE module and 36,141 participants were from urban areas. Each participant who was exposed to adverse childhood experiences was administered a BRFSS ACE module which consisted of 11 questions.

Chanlongbutra and the research team conducted a Chi-square test that investigated the differences in ACEs scores involving the participants' sociodemographic characteristics. The rural residents who participated in the study were older than the urban residents and had lower scores on education. Although the urban residents ranked higher within the percentage of participants with ACEs, both rural and urban residents had the most similar ACE components involving the participant being sworn at, insulted, or put down by parents or adults in the household. Within the Chanlongbutra et al. (2018) study, there was a determination of increased ACE scores which also increase the occurrence and probabilities of limiting physical activity, poor health outcomes such as heart attack or coronary heart disease, asthma, as well as poor mental health within rural and urban populations.

Accessibility to Resources in Rural and Underserved Communities

Fernandez-Jimenez et al. (2019) conducted a study to determine the impact of pre-school based educational health resources within an underserved community. Recruitment for this study involved 15 Head Start preschools within the Harlem area in New York. There was a 3:2 randomized ratio within the schools, and children received a four-month health behaviors education intermediation or standardized curriculum. Researchers found 562 preschool children between the ages of 3 to 5 years old to enroll for the study.

The sociodemographic characteristics within the study determined that 51% were female, 37% were African American, and 54% were Hispanic/Latino. The knowledge, attitudes, and habits (KAH) were higher within the intermediation groups, and the maximal effect was found within the children who received the standardized curriculum. It was determined that multidimensional school-based activities would be extremely beneficial to implement health behaviors in rural and underserved communities. This would allow early screening to determine prevention strategies within educational facilities that have limited knowledge on the ACEs and curriculum involving mental health.

Problem Statement

Hargreaves et al. (2019) explained how poverty made an impact on the increasing burden of disease, as well as the associated health care costs and underlying factors that occur within underserved populations. Unfortunately, the impact of poverty and the increasing numbers of associated untoward health outcomes are occurring in rural populations as well. Crouch et al. (2020) discusses how childhood exposure to adverse childhood experiences (ACEs) can increase the chances of heart disease, diabetes, cancer, liver disease, depression, and more chronic diseases that occur in later ages. This is one of the many reasons why early detection and screenings are so crucial to advocate for within rural and underserved communities. The statistics could begin to decrease the chances of ACEs as well as chronic diseases if there are proper resources and education for medical professionals.

More research needs to be conducted to help advocate for rural and underserved communities who have the limited resources to maintain healthy lifestyles. There are gaps within different research studies that do not provide studies involving rural and underserved areas in the United States. Chanlongbutra et al. (2018) discussed a recent study in which over half of the

rural residents reported one or more instances of ACEs, but there were higher differences within rural and urban populations that were investigated. There was a conceptual model that was created to outline the impact of ACEs within the development from birth to death. Advocation is an extreme priority to this study to allow different populations to understand the risks, deficiencies, and the lack of health professionals available to provide accurate medical treatment to those suffering.

Purpose of the Study

The purpose of this qualitative case study was to explore the exposure of adverse childhood experiences within rural and underserved residents of Kansas, Oklahoma, and Texas.

Research Questions

Research Questions

RQ 1: Which adverse childhood experience was more exposed within Kansas, Oklahoma, and Texas?

RQ 2: What approaches are being utilized to decrease the exposure to adverse childhood experiences within Kansas, Oklahoma, and Texas?

RQ 3: How do the exposure levels of adverse childhood experiences differ among rural and underserved communities of Kansas, Oklahoma, and Texas?

Assumptions and Limitations of the Study

The purpose of this qualitative case study was to examine the association of adverse childhood experiences that are causing negative mental health wellbeing within rural areas of the United States. There were challenges that were faced throughout the research which included trying to get accurate interpretations/answers from the ACEs survey that was distributed throughout rural communities. Assumptions could be made regarding this study from the rural

residents who were being questioned regarding their own personal ACEs. These participants were most likely to assume that the study would try to diagnose them before hearing their own experience. The assumptions could affect the number of participants who feel like they would be heard thoroughly. The residents could also feel like they are being labeled for the previous abuse or neglect that occurred, which is incorrect. All participants were treated fairly, and all information shared was confidential. One potential limitation was that residents would feel judged or fear that someone will see what they answered. These circumstances were found to be a possible factor regarding the smaller number of participants. Although there was a smaller group of participants, there was an adequate number of participants from different ethnicities and races. An accurate record was kept of the number of participants from each of the states that were investigated within the study. Given the smaller number of participants, it could have created an issue with identifying which rural areas are struggling with adverse childhood experiences and mental health circumstances. Each of the 13 different participants were spread across the three investigated states and have a broad spectrum of adverse childhood experiences.

Theoretical Foundations of the Study

The qualitative research study explored different avenues of how adverse childhood experiences are affecting rural and underserved communities. As mentioned in the previous section, Chanlongbutra et al. (2018) conducted a study involving adverse childhood experiences and the limitations to educational and therapeutic resources for later in adulthood within rural and urban areas. The articles discussed throughout this proposal bring new perspectives on what can be done in these communities to lessen the exposure to ACEs. Within this study, the biblical perspectives on ACEs and the trauma brought a positive or negative foundation regarding the aspect of Scripture.

Regarding the theoretical foundation of the study, it was explained how attachment theory was affected within adverse childhood experiences. There are four styles of attachment within the stages of infancy and early childhood: secure, insecure, disorganized, and disrupted (Benoit 2004, p. 543). These stages will be difficult to address in rural and underserved areas given there are not enough educational resources to understand what these children are experiencing during such a crucial time in development. This section will provide a better understanding of how childhood trauma played a key role in the effects of relationships in regard to attachment theory.

There are possibilities that adverse childhood experiences and attachment theory are connected by sexual violence according to Grady et al. (2017). The researchers have a mission to discover explicatory linkages between adversity and sexual abusive behaviors within adulthood. Maltreatment and different adverse situations are proposed to be a disruption within the socioemotional development of the child. The child's understanding of their self is unfortunately affected potentially causing relational differences and feasibly sexual offending.

Intergenerational risks play another key role in regard to attachment theory and adverse childhood experiences. Cooke et al. (2019) provide a study that investigates maternal mental health that can play a key factor into the risks of their children developing behavioral problems. The risk of insecurity within the attachment relations between mother and child are jeopardized, as well as their mental health being affected throughout their lifespan. There were 1994 mother-child dyads who participated in this study between January 2011 and October 2014. The mothers who participated in the study expressed that their children were around 36 months old when ACEs were identified. Around the age of 60 months old, the mothers discovered attachment styles, depression, and anxiety symptoms, as well as the behavioral problems by their children. It

was concluded that maternal adverse childhood experiences were influential regarding the poor behavioral outcomes of their children.

Moe et al. (2018) created a discussion regarding maternal attachment styles during pregnancy, as well as the parenting stress during the infant stage of 12 months old. Mothers' recollections of ACEs were studied to determine if there were relations regarding parental stress, as well as their own attachment styles. There were also facilitated discussions regarding the relationship between the perceived infant attitudes and the maternal parenting stress at 12 months old. Influences of different maternal, as well as infant risk factors, could play a key role regarding the stress and attitudes. There were 1,036 families who participated in the study where the data were collected from pregnancy to 12 months after the child's birth. The data showed that maternal attachment styles were found to be related at 12 months after birth when there was consideration of potential risk factors. There were also relations found between maternal ACEs and the future parenting stress that were found.

These studies all have the same conclusions of how attachment theory is affected by adverse childhood experiences. Adverse childhood experiences are continuing to be identified in the early stages of life, and even during the maternal pregnancy. The study being presented brings a new perspective of how rural and underserved areas can receive the proper education and medical treatment to continue to identify these risk factors early.

Definition of Terms

The following is a list of definitions of terms that are used in this study.

Adverse childhood experiences (ACEs) – ACEs are traumatic events that include all types of abuse and neglect which can occur before a child reaches the age of 18 (Child Welfare).

Exposure – The fact of experiencing something or being affected by it because of being in a particular situation or place (Cambridge Dictionary).

Underserved communities – Refers to populations who do not have adequate access to medical care (NIH.gov).

Significance of the Study

The significance behind this study sheds light on how rural residents are not given the proper resources to maintain their mental health, regarding those who have experienced Adverse Childhood Experiences (ACEs). As John 5:4 describes, "Every child of God can defeat the world, and our faith is what gives us this victory" (New International Version, 2011). This would be a useful Bible verse to express to those who are struggling and need a sense of comfort and hope.

If this study can be a small piece of information that can make a difference in one or more rural communities, then there will be one more person in the community educated regarding ACEs. This will also allow the public to understand the struggles that are occurring for rural residents, and how we can improve mental health resources. This study also allows more familiarity to medical professionals, educators, political leaders, and parents/guardians. The more findings that are created on this subject, the more knowledge that will be inherited from each reader. This will slowly decrease the number of individuals who struggle with their mental health daily.

Summary

Throughout this section, it was explained how adverse childhood experiences can bring many traumatic memories to children and adolescents which should be treated immediately when signs occur. This trauma can bring long-term mental health issues. There is a limited

accessibility to therapeutic resources found in rural and underserved areas within the participating three states. During this qualitative case study, there were discussions on how rural and underserved communities should be provided the same, if not similar, resources that are provided to high volume communities. The research questions proposed highlight the exposed states, as well as how resources could be more utilized within the affected areas. These resources could bring positive effects to health outcomes, as well as lower mental health rates within these rural and underserved areas. There were limitations and assumptions that were also explained determining that challenges could be faced with accuracy in interpretations of their ACE responses. Issues could arise if an offset number of participants are unwilling to provide their own personal experiences.

CHAPTER 2: LITERATURE REVIEW

Overview

This chapter will consist of reviewing the existing literature on adverse childhood experiences. There will be articles that consist of studies that involve adverse childhood experiences within rural and underserved communities throughout the United States. These will be ideal references to investigate the limitations and improvements that can be done to future studies. There will also be reviews conducted throughout this section regarding the perspectives of adverse childhood experiences within the Midwest and southern portions of the United States. The health outcomes that are correlated within adverse childhood experiences will be investigated to determine the effects that ACEs are making in different populations. As for the Biblical Foundations of the Study, there will be a discussion on how Scripture can make a difference to those who have endured traumatic events.

Description of Search Strategy

The literature search strategy involved determining what keywords would best be suited for this study. The keywords that were used within the search strategy include *adverse childhood experiences, rural, underserved, and development*. Some of the databases used within the literature search strategy involved PubMed Central, ScienceDirect, SciQuest, Taylor & Francis Online, and Wiley Online Library. The delimitations of the literature search filtered the date range 2017-2022. For the biblical research for this study, the search terms involved biblical along with the original keywords. Biblical research performed within the study involved how religion plays a part within the coping mechanisms of ACE survivors.

Review of Literature

Perspectives of ACEs within the Midwest and Southern United States

Giano et al. (2020) examined the frequencies and disparities of adverse childhood experiences within the United States. The researchers found that most of the participants had experienced at least one adverse childhood experience, while 22.9% endured one ACE, and up to 0.3% had endured all eight ACEs. Emotional abuse was found to be the most endured ACE domain, while parental separation/divorce, household substance abuse, physical abuse, and incarceration were among the other ACEs endured. The study concluded that there should be creation of resilience and intervention programs for adolescents between the ages of 6-17 years old. These programs could help reduce the number of ACEs endured, as well as increase the adversity for those children who have experienced some sort of traumatic event.

Treat et al. (2020) conducted a longitudinal study of 52 mothers and infants living in poverty within the Midwest region of the United States. The two objectives that are being executed within this study include: (1) determining a relationship between the ACE scores and the child's social and emotional problems, (2) investigating if there is self-efficacy occurring regarding maternal depression with the social supports provided to the participants. Previous studies such as Dobbins et al. (2021) discuss how the participants needed to be a certain age range, completed a certain level of education, and the participants needed to identify as Latinx. There was a year-span of recruitment that occurred for the study, and the participants were found in eastern and central areas of North Carolina.

Another southern state in the United States, South Carolina, had been selected for a research study to determine the rural-urban differences in the exposure to adverse childhood experiences. There were 18,176 participants in the Radcliff et al. (2018) study, of which 15.9% were classified as living in a rural community. Results of the study determined that both communities had the same ACEs: divorce, emotional abuse, and substance usage. There were a

higher number of rural participants who did not experience any ACEs, while there were more urban participants who experienced four or more ACEs. Radcliff et al. (2018) concluded that exposure preventions were more necessary in rural areas, due to limited access to the proper tools needed to manage the traumatic effects of ACEs.

Health Outcomes within ACEs

According to Chang et al. (2019), there are negative health statuses in later years due to adverse childhood experiences (ACEs). The cross-sectional study included 1501 participants within Macheng, China. The purpose of this study was to determine the associations between ACEs and health-related behaviors within adults. The ACE questionnaire assessed psychological, physical, and sexual forms of abuse. Chang et al. used lifetime drinking status, smoking status, depression, chronic diseases, and posttraumatic stress disorder as their main outcome variables. The difference between the overall ACE scores and individual ACE component scores, as well as the risk behaviors in adulthood were identified by multiple logistic regression models.

Barnes et al. (2020) investigated the ACEs identified in pediatric primary care settings, as well as the effectiveness and truthfulness of prospective screening mechanisms. It has been determined with evidence in the United States that more than 40% of youth have experienced more than one adverse childhood experience. Enduring one or more ACEs has been discovered that the victims have destructive effects on their health due to the lack of educations for primary care clinicians on identifying the ACEs. Combining the lack of standardized and clinical assessment accuracy with the lack of "toxic stress" biomarkers creates a barrier for preventing health problems from ACEs (Barnes et al. 2020, p. 362). Barnes et al. (2020) concluded that there is still more work that needs to be done for the screening of childhood adversity regarding

chronic health issues. There are also more barriers that need to be addressed with pediatric clinicians needing more proper ACE screening to reduce missed diagnoses.

Petruccelli et al. (2019) performed a systematic review to achieve two goals to the health-related outcomes that have association with ACEs, and to also compute relationships to the number of measurements on the CDC-Kaiser ACE scale. There were health outcomes that were mostly stated as medical or psychosocial outcomes, which addressing that psychosocial outcomes are found to be detrimental to the quality of life. The Newcastle-Ottawa scale was described within the review that assessed the quality and risk of bias occurring in case control or cohort studies. Structured interviews within a reviewed study used the Newcastle-Ottawa scale as another source of discovery for exposure to adverse childhood experiences. Females were found to report more ACEs than males, while also non-white, low education, and low socioeconomic status had more association with ACE reporting. There is a significant relationship with psychosocial/behavioral health outcomes incorporating only one ACE. It has been suggested by Petruccelli et al. (2019) that early detection of ACEs would allow early identification for the at-risk patients who are suffering from both life-threatening psychosocial/behavioral health outcomes.

Chronic and Mental Health within Rural and Underserved Communities

As it has been described throughout this discussion, there are shortages of mental health resources within rural and underserved communities. There are still unmet mental health requests within rural areas that need to be accomplished. Hoeft et al. (2018) performed a systematic review involving mental health care within rural areas in high-income countries before August 31, 2013. The discussion will involve approaches to accomplishing these needs, as well as how future research can successfully be performed within these areas. There were exclusions within

the review that did not include low- and middle-income countries, direct transfer of care to other providers, and clinical guidelines and the decision-making tools that were shared.

Community health workers and primary care providers were identified within the approaches of the systematic review. The mental health specialists determined that technology was the influence to supporting care across primary care settings and within the community. Provider education, supervision, and local community partnerships were identified as resources that help assist task sharing. Confidentiality was found to be a challenge within rural and underserved areas, even though the private information that was provided to the community health workers and primary care providers were not expressed within the literature. It was concluded from the systematic review that task sharing approaches were found to improve the effectiveness of mental health care in rural and underserved areas. There were recommendations for future research to address the inquiries of improving the approaches for mental health resources within these small communities.

There was a similar study performed by Thompson et al. (2019) that was conducted about specific adverse childhood experiences and the relationship of behavioral, developmental, and emotional problems within childhood. The research design of this study involved an anonymous survey that used data from the 2016 National Survey of Children's Health (NSCH) which was distributed to parents or guardians that were randomly selected from the 67,047 households with one age-eligible child. Similar to the proposed study, the sex and race/ethnicity were also investigated throughout the Thompson et al. (2019) study. Nine of the following adverse childhood experiences were questioned: economic hardship on family's income, parental divorce/separation, death, incarceration, witness of domestic violence, mental illness of family member, drug/alcohol consumption, and discrimination. Maltreatment and neglect were omitted

from the study because of the lack of reliability of asking the parents on the electronic/physical questionnaire.

Conn et al. (2018) brings the parental perspective of adverse childhood experiences within a primary care setting. This reference could be crucial to help broaden the perspective of determining primary care screening and interventions within rural and underserved communities. This qualitative study explored different avenues of adverse childhood experiences, intergenerational transmission, and the guidance for preventing parent and child ACEs. There were two different concurrent studies conducted about the parental viewpoints of parenting attitudes related to their own adverse childhood experiences. Within the two concurrent studies, there were qualitative and quantitative data sets produced to bring purposive sampling for the study. It was explained how qualitative sample saves are best determined by thematic saturation, which is consistent with the previous findings on the adequate sample size within a homogenous population in qualitative related research.

In regard to recent headlines, Hoffman et al. (2020) addressed the concept of COVID-19 and the physical/mental wellbeing of children. School closures during the COVID-19 pandemics were found to be such a disruptive aspect of the physical/mental aspect of children's everyday life. There were different COVID-19 compounds that caused stressors to different varieties of families and communities within the United States. Low-income Americans, Blacks, Hispanics, and Native Americans were just some of the identified groups that were largely affected by the disparities of the pandemic. Resources were already identified to be low within economically disadvantaged neighborhoods, but when the COVID-19 pandemic occurred, the resources needed for school were deeply affected. These scenarios caused less engagement within those vulnerable children causing mental health cases to rise. The increase of mental health concerns

occurred within children who were vulnerable to the school closures, those students who relied on school-based health care, children who faced food insecurities, and abused/neglected children. The children who also faced homelessness were also deeply affected by the school closures.

Unfortunately, it was discussed throughout the literature that domestic violence and child abuse cases were increased during the COVID-19 school closures. This is why more factors need to be placed within returning to school providing round-the-clock mental health and social service resources. These resources could potentially decrease their social, emotional, and behavioral needs to heal the trauma and abuse. It was concluded at the end of this discussion that there was an all-around withdrawal of critical assistance to the communities with limited resources. Within the delayed school openings, there was an importance for nonacademic services and supports that should be provided to increase the wellbeing of every child.

Exposure of Adverse Childhood Experiences in Hospitals

Crouch et al. (2019) created a cross-sectional research study involving adverse childhood experiences and preventative dental care for children and adolescents. There were 33,395 participants who completed the 2016 National Survey of Children's Health to gain a better understanding of oral health, ACEs, and utilizing healthcare information. There were two dependent variables used within this study: preventative dental visits and decayed teeth within the last 12 months. The independent variable was classified as the child's exposure to ACEs. The highest prevalence of ACEs within the 2016 National Survey of Children's Health was parental separation/divorce at 30.7%. The second highest prevalence of ACEs was economic hardship. Crouch et al. (2019) determined that there were more male participants than females between the ages of 6-12 years old who participated within the study. There was a bivariate analysis performed in this study; the results found that preventative dental care and tooth decay were

related with more than four ACEs. This was determined by these children who have experienced four or more ACEs not experiencing preventative dental visits.

There are studies that have found patients with mental illness and exposure to ACEs are more likely to frequently visit the emergency departments (ED). Bhattarai et al. (2021) conducted a research study determining the capabilities of an ACEs checklist which could foretell ED visits with children and adolescents who have pre-existing mental health problems. This study was also performed to highlight the knowledge gap within clinicians, as well as provide potential guides that will excel their clinical decisions. These potential guides were newly made by the now nearby available patient records. The bivariate analysis showed that there were higher relationships with most of the ACEs during each of the emergency visits. Sexual abuse was found to be the highest odds ratio at 1.72, while physical abuse was second at 1.56, and the third was parental divorce at 1.23. Since the population of the study was determined to be urban, researchers recommended for future studies to include higher exposure of ACEs which could occur more in poor and disadvantaged backgrounds.

Deprivations of Adverse Childhood Experiences within Rural Communities

Socioeconomic disadvantages have increased risks of health and social problems. These deprivations also increase risks for youth adversity. Kurani et al. (2022) investigates the relationship between country-level disadvantage and ACEs within a population of Maryland high school students. There were five ACEs researched throughout this study: food insecurity, parental substance use/gambling, parental mental illness, family member in jail/prison, and caregiver verbal abuse. All of these ACES have been found to be related to later problems in life, which involves mental disorders. Kurani et al. (2022) created a two-stage cluster sample design study which consisted of 9^{th}-12^{th} graders from Maryland. Recruitment for the study was random,

and the classrooms were also sampled randomly. Overall, there were 41,091 students who participated in the study. Each of the surveys that were distributed included five binary questions that concentrated on adversity.

There were 45% of the participants who identified as White, of which 30% were over the age of 17 years old, and 45% of the participants also identified as female. Sexual or gender minority (SGM) status calculated to be 18%. Parental mental illness was the most commonly reported adverse childhood experience among the White and Latinx student participants; meanwhile jail/prison was the most reported ACE within Black students. It was also determined that females had a greater frequency than males of experiencing any of the five adverse childhood experiences. Meanwhile, males were more prone to experience family member incarceration than females. Cisgender, heterosexual student participants and SGM student participants were both more likely to have a higher chance of experiencing all five of the ACEs. SGM student participants were the only participants group who had the most reported ACE, parental mental illness.

Kurani et al. (2022) concluded that rural county status was related to the higher chance for parental substance use/gambling, jail/prison, and caregiver verbal abuse. Black and Latinx students were more likely to report at least one ACE, as well as experience food insecurity. Forty percent of Latinx students were more probable to report parental substance use/gambling. At the conclusion of the study, it was discussed how determining specific structural targets will allow more change to occur regarding youth adversity. This will allow states and other municipal agencies to prioritize the inclusive evaluation of ACEs and how preventions can be created. For example, Maryland has issued an Executive Order that helps promote the understanding of adversity, toxic stress, and trauma. Within this Executive Order there are advertisements to

promoting resilience through different protective mechanisms and recovery programs. These future changes will allow growth in developing trauma-informed programs, interventions, and screenings to reduce disparities of ACEs.

Deprivations of ACEs could involve the concept of social isolation and future deteriorating cognitive function. It has been discovered between 2015-2018 in China that 15.5% of the population who were 60 years or older were found to have mild cognitive impairment. Dementia ranked at 6.0%, while 3.9% of the adults have been diagnosed with Alzheimer's disease. All of these risk factors were related to the cognitive decline occurring in China, while sparked advocacy for public health interventions and promotion of healthy aging. Lin et al. (2022) created a CHARLS baseline study based on these statistics, that occurred between the two date ranges: June 1, 2011 to March 31, 2012. The life history surveys which were administered during the study were concluded on December 31, 2014. Among the baseline survey conducted, over 17,708 participants were recruited from 450 different villages across China. Every four years the participants were contacted for a follow up based on information about their childhood experiences.

Analyses of the survey data involved the relationship of threat-related and deprivation-related ACEs with cognitive decline during the study time period. There was a large significant relationship found within the analyzed data. Additional analyses were performed secondary by evaluating the modifying role of social isolation between dimensional-specific ACEs. Within these secondary analyses, the cognitive decline was investigated using 3-way interaction tests based on the baseline social isolation status when the results were found to be statistically significant. There were 3301 participants; (51%) were males, and 3165 (48.9%) females who participated in the Lin et al. (2022) study. The mean age of the study was 57.2 which was

determined to be baseline. In regard to the topic of childhood deprivation, 3247 participants (50.2%) identified as having experienced one of the deprivation-related adverse childhood experiences. Eight-hundred and thirty-two participants (12.9%) have experienced two or more of deprivation-related adverse childhood experiences. Results determined that threat-related ACEs were not related to the global cognition at the baseline statistics of cognitive declines. Participants who had experienced two or more deprivation-related ACEs scored considerably lower cognitive *z* scores. It was also determined in the Lin et al. (2022) study that social isolation was a drastic modifier for the relationship between childhood deprivation and higher rates of annual cognitive decline regarding global cognition and executive function.

The findings from Lin et al. (2022) concluded that there was an independent relationship to the faster rates of yearly cognitive decline among middle-aged and older Chinese adults based on the exposure to deprivation-related ACEs. There was no relationship between threat-related ACEs involving cognitive decline in later years. Future research performed could determine social isolation modifies the relationship of deprivation-related ACEs including declines in global cognition and executive function. Advocating social engagement and interaction would be recommended by the researchers based on the data collection. This promotion could enhance childhood deprivation-related risks of cognitive declines.

Radcliff et al. (2019) performed a cross-sectional, descriptive study that determined the exposure to childhood homelessness in regard to adverse childhood experiences. It has been discovered that 68.1% of the participants experienced greater than four ACEs, while 16.3% of the participants had no experience of homelessness in their childhood. Of the 215 participants, there were three or more races and ethnicities that were involved in the data: non-Hispanic, White, non-Hispanic Black, Hispanic or another race/ethnicity. The education level of the

participants was identified as a binary variable: high school diploma and at least some college. Radcliff and the research team used bivariate analyses to determine the statistical differences within the ACEs based on the experience of homelessness. Significance was calculated by chi square tests at $\alpha=0.05$. Behavioral Risk Factor Surveillance System (BRFSS) was used for the sampling strategy by reporting a full sample of homelessness in childhood.

Results in the Radcliff et al. (2019) study determined that there were 52.1% of females and 58.1% with some college education. There were over two-thirds (68.6%) non-Hispanic White participants with 53.5% being under the age of 40. It was found within the study that those adults who experienced childhood homelessness had higher number of exposures to ACEs than those adult participants who had exposure to adverse childhood experiences, but no experience with homelessness. There were also higher percentages of ACEs within adults reporting childhood homelessness than those who reported no homelessness. Determining this high exposure to ACEs within homelessness discovered the risk of long-term wellbeing within the next generation of children. There were also risks of poor physical and psychological outcomes within the adult participants based on their exposure to ACEs. Future research that could be performed regarding this matter could investigate more in-depth regarding the adverse childhood experiences by using temporal data.

Cultural Differences in Adverse Childhood Experiences

Barrera et al. (2019) created a study that discovers relationships between adverse childhood experiences and Latinos living in rural communities. Latinos are known to be the highest ethnic group within the state of California, as well as the fastest growing ethnic group in rural America. There were three aims specifically for this study: (1) occurrence of mental distress and substance abuse in the small town of Avenal, (2) overall occurrence of ACEs in

Avenal, and (3) the relationship involving adverse childhood experiences and mental distress/abuse. The Barrera et al. (2019) study was conducted between December 2016 – January 2017, in the small rural town of Avenal, California. Researchers conducted a direct recruit approach of 80 participants for the first group. The remaining 115 participants for the study were discovered at community events throughout Avenal. Each of the participants had the option for an English or Spanish version because a vast majority of the participants identified as Hispanic/Latino (92%).

There were questions about the prevalence of adverse childhood experiences within rural Latinos, to which 28% answered that they experienced one or more ACEs, and then there were 37% who experienced three or more ACEs. It was calculated that 47 females were found to have experienced three or more ACEs at 63%, whereas 36 males at 52% stated they have not endured any ACEs. Researchers recommended that social workers who work closely with Latinos in low-income rural areas should cautiously evaluate future patients for any mental distress or signs of alcohol/substance abuse. Improvements for future studies should include that the self-reporting procedure should be further investigated because of the language barriers. There should also be more culturally relevant measures to better identify the relationship of ACEs and mental health issues among the Latino population.

There was disproportionate exposure to stressful and traumatic events within urban areas according to the Goldstein et al. (2019) study. It was also determined a mixture of trauma, racial, and socioeconomic stressors were contributing factors to lesser life expectsancy. African Americans are more prone to the cycle of intergenerational trauma through enduring discrimination and epigenetic heritage. There are higher rates of incidents causing PTSD within the African American population. Goldstein et al. (2019) hypothesized in the pilot study that it

would be sufficient to create mechanisms for ACEs within primary care facilities who serve low-income African American patients. The participants within this study included 76% who were on Medicaid and 65% who were classified as female. There were two sessions performed in the study that involved trauma education, coping mechanisms, and assessing the barriers.

The results of the pilot study proved that there is achievable success within ACE and PTSD delivery intervention services available at primary care clinics who serve low-income Black patients. Nearly 86% of the participants experienced one or more ACEs, and all the participants were also fully screened for posttraumatic stress disorder (PTSD). It was recommended for future studies to conduct efficacy trials to determine the effectiveness of interventions for mental health and stress. Performing these certain trials could increase the engagement of trauma-affected patients to participate in brief interventions and increase willingness to pursue treatment services that could create a healthier lifestyle.

Spiritual Roles within Adverse Childhood Experiences

There can be negative thoughts and emotions that formulate throughout the struggle of determining one's own religion and spirituality. This can be more difficult regarding the aspect of surviving traumatic events, such as adverse childhood experiences. In the McCormick et al. (2018) study, the researchers hypothesized that adverse childhood experiences would create an increasingly direct effect on the symptoms of posttraumatic stress disorder (PTSD) and major depressive disorder (MDD). There would also be an examination of religious/spirituality struggles on the relationship of ACEs and PTSD/MDD. Participants of the study include 458 undergraduate students at the regional southeastern university. Females were calculated at 61.3% as the highest number of participants with the mean age at 20 years old.

Results of the study determined 22.2% of the participants exhibited at least one ACE, while 21.6% of the participants recounted three or more ACEs by the age of 18 years old. Three commonly reported ACEs were reported within the results: parental separation/divorce (36.5%), emotional abuse (22.5%), and substance abuse (18.1%). There was an importance of prior ACEs assessment that was highlighted throughout the McCormick et al. (2018) study. It was identified as the first study to examine the relationship between adverse childhood experiences and struggles with religious/spirituality, specifically centering around the needs for evaluation of ACEs, religious/spirituality, and mental health.

Santoro et al. (2016) conducted an exploratory study which overlooked adverse childhood experiences and religiosity/spirituality in a group of adolescents who live in Hyderabad, India. This study created evidence to provide future research to benefit this underrepresented population. Researchers hypothesized there would be greater adversity during childhood, which would determine lower levels of wellbeing. The second hypothesis stated there would be existing gender differences in that females would score higher on the measurements of religion/spirituality. There would be higher adversity rates that would be predicted as a great desire to connect with a Higher Power as stated in the third and final hypothesis. Santoro et al. (2016) recruited 139 adolescents for this study, of which 76 were males, and 62 participants were females. Questionnaires were administered to each of the participants at the Hyderabad secondary school.

Results from the exploratory study showed that physical abuse was the category that both males and females experienced. It was found that males encountered more adversity categories than the female participants. Childhood adversity was a significant predictor that was found in the emerging adolescent participants in India. There was also a strong relationship between

childhood adversity and the adolescent's urge to connect to a Higher Power. Females in the study validated higher levels of experiential and religious wellbeing. There were no gender differences found within daily spiritual experiences, known as positive religious coping. Santoro et al. (2016) recommended future studies should design the questionnaire to cover the Eastern samples to address the portion of that specific population. There should also be improvements on determining the differences in non-Western samples with higher number of participants who practice Christianity.

Social Supports for Adverse Childhood Experiences

Appleton et al. (2019) provides the first proof of evidence that shows childhood adversity experiences contribute to unhealthy birth weights, as well as social supports during pregnancy provides buffer and promotion to enhanced birth outcomes. The participants of this study were affiliated with the Albany Infant and Mother Study (AIMS) and the Albany Medical Center. Participants were English speaking women between the ages of 18-40 years old; they also had to be enrolled at the 27 weeks' gestation period. There were questionnaires inquiring about their personal exposures during and before their pregnancy. One hundred and twenty-six mothers of the total 300 participants were included within the complete study analysis. Ten items from the ACEs questionnaire involving neglect, abuse, and household dysfunction were used within their measures. Social supports were also investigated by Appleton et al. (2019) using a 12-item Interpersonal Support Evaluation List. At the time of delivery, anthropometric measures were performed on newborns using the birth weight and head circumference.

It was found in the Appleton et al. (2019) study that the average participating mother was 29 years old, 40.5% associated with a racial/ethnic minority group, the average pre-pregnancy BMI was 29.1, 13.5% were found to be continuing to smoke during pregnancy, and 8.7 was the

average depressive indicators score. There was also 34% of infants born via C-section, 51% of the infants were male, and the babies were born around 38.5 weeks gestation. Conclusions found that there was a conflicting relationship between ACEs and social supports during pregnancy with asymmetry within fetal group, as well as the increase of ACEs were found to be related to increased cephalization scores. Controlling and advocating the importance of social and biologic factors could be the main effect of fetal growth. There was evidence found within Appleton et al. (2019) proving contributions of poor birth outcomes from maternal ACEs. More research could be performed in the future by promoting more programs that involve social support and accessible aid for women's health improvement, while also advocating for infant health.

Adolescents are found to have higher rates of non-suicidal self-injury (NSSI), suicidal ideation, and suicide attempts. This particular age group is found to have the strongest and most consistent predictors of future suicidal behaviors across in-patient and general populations. In regard to adverse childhood experiences, there is plenty of research that has determined there are substantial outcomes within ACEs and self-injurious behavior (SBI) related social supports. Research on the relationship between ACEs and NSSI social support include little research on the topic of the interaction effects. Little research has yet to be done to understand suicide attempts in adolescents, despite the large connection between ACEs and social supports. There is also little evidence about gender differences within relationships of ACEs and social supports involving NSSI, suicidal ideation, and suicide attempts.

Wan et al. (2019) explores the individual and interaction effects of adverse childhood experiences and social supports on NSSI, suicidal ideation, and suicide attempts in adolescents, as well as investigating gender differences within these concepts. There were 14,820 students who participated in this study between the ages of 10-20 years old and attending grades 7-12.

The demographic variables were age, gender, urban/rural residency, parents' education level, and the family economic status. In order to determine childhood maltreatment within the concept of adverse childhood experiences, the Childhood Trauma Questionnaire (CTQ) was used to measure the extent of physical, sexual, and emotional abuse. Wan et al. (2019) reported that 89.4% of participants experienced one or more categories of adverse childhood experiences. There was a 12-month timespan within which one of the following categories occurred: NSSI, suicidal ideation, and suicide attempts.

Results from Wan et al. (2019) determined that 26.1% suffered from non-suicidal self-injury, 17.5% encountered suicidal ideations, and 4.4% experienced a suicide attempt. All three of these categories had a relationship with higher ACEs, as well as suffering from lower social supports. Female participants had a 2.27 ratio of NSSI within social supports, whereas male participants had a 1.81 ratio of NSSI. It was a crucial finding that females with higher ACEs and low social support were found to have higher risks of suicide attempts than males. Wan et al. (2019) concluded that ACEs and lower social supports were found to be related to increased risks of NSSI and suicide attempts. There was a discussion that improvements could be made to improve social supports within female participants who are experiencing higher number of ACEs. These improvements could make a drastic difference within the targeted mechanisms for mental health.

As adolescents grow older, it can be a little more difficult to get them open up about past traumatic experiences. It was determined that three quarters of lifelong mental disorders can arise by the age of 24 years old. This is when college students begin to express higher and persistent health needs. The increase of adverse childhood experiences could be the contributing factor to these sudden health needs. Stressful and potentially traumatic experiences, (e.g., maltreatment,

violence exposure, and family psychopathology) can occur within their childhood. It was discovered that 37% of American adults have endured two or more adverse childhood experiences, and there are possibilities that ACEs could still be on the rise within the recent cohorts. Karatekin and Ahluwalia (2020) have a goal to investigate the relationship between adverse childhood experiences and the health status within college students.

Karatekin and Ahluwalia (2020) recruited 321 undergraduate students at a mid-Western University within psychology classes. There were 15% psychology students, 25% business students, and 25% pre-medicine students, of which 76% were female and 23% male. Caucasian students were predominate, comprising 72% of participants, while Asian students were the second dominate group, comprising 20% of participants. Qualtrics was used to generate the online survey which students received course credit for participation. The survey included questions about parental education, ACEs, stress levels, health status, and social supports.

The results from the participants determined that there were higher levels of mental health issues, considering their own parents were found to have quite a bit of educational experience and higher social support levels. Stress was determined to be the main contribution with higher ACE levels but were not given enough social support. Researchers determined that there needs to be more relationship awareness on ACEs and the health on college campuses. This allows more investigation to occur regarding the effects of adverse childhood experiences and creating future ACE-informed programs within this college population.

Cheong et al. (2017) created a study based on previous research performed regarding the relationship between three of the ACE subtypes and later-life depressive indicators. The three ACE subtypes involved abuse, neglect, and household dysfunction; if there was any sort of relation, there was more investigation done regarding the perceived social support (PSS)

moderations. It was suggested by Cheong et al. (2017), in recent studies performed, mental health has found to have great effects based on the multiple ACEs experienced by the research participants.

Randomly selected men and women between the ages of 50-69 years old participated in the Cheong et al. (2017) study. These participants were patients at Livinghealth Clinic in Mitchelstown, Ireland within the years 2010-2011. Informed consent was obtained from the participants before questionnaires could be administered. Once approval was given, health and lifestyle questionnaires, as well as a physical examination, were provided to each of the participants to gain a perspective regarding the research concept. An optional ACE questionnaire was available to the participants to provide more data for the research team. There were 10 individualized Adverse Childhood Experience questions provided, as well as perceived social support providing three questions based on the Oslo Social Support Scale. Depressive symptoms were also questioned within the Cheong et al. (2017) study by using a CES-D questionnaire.

Results from the research study included 23.7% of the participants experiencing at least one ACE. There were higher odds of ACE exposures based on the relationship with depressive symptoms, only because of the participants who experienced poor perceived social supports. It was concluded in Cheong et al. (2017) that there was an association within ACEs in older adults, while there also being correlation of later-life depressive indicators. There were patterns recognized regarding the exposures of ACE subtypes and ACE scores. Enhancing social supports, reducing depression burdens, and more advocates to report abuse were recommended as interventions for this study.

Breaking the Intergenerational Cycle of Adverse Childhood Experiences

There are still unknowns regarding the increasing and/or decreasing factors regarding the continuance of intergenerational adverse childhood experiences. Decreasing factors could include a supportive community which could bring positive effects to the parents and their intergenerational trauma. It has been discussed that more research should be performed regarding the community effects of ACEs. Within the United States, there are one of five children living in rural areas where there are limited resources involving child abuse. There should be more research that provides a better understanding of the acknowledgements at a community-level about adverse childhood experiences.

Schofield et al. (2018) hypothesized in their study that there would be a supportive community related to few numbers of ACEs within the rural participants. There were 451 families located in Iowa around winter and spring of 1989 recruited for this particular study. Each of the families that agreed to participate in the study needed to have a seventh grader within their household. There was also a requirement of a sibling included within the study data. The recruitment occurred within public and private schools in rural Iowa. It was determined that 75% of the families accepted the interview process of the study. Assessments investigated many different aspects of the family, including school, family life, work, finances, mental health, physical health, and socialization.

Results from Schofield et al. (2018) determined that the assessed rural White families were found to have experienced ACEs. The ACEs that were endured included neglect, childhood abuse, and challenges within the household. There were higher relationships regarding social cohesions for health and the wellbeing for the participating located in these rural areas. High parental exposure to adverse childhood experiences and high alcohol vendor density were both discovered to put their own children at risk for exposure. It was concluded that successful

relationships and reduced productivity within a workplace were found to be interference with exposure to early hardship. There were recommendations for future research to include social interrelation and density limitations of alcohol vendors, which could be a factor to breaking the cycle of intergenerational ACEs.

Promoting resilience within intergenerational adverse childhood experiences was one of the main goals for the Woods-Jaeger et al. (2018) study. Woods-Jaeger et al. (2018) used a community-based participatory research (CBPR) approach to help bring active engagement within low-income parents who have been affected by adverse childhood experiences. These researchers also had a mission to investigate deeply into the parents' ACEs experiences, their observed impact on parenting, determine the barriers of protection within the negatives of ACEs, and how to reduce the brutality of ACEs by providing supports and resources to children within their early adversity. It was explained in the study how there has not been any qualitative research done prior regarding the experiences of parents with high number of ACEs. This study also incorporates present ACEs and the continuing resilience research that helps identify and describe community targets and their approaches.

Researchers were able to recruit 11 low-income parents who had a history of ACEs to participate in one-on-one interviews. Each of the participating parents had children between 6 weeks old – 5 years old, where their child attended Early Head Start. The recruitment was done by the distributed flyers at the on-site pediatric clinic, where the staff could also provide information regarding the study. The one-on-one, in-depth interviews were approximately an hour long and occurred in private rooms within the Early Head Start. Data were collected by obtaining informed consent from the participating parent and allowing their child to participate also. The study used the demographics, ACE questionnaire answers, and the responses from the

one-on-one interviews. There was compensation of $40 for the parents who participated in the interview process. The interviews were tape recorded for later reference and were also precisely transcribed.

Results from the Woods-Jaeger et al. (2018) study found the mean parental ACE score at 4.9. The negative effects of ACEs were determined based on the three major themes that were found within the study. Each of the identified themes creates an intergenerational cycle and the parental protective factors that help identify the negative effects occurring within the parental ACEs. Based on the previous statement, intergenerational cycle of ACEs was found to be the first theme of the results. Emotional abuse, household substance abuse, and emotional neglect were found to be the highest score of parental ACEs. The second theme found was the aspiration to make their children's lives better. In order to eliminate intergenerational cycles, there were many parents who identified their hopes, goals, and aspirations to create a safe, happy, and successful environment than what the parent was brought up in. The third and final theme determined within the study was nurturing and supporting their children.

There were recommendations for interventions by the parents to help break the intergenerational cycle of adverse childhood experiences. Raising awareness about ACEs within communities, building and nurturing supportive communities, and providing accessible parental education and supports were among the discussed recommendations. Mental health treatment services were specifically identified within the requested parental education. The strengths of the Woods-Jaeger et al. (2018) study found success using internal validity and iterative themes within discussions formed by the research team. There were benefits found by using the CBPR approach which influenced active participation by the community within the entire research study. Limitations were also identified by the generalization that caused some constraints within

the research. The recruitment identified one male and 10 females; there was an uneven participation between the mothers and fathers. Future qualitative research could help determine the resilience promoting factors that are present within disproportionate communities that are affected by ACEs.

As mentioned previously, there is limited research being performed on parent's personal childhood experiences and how they are transmitting their ACEs into the future generations. Narayan et al. (2021) created a study that theorizes and examines evidence regarding the linkage of parent's life experiences and how it is affecting their children within their parenting practices. The risks and concepts of resilience were closely examined through the intergenerational transmission of adverse childhood experiences. There was also an examination of the resilience-informed methods that were found to influence positive childhood experiences within future generations. The influence of positive childhood experiences within these methods decreased the chances of childhood ACEs. By the end of this study, there were clinically-sensitive assessments and recommendations provided to elevate the main preventatives of adverse childhood experiences.

There were many interventions that were mentioned within Narayan et al. (2021) that are beneficial to the participating parents, as well as their children. The benefits of these interventions bring the ACEs, as well as the PTSD symptoms, to the surface to point in the direction of future treatment. Narayan et al. (2021) used the following interventions within their study: *Child-Parent Psychotherapy* (CPP), *Mom Power*, *Child FIRST* (Child and Family Intra-agency, Resource, Support, and Training), *Legacy for Children*, *Perinatal CPP* (P-CPP), *Minding the Baby* (MTB), and *The Survivor Moms' Companion* (SMC). Each of these interventions are relationship-based, shared similarities of pathways from ACEs to PTSD,

weakened caregiving, and the explanation of ACEs in children. Relationship safety, security, supportiveness, predictability within caregiving is among the characterized early resources. These characteristics are found to be well-documented positive experiences that bring protection towards the spread of long-term trauma.

There were advances in research and practices performed within the Zhang et al. (2022) study. Tracking the scope of the research regarding intergenerational research that associates parental ACEs with the influences on their own child's outcomes. Researchers created a summary of the main reasonings behind parental ACEs and the mediators/moderators based on the determined outcomes. By the end of the study, the main gaps within the research literature were identified and created discussions regarding future research and practices that could be performed to enhance these matters. Zhang et al. (2022) used the five stages of scoping to review the literature discussed within this study: developing research questions, identifying relevant studies, selecting articles with inclusion and exclusion, charting the data, and summarizing and interpreting the findings.

Throughout the Zhang et al. (2022) study, there were 68 research studies published between 2013 and 2022. Within the 68 research studies, it was found that 55 studies primarily studied the maternal ACEs effects. Sixty-seven studies were found to be only quantitative, which there was also a mixed-methods approach. The outcomes of children discussed in the study were divided into six categories: infant/toddler development, child mental health problems, child physical/physiological problems, child internalizing/externalizing problems, child temperament, and the child's academic performance. Mediation mechanisms were found in 35 studies to impact the children's outcomes based on their parents' ACEs.

Challenges, Differences, and Future Practices of ACEs within Rural Patients

Gender differences have been found to be a purposeful study within rural residents in regard to adverse childhood experiences. Winstanley et al. (2020) published a study that used the sociodemographics, clinical aspects, and the ACE score of rural patients in Appalachia receiving treatment for opioid use disorder (OUD). The hypothesis of this study consisted of females scoring higher on their ACE scores than the male patients being surveyed. There were also expectations that the ACE score would be higher for the rural Appalachian participants compared to those who do not live in rural communities undergoing the same OUD treatment. Speculations of this study involved the use of gender-specific services and specific trauma-informed care for those OUD patients in rural and Appalachian areas. Results from the Winstanley et al. (2020) study determined that nearly half of the participants endured four or more ACE categories within the rural or urban setting, except rural patients endured different ways of adversity. These rural patients were more prone to experience emotional abuse, partner violence, and incarceration of a loved one. Forty-two percent of the females who participated in the study reported sexual abuse, which ranked significantly higher than the national rates.

In regard to the research being conducted on ACEs, the Winstanley et al. (2020) study consisted of neglect experiences, which included drug or alcohol usage of a parent and teen dating violence. Poverty, unemployment, and lack of education were cofounders of adverse childhood trauma within Appalachian areas. There could be future research performed regarding these matters by bringing a better understanding of the risks that are associated with opioid use and addiction. The establishment of effective treatments for OU and trauma-related disorders were also recommended future studies regarding the topic of adverse childhood experiences.

There was a cohort study performed by Sanderson et al. (2021) that researched the relationships between adverse childhood experiences and risks of chronic disease within 12

states in southeastern United States. The number of participants was 38,200. Positive relations to four or more ACEs were found within the results of the study, as well as depression resulting as the most elevated risk. It was also discovered that there are increasing chances of worsening ACE scores in chronic diseases. Participants with cancer, hypertension, diabetes, COPD, depression, heart attack, and high cholesterol were found to have worsening ACE scores. There were four or more ACEs identified within the identification of a chronic disease, which was determined as depression. The limitations within this study involved the self-reporting of ACEs and chronic diseases which were contingent to affect the cross-sectional portion of the analysis. It was recommended by Sanderson et al. (2021) that an establishment of resilience programs throughout childhood would benefit the prevention of chronic diseases. These programs could also lower the chances of incidents of abuse, neglect, and household dysfunction if resources are available for the entire family, bringing advocacy to adverse childhood experiences and chronic diseases within underserved populations.

Ziller and Milkowski (2020) express the awareness that is continuing to increase regarding rural health disparities. This correlates accurately to how adverse childhood experiences are less of an educated topic within these rural and underserved communities. This research investigated previous rural public health literature to find correlations to how it is relevant to rural health today. Rural health disparities were found to include infectious diseases, maternal and children health, access to healthcare, and the inequities of racial health. To correlate to adverse childhood experiences, it was determined that US maternal morbidity and mortality rates are still continuing to rise. There is an increased risk for rural mothers who are facing severe adverse outcomes, which include Black women in the South.

Unfortunately, the infant mortality rates in rural counties have elevated to 6.69 per 100,000 unlike large urban counties who face 5.49 per 100,000. The reasoning for these higher rates is because of the worsened access to maternity and postpartum care for rural women. Between 2004 to 2014, 9% of rural counties had obstetric hospital unit closures, leaving rural counties without these crucial services. This causes rural women in lower-income counties to have to travel extra for their required obstetric care. It is concluded there should be more consideration of expertise of rural public health experts who are more familiar with the day-to-day life experiences occurring within these communities. These experiences would be extremely helpful for the outside experts to understand what is really occurring and the rural communities feel heard and seen having advocacy with their own public health experts.

Biblical Foundations of the Study

"For everyone born of God overcomes the world. This is the victory that has overcome the world, even our faith" (1 John 5:4). Adverse childhood experiences can accumulate a lifetime of trauma within an individual. These traumatic events can also bring a positive or negative biblical foundation. There will be participants who will believe strongly in their faith, while there will be participants who feel negative thoughts regarding faith. These negative thoughts can be feelings of neglect or disbelief in the power of prayer. As for those who feel strongly about their faith, this will allow these participants to feel resilient and motivated to overcome these horrific experiences.

Biblical principles could play a tremendous factor in the beginning process of healing for those participants who have endured any form of physical, emotional, or spiritual abuse. The main goal is to allow these participants to feel closer to God and his presence throughout their adversity. There are many organizations (e.g., Relational Impact Ministries) that conduct yearly

studies that bring biblical principles to the surface to formulate a sense of counseling for many ACE survivors (RIMinistries (2021)). The lessons that are taught throughout these studies include:

- Depression, Anger, and Anxiety
- Personal and Family Relationships
- Communication Skills
- Trusting God
- Understanding Thoughts and Feelings

Summary

Throughout this section, it was discovered there have been studies conducted regarding the three participating states but were researched in different aspects. Giano et al. (2020) incorporated all 50 states, while Treat et al. (2020) specifically included Oklahoma in their study involving adverse childhood experiences. There were different search engine strategies used to discover the articles that were used within this research proposal. Throughout the Review of Literature, there were many different concepts revolving around adverse childhood experiences and rural/underserved communities. Each of the different concepts creates a visual picture of how adverse childhood experiences are affecting these communities that have little to no resources available for a healthy wellbeing. The health outcomes, exposure, and the deprivations to ACEs were just a few of the areas of research that were explained to help provide a supportive argument on how exposure varies within different areas of the world.

There were also reviews performed regarding the cultural perspective of adverse childhood experiences. Spiritual roles can play a crucial role regarding the aspect of ACEs, so it was important to bring light to those research studies. To create a better picture of how adverse

childhood experiences can be prevented and reconciled, studies that concentrated on social supports provided examples for rural and underserved communities. Challenges, differences, and future practices within rural residents who have experienced adverse childhood experiences were explained an in-depth discussion to bring to light how these rural and underserved communities lack the medical services and resources needed to create a safe and healthy lifestyle for these residents. As for the Biblical Foundation of the Study, it was discovered that incorporating biblical aspects and Scripture can bring a positive or a negative effect regarding their faith. It would benefit the participants by giving them an avenue of therapy that could be done privately and would be their own source of relief.

CHAPTER 3: RESEARCH METHOD

Overview

Hargreaves (2018) discovered that the impact of poverty will increase the severity of a disease, as well as the costs and operations of the given healthcare. There is an importance to the understanding of these increases since underserved populations have higher unfortunate health outcomes. Unfortunately, the impact of poverty and the increasing numbers of associated untoward health outcomes are occurring in rural populations as well. Crouch et al. (2020) discusses how childhood exposure to adverse childhood experiences (ACEs) can increase the chances of heart disease, diabetes, cancer, liver disease, depression, and more chronic diseases that occur in later ages. This is one of the many reasons why early detection and screenings are so crucial to advocate for within rural and underserved communities. The statistics could begin to decrease the chances of ACEs as well as chronic diseases if there are proper resources and education for medical professionals.

More research needs to be done to help advocate for rural and underserved communities who have the limited resources to maintain healthy lifestyles. Chanlongbutra et al. (2014) found that over half of the rural participants found one or more ACE exposures, but there were not any differences when experiencing increased ACE scores between urban and rural residents There was also a conceptual model created from the influences of the CDC-Kaiser Permanente ACEs, which determines the impact of ACEs on developing conceptions or influences of health risk behaviors later in life. Advocation is an extreme priority to this study to allow different populations to understand the risks, deficiencies, and the lack of health professionals available to provide accurate medical treatment to those suffering.

Research Questions

Research Questions

RQ 1: Which adverse childhood experience was more exposed within Kansas, Oklahoma, and Texas?

RQ 2: What approaches are being utilized to decrease the exposure to adverse childhood experiences within Kansas, Oklahoma, and Texas?

RQ 3: How do the exposure levels of adverse childhood experiences differ among rural and underserved communities of Kansas, Oklahoma, and Texas?

Research Design

The qualitative research study brought different aspects of adverse childhood experiences that were occurring within three different states: Kansas, Oklahoma, and Texas. The focus was to determine where the adverse childhood experiences are affecting these communities, and what mechanisms are being performed to decrease the exposure of these ACEs within rural and underserved communities. Given that this is a qualitative research study, electronic surveys were distributed as sources of data collection. Virtual interviews were conducted based on the participant permission. These interviews provided a better understanding of the participants, their adverse childhood experiences, and what therapeutic mechanisms were being utilized. This nominal data collected allows an in-depth investigation of the data responses. The demographics, and the survey responses were found to be relevant resources for determining the outcome of the tendencies of adverse childhood experiences. The research of Thompson et al. (2019) and Conn et al. (2018) demonstrated how qualitative sample is best determined by thematic saturation, which is consistent with the previous findings on the adequate sample size within a homogenous population in qualitative related research.

Participants

Participants were recruited through assistance by the State Health Departments, State Departments of Mental Health and Substance Abuse Services, State Offices of Rural Health, Public Health Organizations, and County Extension Offices. Each of these institutions were contacted by email asking for a time to meet in-person or via Zoom. This allowed a formal introduction of the purpose of the study. Each of the State Health Departments, State Departments of Mental Health and Substance Abuse Services, State Offices of Rural Health, Public Health Organizations, and County Extension Offices work with these communities on a daily basis and were the best point of contact regarding which cities would benefit from this study. With those selections given by each state, there could be up to 20 cities investigated within this study. Within these selected cities, surveys were distributed to participants who agreed and signed the consent to participate in the survey. The distribution of the surveys occurred electronically as well as on paper for participants who did not have internet access. Those participants who needed it on paper could retrieve the survey from their local extension office.

There were 13 participants among the three states, which provided a range of data that could help bring awareness to adverse childhood experiences occurring within rural and underserved areas. The reasoning for recruiting over ten participants among the three states came from the Vasileiou et al. (2018) study. This study examined different qualitative studies in regard to health research.

Inclusion for participation in the proposed study included the following criteria: (1) their place of residence must be in Kansas, Oklahoma, or Texas; (2) must be over the age of 18 years; and (3) have experienced any kind of traumatic event. There were exclusions that occurred

during the Screening & Demographics Survey (see Appendix A): (1) they were under the age of 18 years; (2) did not reside in a rural or underserved area within the three states; or (3) answer "no" to experiencing traumatic events that occurred within their childhood.

Advertisement and Recruitment

The advertisement occurred within different media outlets: a flyer (see Appendix E), social media (see Appendix F), and by email (see Appendix D). Each of these were supplied to the designated states to the different State Health Departments, State Departments of Mental Health and Substance Abuse Services, State Offices of Rural Health, Public Health Organizations, and County Extension Offices. Recruitment also involved different Facebook groups involving persons who have endured childhood trauma. When questionnaires were distributed, there was a close overview of how many states are involved. This was to help determine the final 13 participants who were eligible to participate in the proposed study. The goal at the end of recruitment was to obtain a median number of participants among the three states, or to the best of availability. This will bring a better perspective to the residents, health professionals, and the outside population to show how resources need to be made more readily available for different rural and underserved communities.

Study Procedures

The Behavioral Risk Factor Surveillance System was analyzed from data within 2012 to 2022. There were three states examined throughout this study: Kansas, Oklahoma, Texas. Recruitment was assisted by the State Health Departments, State Departments of Mental Health and Substance Abuse Services, State Offices of Rural Health, Public Health Organizations, and County Extension Offices who helped distribute the study flyer to rural and underserved areas.

These recruitments were beneficial to finding those individuals who have been dealing with their own trauma.

In order to begin the study data analysis, approval for the study needed to occur. The study was approved by Liberty University's Instructional Review Board (IRB) first. After the approval was received, the data analysis process could begin. First, the State Health Departments, State Departments of Mental Health and Substance Abuse Services, State Offices of Rural Health, Public Health Organizations, and County Extension Offices within Kansas, Oklahoma, and Texas were contacted by email to asking permission to distribute the recruitment letter (see Appendix D) and the flyer (see Appendix E) to residents among rural and underserved communities. The QR code provided on the flyer and the social media posts (see Appendix F) allowed participants directly to the screening and questionnaire. If all of the screening questions are answered correctly, it guided the participant immediately to the survey.

Once responses began to be submitted, it was closely monitored to confirm there were fairly equal submissions within all three investigated states. There was also a close investigation on the incomplete surveys that were submitted to make sure they were removed. All of the surveys which passed the protocol were imported into Qualtrics Text IQ to create visuals on the participant results to bring awareness and answers to the study that was conducted.

Instrumentation and Measurement

Each survey distributed within rural areas of the designated states included eight questions from the BRFSS Adverse Childhood Experience (ACE) Module, as well as two questions from the Ask Suicide-Screening Questionnaire. The distribution of the surveys occurred electronically. In order to recruit participants, there was a recruitment letter and flyer sent to different residents within the recommended rural and underserved counties of Kansas,

Oklahoma, and Texas. Throughout the distribution of the electronic survey, there was an appreciation note provided at completion. Using the results from the distributed surveys, the following data sections included State, Age, Sex, Race/Ethnicity, Veteran Status, Education, and Adverse Childhood Experiences (ACEs).

1) Did you live with anyone who was depressed, mentally ill, or suicidal?
2) Were your parents separated or divorced?
3) Not including spanking, (before age 18), how often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?
4) For how much of your childhood was there an adult in your household who made you feel safe and protected? Would you say never, a little of the time, some of the time, most of the time, or all the time?
5) How often did your parents or adults in your home ever slap, hit, kick, punch or beat each other up?
6) How often did anyone at least 5 years older than you or an adult, ever touch you sexually?
7) For how much of your childhood was there an adult in your household who tried hard to make sure your basic needs were met? Would you say never, a little of the time, some of the time, most of the time, or all of the time?
8) In the past few weeks, have you wished you were dead?
9) In the past week, have you been having thoughts about killing yourself?
10) Have you ever tried killing yourself?

Data Analysis

This qualitative research study used electronic responses of the survey as sources of data collection. Surveys were generated and distributed electronically through Qualtrics. Virtual audio-only interviews were conducted after survey completion based on participant permission. Using the genders, ages, nationalities, experiences, and questions asked throughout the survey were beneficial for identifying the nominal data. In order to gain these findings, the research questions needed to determine (1) which adverse childhood experience was more exposed within Kansas, Oklahoma, and Texas; (2) what approaches are being utilized to decrease the exposure to adverse childhood experiences within Kansas, Oklahoma, and Texas; and (3) how the exposure levels of adverse childhood experiences differ among rural and underserved communities of Kansas, Oklahoma, and Texas. Given this is a qualitative study, the data created a descriptive finding by determining the inclinations of adverse childhood experiences using the completed questionnaires and interviews. Interviews that were conducted were audio recorded for transcription. These audio recordings are stored in a Dropbox folder designated to this study. Each of the recordings were transcribed through Otter.AI or Google Cloud. Before the interviews were conducted, the participants had to identify themselves before beginning the interview to confirm accurate identification. Throughout the interview, there was an opportunity for the participant to explain further how the ACEs impacted their everyday life, and what resources they have exercised for a better lifestyle. Before concluding the interview, they received a handout of resources (see Appendix G) that were made available for them in the surrounding areas, and also telehealth related resources.

Throughout this study, content narrative was used to analyze the transcribed data conducted from the participant interviews. There were discussions of the themes that were found

within all the participants' interviews within all three investigated states. It allowed a broad perspective of the experiences, thoughts, or behaviors experienced by these rural residents who had endured adverse childhood experiences. The transcribed interviews and completed surveys were analyzed by creating tables, charts, and word cloud pertaining to data collected throughout the study. This gives a visual and descriptive approach explaining how adverse childhood experiences were affecting the participants within Kansas, Oklahoma, and Texas. By the end of the study, there is a clear and informative understanding to how rural and underserved areas are affected by adverse childhood experiences, as well as what resources are available or missing from these communities.

Delimitations, Assumptions, and Limitations

Delimitations were placed in this study due to the caution of privacy within these rural and underserved communities. There are pros and cons regarding working with these small communities, but there must be boundaries to protect the identity of these participants who volunteered to participate in the study. It would be crucial throughout this study to determine what resources are made available to these residents that is confidential and beneficial for their mental and physical wellbeing. If these resources can be made known as safe and confidential environments, there could be higher chances of these small-town residents of obtaining these important resources. There could be delimitations regarding the research questionnaire, the questions being asked may trigger these respondents. The goal of this study is to bring awareness to those who are/have suffered adverse childhood experiences and are most likely not receiving the proper treatment options. This study will allow a sense of awareness that will allow these individuals to gain the proper psychological treatment needed to get through everyday life. There could also be delimitations that occur using content analysis based on the small number of

respondents involved with this study. Since these are rural and underserved areas within three different states, it is going to be crucial to find enough respondents to bring out a variety of data.

Assumptions were made that the research was going to take longer than expected due to the distribution of paper and electronic surveys, as well as interviewing certain participants after the completion of surveys. There could be complications that occur regarding the participants feeling like their information is going to be shared and they want to avoid the "small town talk." Outside of the "small town talk," this could bring a state-wide discussion between officials within Kansas, Oklahoma, and Texas. This study could provide data that could be crucial to understanding the limited resources made available for residents within these states. It is crucial for legislature, medical professionals, and different outside individuals to read this study to eliminate any assumptions that are made about adverse childhood experiences, as well as living in a rural and underserved area. Using content analysis should play an important role in the elimination of assumptions by shedding light on the interview keywords, and the tables that explain the adverse childhood experiences and resources provided in these communities.

This also leads into the limitations that occur regarding the prolonged duration of methodological resources. The recruitment lead to issues with potential participants not wanting to confide in their traumatic past. Creating positive affirmations that allow the participants to feel comfortable confiding and potentially creating techniques could help the future of rural and underserved populations. Comparing the three states involved in this study needed to be closely monitored through the data compilation to avoid any duplications in the results. In regard to the questionnaire, there were limitations that occurred within the limited number of questions. This created an issue within the analysis of the data collection to decrease duplications of answers within the different participants. It was discovered that there needed to be more descriptive

questions to help bring a solid perspective of adverse childhood experiences within these different communities. As discussed in the assumptions section, the small number of participants lead to a limitation within this qualitative research study. There were risks of the data being labeled as unreliable or sordid. As long as the content analysis provided a solid and descriptive narrative of the compiled data, there were not any concerns of these delimitations, assumptions, and limitations.

Summary

Bringing awareness to adverse childhood experiences within these three states will allow these rural and underserved communities to progressively expand their educational and therapeutic resources. In today's world, there are many new interventions created to help with trauma, mental health, and depression. This study also allowed the State Health Departments, State Departments of Mental Health and Substance Abuse Services, State Offices of Rural Health, Public Health Organizations, and County Extension Offices to have a spotlight on what goes on in rural and underserved communities. Health disparities could improve within the rural and underserved areas of the three participating states. More research could be expanded beyond this project by interviewing the next upcoming generations involving the current epidemic occurring in the United States.

Within this qualitative study, three states within the Midwest were examined based on many experiences of adverse childhood experiences. Expanding the questionnaire would benefit upcoming studies regarding adverse childhood experiences. The different aspects of the questionnaires and interviews could benefit those participants in rural areas with limited access to internet service. The virtual audio-only interviews allowed the participants to feel comfortable confiding in someone, not worried about if their electronic questionnaire will be published

anywhere within town. All of the nominal data that were collected will bring further investigations on the genders, experiences, nationalities, ages, and questions regarding the same matters from this study.

Using the Behavioral Risk Factor Surveillance System data from 2012 to 2022 will bring a wide variety of data regarding ACEs in the three participating states. The help of the State Offices of Rural Health to determine the more rural and underserved areas will provide more awareness to the limited mental health resources for the victims of adverse childhood experiences. Each of the surveys that were distributed included questions from the BRFSS ACE Module, and related questions from the Ask Suicide-Screening Questionnaire. There were different data sections within each of the distributed surveys: State, Age, Sex, Race/Ethnicity, Veteran Status, Education, and Adverse Childhood Experiences (ACEs). Data created throughout the qualitative study created descriptive findings determining the dispositions involving adverse childhood experiences to those participants living in rural and underserved areas. The delimitations, assumptions, and limitations could be improved by finding different avenues of private interview processes that will allow the “small town talk” to emit, which will give comfort to the participants.

CHAPTER 4: RESULTS

Overview

Within this qualitative research study, the data collection was determined based on the used electronic responses of the survey. Surveys were generated and distributed electronically through Qualtrics. Virtual audio-only interviews were conducted after survey completion based on participant permission. Using the demographics, participants' experiences, and survey responses were beneficial for identifying the nominal data. In order to gain these findings, the research questions needed to determine (1) which adverse childhood experience was more exposed within Kansas, Oklahoma, and Texas; (2) what approaches are being utilized to decrease the exposure to adverse childhood experiences within Kansas, Oklahoma, and Texas; and (3) how the exposure levels of adverse childhood experiences differ among rural and underserved communities of Kansas, Oklahoma, and Texas. Given this is a qualitative study, the results section helped create a descriptive finding by determining the inclinations of adverse childhood experiences using the completed questionnaires and interviews.

Research Questions

Research Questions

RQ 1: Which adverse childhood experience was more exposed within Kansas, Oklahoma, and Texas?

RQ 2: What approaches are being utilized to decrease the exposure to adverse childhood experiences within Kansas, Oklahoma, and Texas?

RQ 3: How do the exposure levels of adverse childhood experiences differ among rural and underserved communities of Kansas, Oklahoma, and Texas?

Descriptive Results

There were initially 16 participants. Three participants were removed because they did not meet the full qualifications for participation. One of the participants answered they resided outside of the three qualifying states, and the other two participants answered they had not experienced childhood trauma. After omitting the three participants, there were 13 participants: 46% were male (N = 6), and 54% were female (N = 7). The race/ethnicity of the 13 participants included: 15% of the participants were American Indian or Alaskan Native (N = 2), 8% were Asian/Pacific Islander (N = 1), 8% were Black or African American (N = 1), 15% were Hispanic (N = 2), and 54% were White/Caucasian (N = 7). There were three residents of Kansas, seven residents of Oklahoma, and three residents of Texas.

Instruments

Participants completed a survey consisting of eight questions from the BRFSS Adverse Childhood Experience (ACE) Module, as well as two questions from the Ask Suicide-Screening Questionnaire. Each of the answers are measured from “never” to “all of the time.” Table 1 demonstrates the adverse childhood experiences (ACEs) that each of the participants identified throughout the survey. There was an open-ended question that asked for the types of resources that were participated in, which provided varieties of mental health options that have been taken advantage of as visualized in Figure 1. Table 2 shows some brief responses from questions that were asked during the post-survey interview process. The responses that were selected were different participants within Kansas, Oklahoma, and Texas. Each of the responses bring a widespread understanding about their upbringing, trauma within ACEs, and the availability of mental health resources in their communities. As for the availability of the mental health

resources in the rural and underserved communities of Kansas, Oklahoma, and Texas were calculated in Figure 2.

The post-survey interview that was required within participation of the study consisted of five open-ended questions (see Appendix H). These questions that were discussed audio only via Zoom. Participants were able to be in a safe environment which allowed the participant to feel comfortable opening up about their trauma and adverse childhood experiences. Table 2 brings a visual understanding of the experiences from three different participants based on their post-survey interview responses. The excerpts within the table are based on responses from Kansas, Oklahoma, and Texas participants.

Table 1 – *Adverse Childhood Experiences within the Participants*

Adverse Childhood Experiences	***Frequency***	***Percentage***
Alcoholism	10	77%
Divorce	9	69%
Domestic Violence	9	69%
Emotional Abuse	13	100%
Neglect	10	77%
Parental Incarceration	6	46%
Parental Mental Illness	13	100%
Physical Abuse	11	85%
Sexual Abuse	8	62%
Substance Abuse	8	62%

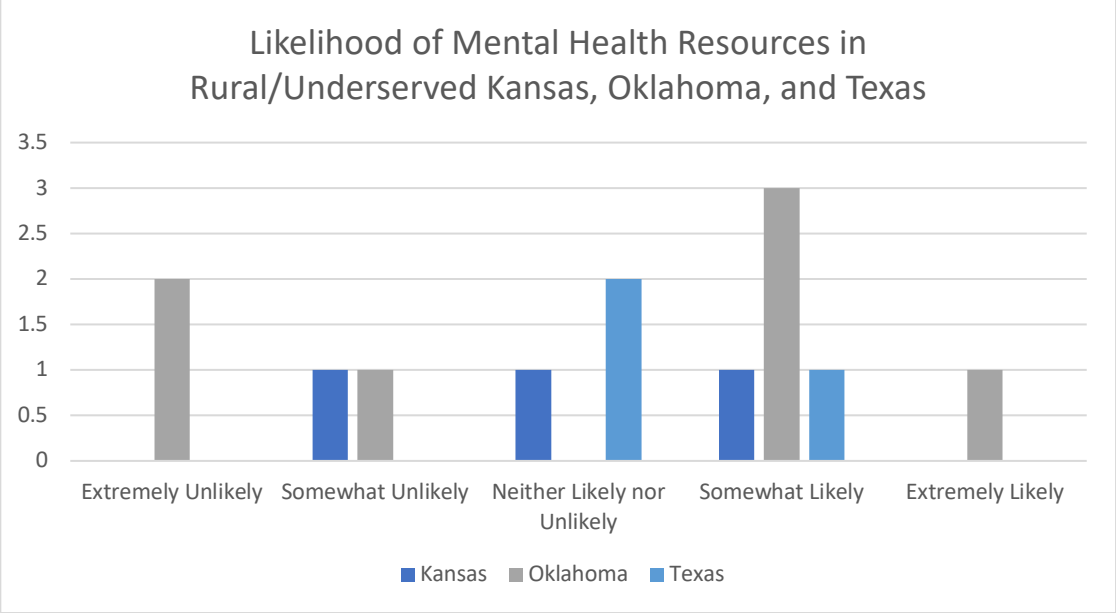
Figure 1 – *Word Cloud of Mental Health Resources Used*

Table 2 – *Participant Responses during Post-Survey Interview*

Post-Survey Interview Questions	**Participant Responses**
What were pros and cons of living in rural Kansas, Oklahoma, or Texas?	"*Living in rural Kansas has its positive to bring a tight knit community. The negative part involves the lack of privacy regarding private matters.*" *"Rural Oklahoma has a sense of community that allows everyone to feel like family. I just get nervous when confiding about personal experiences."* *"The south is known for helping one another, and Texans definitely look out for their own which is a great trait. A negative trait about rural Texas is the limited resources that are made available to the residents."*

What age did your ACEs begin?	"*My trauma began around the age of 12 years old...*" *"I had trauma begin at 4 years old..."* *"The trauma started as early as I could remember; I was very young..."*
Does your community have the proper necessities to provide mental health resources for their residents?	"*It's a slow process since it's a rural town, but technology is progressing, and local medical professionals are finding ways to adapt to them."* *"They provide local resources on the bulletin in the center of downtown."* *"Mental health has been known as a stigma, but thankfully the community medical professionals are brining awareness to the opportunities for therapy."*

Figure 2 – *Likelihood of Mental Health Resources in the Participants' Communities*



Study Findings

The findings throughout this study brought different aspects to the concept of adverse childhood experiences. Within Kansas, Oklahoma, and Texas, there were a variety of different

ACEs that occurred, which was anticipated. In the survey at the beginning of the study, each of the participants were asked questions revolving around each of the different adverse childhood experiences. According to Table 1, the findings showed that participants mostly experienced both emotional abuse and parental mental illness. Physical abuse and alcoholism were also experienced by a majority of the participants. The lowest number of participants experienced parental incarceration. This table is a guide for health professionals to gain an insight on what individuals are experiencing behind closed doors. Gaining insight to these different experiences could potentially bring medical professionals and their skills to rural and underserved communities that need the proper assistance with meeting their personal needs.

This study created a wide perspective of how adverse childhood experiences can influence the wellbeing of an individual, and the potential lack of mental health resources. As Figure 1 shows, the main resources that these rural residents were using were different aspects of counseling/therapy and medication. Inpatient treatment was taken advantage of by residents that finally felt comfortable bringing their inner thoughts to the surface. The residents felt that it was crucial because of the affect it was putting on their health. Unfortunately, there were residents who were not taking any advantage of mental health resources, due to the fear of exposing their personal experiences. It was discovered throughout the post-interviews that many of the participants' communities do not have the proper medical professionals in their area to treat their mental health. As Figure 2 illustrates, three of the Oklahoma answered on the survey that their communities were somewhat likely to have the proper mental health resources. There were two

residents each of Kansas and Texas that answered that their communities are extremely unlikely or neither likely/nor unlikely to have the availability of mental health resources.

The participants were asked in the post-interview how old they were when they began experiencing ACEs (see Table 2). The oldest was 12 years of age, meanwhile the youngest was as young as four years of age. The median age among all the participants was calculated to be 7.5 years old. All of the ages that experienced adverse childhood experiences were all at crucial stages of development. With all of these participants living in rural and underserved communities where resources are limited, it is so important that these participants as they continue to get older, take advantage of the mental health resources available. With future generations, it is so crucial to be able to start these resources early, to allow these individuals to live a long and healthy lifestyle. It also "breaks the cycle," which was expressed by a couple of the participants of this study. There are many households where multiple generations experience traumatic events which are often affiliated with ACEs.

Evidence of Quality

As the previous sections explained, the analytical process of this study involved performing a state-wide survey to individual who have endured adverse childhood experiences while also living in rural and underserved communities. Once the surveys were completed, each of the participating responses were thoroughly examined for any patterns, and to see any correlations within the three different states investigated. Participant validation was conducted with each of the responses by confirming their zip codes were within the regions being investigated. When the post-survey audio interviews were conducted, the participants appreciated taking the time to submit their responses and were assured that they could trust their recorded interviews were in a secured encrypted location. Since this study is being conducted

with a content analysis, each of the responses/recordings had specific coding mechanisms to identify the key points that should be highlighted within the results and study findings sections.

There were different themes that were identified among the coding to differentiate each of the responses based on their ACEs. This organization allowed the responses to stay accurate, even throughout the post-survey interviews. The word cloud that was created for Figure 1 was based on the validity and frequency of the keywords that were used to explain the mental health resources that were used in their own personal lives. Triangulation was able to be initiated determining how the participants among the three states survey responses and post-survey interviews were similar and how different participant responses were correlated with one another.

Summary

Adverse childhood experiences are found throughout this study to be differential among the 13 participants. It was eye-opening to determine that a majority of the participants have experienced parental mental illness and emotional abuse. A vast majority of the participants experienced physical abuse. Since each of the 13 participants live in rural and/or underserved areas, there are limitations to resources made available for these trauma victims. Each of the participants identified if they were/able to obtain any mental health resources, which counseling/therapy and medication were among the most popular services that were taken advantage of. Among the three investigated states, Oklahoma residents answered that their communities were more likely to provide mental health resources. Kansas and Texas residents claim that their communities were unlikely to have availability to mental health resources.

The post-survey interviews provided different aspects of the adverse childhood experiences among the participants. The different aspects created a narrative of how adverse

childhood experiences are dealt within the households, generational trauma, future hopes for their rural/underserved communities, and how they are managing their coping skills. Each interviewee had their own different perspectives about adverse childhood experiences, talking about how living in their rural/underserved community has affected their everyday life. All of the participants had similar experiences where their communities have limited mental health resources and would have to go "into the nearest city" to gain the proper clinician, although, there were some participants who have used the telehealth aspect to gaining therapeutic treatment. It is an optimistic feeling that ACE survivors are creating a healthier mindset to bring a better lifestyle. Resilience is a perfect word to describe these participants and what they have undergone in their lifetime. With growing technology and the continuous creation of different mental health resources, there is optimism that the adverse childhood experience rates will lower throughout future generations.

CHAPTER 5: DISCUSSION

Overview

The purpose of this qualitative case study was to examine the association of adverse childhood experiences that are causing negative mental health wellbeing within rural and underserved areas within Kansas, Oklahoma, and Texas. It was discussed how adverse childhood experiences were viewed through different points of view. Previous research relevant to the presented research was analyzed, as well as the limited resources that were made available among these communities.

Summary of Findings

All of the key findings from this study had their own sense of meaning among the 13 participants. Each of the participants brought a different perspective, but similar in different ways, of how adverse childhood experiences are affected within Kansas, Oklahoma, and Texas. The main adverse childhood experiences among the participants were emotional abuse and parental mental illness. There was a magnitude of other traumatic experiences that were endured among the participants, which ranged from alcoholism to substance abuse. Each of the participants experienced childhood trauma as early as four years old, and then all throughout childhood and adolescence. Throughout the study, it was also discovered that therapy, counseling, and medication were among the many mental health resources that were used by the thirteen participants. Summarizing the findings of this study determines that adverse childhood experiences within rural/underserved Kansas, Oklahoma, and Texas are highly relevant from these three states. There are communities within these three states where participants reside that have the mental health resources to create a healthier lifestyle for these resilient survivors.

Similar to the research performed by Giano et al. (2020), both sets of subjects had connections to emotional abuse being the main adverse childhood experience endured among the individuals. Even with the age gap between the presented research and the previous research, there are still individuals enduring emotional abuse at any age. In regard to the aspect of rural communities and ACEs, the presented research and research performed by Radcliff et al. (2018) both present evidence that rural communities are more likely to present signs of adverse childhood experiences among the residents in the communities. Research from both parties presents that the availability of mental health resources is limited among the rural communities within the southern United States.

Adverse childhood experiences create negative health issues among the individuals who have endured any sort of traumatic event. The presented research findings show there were high ACE scores, which create numerous different health outcomes among the participants; there were also high ACE scores among the participants of Chang et al. (2019). With the limited mental health resources available within each of the rural and/or urban communities investigated, there are higher chances of negative health outcomes that were determined within both research studies. This is similar to the Hoeft et al. (2018) study; both the previous study and the presented study show that there was such an urgent need of mental health resources among the rural communities that participants are not able to receive the proper professional help to alleviate the negative health outcomes endured from adverse childhood experiences.

Discussion of Findings

The findings that were discovered throughout the study determine that adverse childhood experiences are and will continue to be a relevant topic of discussion, as well as a part of current research literature. Research literature will need to still be conducted until there can be solid

justification made on the reasoning for adverse childhood experiences to allow every childhood trauma survivor to be fully healed from their physical and mental health diagnoses. Based on the previously discussed literature review and the results determined from this study have similarities amongst the data The similarities between the sources include the multitude of adverse childhood experiences that are endured by residents of rural and underserved residents. Due to the lack of resources within the communities, there are higher risks of stress and declining health outcomes.

As research strengthens and gets closer to finding promising answers, the biblical foundation will be an instrumental part to allowing these survivors to gain a sense of peace with their faith. Faith could be a source of comfort for these survivors to turn to and restore if there have been doubts in the past. As religious organizations are taking advantage of the NEAR Science training, the number of individuals trained in these particular trauma concepts will continue to increase. Creating more trainees on the concept of ACEs and other mental health subjects will allow trauma survivors to have one more individual to confide their feelings to these trained individuals. The bonds that will be formed between the trainee and the trauma survivor will be one less statistic of no mental health resources being taken advantage of. As the bond continues to grow between the trainee and survivor, this will bring a sense of advocacy that the trauma victim has needed from the beginning. The individuals knowing there is someone in their corner, and they can also use their faith as a source of comfort are steps in the right direction for a healthy lifestyle.

Implications

Implications of the findings within this study determine that adverse childhood experiences are still a crucial area of concern and are not subsiding anytime in the near future.

The scientific community could benefit from the physiological aspect of how adverse childhood experiences affect the human body. Unfortunately, childhood trauma is still an ongoing topic and continuous research still needs to be conducted on all different aspects of ACEs. The psychological practice could benefit from the findings that there are still communities in rural and/or underserved communities that need medical professionals who are trained on the topics of childhood trauma and adverse childhood experiences. The ongoing growth in medicine could potentially bring more medical professionals who are eager and passionate about being back in their home communities. Allowing these medical professionals to create their own practices in their home communities will bring a sense of comfort to the residents. Creating these safe environments will bring more residents to take care of their mental and physical health.

There are organizations that are using a new educational concept called NEAR Science that has been a beneficial tool to understanding adverse childhood experiences (ACEs). NEAR (Neurobiology, Epigenetics, Adverse Childhood Experiences, Resilience) Science brings a universal perspective to the impact that trauma and resilience brings to different health effects. In regard to ACEs, NEAR Science brings an in-depth introduction and the factors that are played in regard to resilience and healing. The organizations that perform the trainings extend their invitation to schools, churches, medical institutions, and other institutions that have constant contact with children and adolescents. Allowing these trainings to occur in the rural and underserved communities will create a better understanding to individuals who do not realize they are enduring health outcomes resulting from adverse childhood experiences.

Limitations

As previously discussed at the beginning of this study, there were limitations that occurred throughout the recruitment process. There were fears from potential rural residents that

they were going to be judged or the fear of their responses being revealed. The unknown about the study and if their information would be shared created a hesitation in individuals who wanted to be involved within the study. There were different outlets that were used to recruit those who have experienced childhood trauma. Due to the smaller number of participants within this study, this could be classified as a limitation. Within this study, there was an adequate number of participants from different ethnicities. The range of different participants create a full perspective of how individuals deal with childhood trauma and the adverse childhood experiences that are affecting their physical and mental health. At the completion of the study, it was notated if there was any hesitation from any of the participants when quoting their statements. It led to limiting those responses among Table 2.

Recommendations for Future Research

There could be additions made to the current research study that would concentrate on the younger generations. Parental consent would be needed, but it would be so beneficial to determine how the younger generations are dealing with childhood trauma and the effects of adverse childhood experiences. It would be recommended to be create a model of how these adolescents are dealing with their emotions and trauma on a day-to-day basis. Future research on another aspect regarding adverse childhood experiences is always going to be crucial, especially with the recent pandemic. Studies could concentrate on how adverse childhood experiences and the pandemic could be related to the higher mental health disorder rates in the United States. Quarantine took a toll on many different individuals' mental health, especially those younger individuals who were born, but then kept in solitude for two years until the world was back to normal everyday life.

These younger individuals were not able to live a “normal” baby and infant stage because there were many restrictions due to the coronavirus. This also took a toll on the parents’ mental health states, which unfortunately could formulate adverse childhood experiences to be endured. The creation of this future study could help break the cycle and begin to formulate different resources to alleviate the trauma that has been endured, and help the individual create a new “healthy normal lifestyle.” If these research studies can continue to be performed, the statistics will reduce, and hopefully one day there will much lesser mental health disorder rates across the United States.

Similar to Hoffman et al. (2020) enhancing the research study to particular areas in a rural and/or underserved area with high rates of adverse childhood experiences and high COVID-19 rates. This will bring both crucial topics together that are ongoing investigations. Recruitment should include individuals of different ethnicities among rural and underserved communities to bring a broad perspective of how adverse childhood experiences were endured during quarantine when the COVID-19 rates were at their highest. Evaluating the mental health perspectives of these children and their families throughout quarantine will create a visual image of how crucial mental health resources are direly needed within these communities. As research continues to progress, the numbers should continue to decrease and bring awareness to the importance of keeping up with psychological needs among the younger generations.

Summary

Throughout this entire study, adverse childhood experiences have been defined and how they affect a magnitude of different individuals all across the world. The stigmatization of having mental health issues, especially among rural residents, results in constant fear of being judged. This is the cause of the limited resources and the lack of obtaining the proper assistance to bring

a healthier lifestyle among the residents. The next steps to improving these barriers in limited medical and psychological resources include recruitment of medical professionals to the rural and underserved areas that need it urgently. Providing more mental health training, such as NEAR Science, that can bring more insight and advocates to these communities.

As the science and technology continues to progress, this could bring more telehealth resources available for counseling and therapeutic measures. Using virtual medical visits provides the privacy that residents need to feel comfortable confiding their trauma to these professionals. Creating these different pathways for mental health resources will bring more research that could be produced to show what difference it is making within the communities. The more research being performed, the closer to concluding childhood trauma and the effects of adverse childhood experiences.

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APPENDIX A: Screening & Demographics Survey

1. Are you 18 years or older? Yes/No
2. How would you describe your gender?
    a. Male
    b. Female
    c. Other _____
    d. Prefer not to answer
3. Which race or ethnicity best describes you?
    a. American Indian or Alaskan Native
    b. Asian/Pacific Islander
    c. Black or African American
    d. Hispanic
    e. White/Caucasian
    f. Other _____
4. What is your highest level of education you have completed?
    a. High School
    b. Technical/Vocational Training
    c. Associate Degree
    d. Bachelor's Degree
    e. Master's Degree
5. Are you a veteran? Yes/No
6. What state are you from? Kansas/Oklahoma/Texas
7. Would you classify your hometown as rural? Yes/No
8. Have you experienced trauma in your childhood? Yes/No

APPENDIX B: Informed Consent

Informed Consent

Title of the Project: Exposure to Adverse Childhood Experiences (ACEs) within Rural and Underserved Communities

Principal Investigator: Lauren Sparks, MS

Liberty University School of Behavioral Sciences

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be at least 18 years of age, experienced childhood trauma, and live in a rural area of Kansas, Oklahoma, or Texas. Taking part in this research project is voluntary. Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of the study is to discover the exposure of ACEs throughout three rural and underserved states: Kansas, Oklahoma, and Texas

The study also aims to discuss how rural and underserved communities screen children and adults who are experiencing ACEs. There will be a discussion regarding the accessibility to resources that could prevent and subside these traumatic experiences.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following things:

1. Complete an open-ended questionnaire. The questionnaire will consist of 10 questions and should take approximately 20 minutes to complete.

How could you or others benefit from this study?

The direct benefits participants should expect to receive from taking part in this study are an awareness to adverse childhood experiences within these communities, and enhancing resiliency through treatment opportunities that are desperately needed within these underserved areas.

What risks might you experience from being in this study?

There might be feelings of discomfort while recalling previous traumatic events. If you begin to feel uneasy, please close the survey. You can contact the researcher at the contact information listed below and a referral will be provided for the campus counseling services if needed.

How will personal information be protected?

The records of this study will be kept private. Published reports will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher will have access to the records. Participant responses will be kept confidential through the use of codes. Data will be stored in an online database of which only the researcher will have access to. Data may be used in future presentations. After three years, all electronic records will be deleted.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, inform the researcher that you wish to discontinue your participation, and do not submit your study materials. Your responses will not be recorded or included in the study. If you are completing the electronic questionnaire and you wish to

discontinue your participation, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Lauren Sparks. You may ask any questions you have now. If you have questions later, you are encouraged to contact her at [redacted]. You may also contact the researcher's faculty sponsor, Dr. Gorbett at [redacted].

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

Before agreeing to be part of the research, please be sure that you understand what the study is about. You will be given a copy of this document for your records. If you have any questions about the study later, you can contact the researcher using the information provided above.

_____

Printed Subject Name

_____

Signature & Date

APPENDIX C: Adverse Childhood Experience (ACE) Questionnaire

1) Did you live with anyone who was depressed, mentally ill, or suicidal?
2) Were your parents separated or divorced?
3) Not including spanking, (before age 18), how often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?
4) For how much of your childhood was there an adult in your household who made you feel safe and protected? Would you say never, a little of the time, some of the time, most of the time, or all the time?
5) How often did your parents or adults in your home ever slap, hit, kick, punch or beat each other up?
6) How often did anyone at least 5 years older than you or an adult, ever touch you sexually?
7) For how much of your childhood was there an adult in your household who tried hard to make sure your basic needs were met? Would you say never, a little of the time, some of the time, most of the time, or all of the time?
8) In the past few weeks, have you wished you were dead?
9) In the past week, have you been having thoughts about killing yourself?
10) Have you ever tried killing yourself?

APPENDIX D: Recruitment Letter (Email)

Dear _____:

My name is Lauren Sparks, and I am a doctoral student at Liberty University. I am reaching out to ask your permission to distribute questionnaires among the rural counties of your state. This is for the purpose of conducting research form my dissertation, entitled, "Exposure to Adverse Childhood Experiences (ACEs) within Rural and Underserved Communities."

Participants who have experienced adverse childhood experiences, and live in a rural area within Kansas, Oklahoma, and Texas are eligible to participate in this study. Participants, if willing, will be asked to electronically complete a Qualtrics survey comprised of ten questions about your own experience with childhood trauma. It should take approximately 20 minutes to complete the procedures listed. Participation will be completely anonymous, and no personal, identifying information will be collected.

To participate, please click here:

https://liberty.co1.qualtrics.com/jfe/form/SV_eEYwfF92J0RKege

A consent document is provided as the first page of the online survey. The consent document contains additional information about my research. After you have read the consent form, please click the button to proceed to the survey. Doing so will indicate that you have read the consent information and would like to take part in the survey.

Sincerely,

Lauren Sparks, MS

Doctoral Candidate

[redacted]

[redacted]

APPENDIX E: Recruitment Flyer

Research Participants Needed

Exposure to Adverse Childhood Experiences (ACEs) within Rural and Underserved Communities

- Are you 18 years of age or older?
- Resident in Kansas, Oklahoma, or Texas?
- Live in a rural or underserved community?
- Experienced childhood trauma?

If you answered yes to each of the questions listed above, you may be eligible to participate in a research study.

The purpose of this research study is to discover the exposure of ACEs throughout three rural and underserved states: Kansas, Oklahoma, and Texas

Participants will be asked to complete a Qualtrics survey comprised of ten questions about childhood trauma.

Benefits include bringing awareness to adverse childhood experiences within these communities, and enhancing resiliency through treatment opportunities that are desperately needed within these underserved areas.

If you would like to participate, please click here
https://liberty.co1.qualtrics.com/jfe/form/SV_eEYwfF92J0RKege

A consent document is provided as the first page of the survey/will be given to you at the time of the post-survey interview.

Lauren Sparks, a doctoral candidate in the School of Behavioral Sciences at Liberty University is conducting this study.

Please contact Lauren Sparks at [redacted] for more information.

APPENDIX F: Social Media Recruitment

ATTENTION FACEBOOK FRIENDS: I am conducting research as part of the requirements for a Doctor of Developmental Psychology degree at Liberty University. The purpose of my research is to better understand how rural and underserved communities screen children and adults who are experiencing adverse childhood experiences. To participate, you must who have experienced adverse childhood experiences, and live in a rural area within Kansas, Oklahoma, and Texas. Participants will be asked to complete an online survey, which should take about 20 minutes. If you would like to participate and meet the study criteria, please click the link provided at the end of this post. A consent document will be provided as the first page of the survey. Please review this page, and if you agree to participate, click the "proceed to survey" button at the end.

To take the survey, click here: https://liberty.co1.qualtrics.com/jfe/form/SV_eEYwfF92J0RKege

Twitter:

Are you a resident of Kansas, Oklahoma, or Texas and have endured adverse childhood experiences? Click here for information about a research study on teaching styles: https://liberty.co1.qualtrics.com/jfe/form/SV_eEYwfF92J0RKege

APPENDIX G: Resources Handout

MENTAL HEALTH

TAKING CARE OF YOUR MENTAL HEALTH

KANSAS, OKLAHOMA, AND TEXAS RESIDENTS

KANSAS

- KANSAS 2-1-1
- NATIONAL ALLIANCE ON MENTAL HEALTH - KANSAS
- 988 SUICIDE PREVENTION HOTLINE
- WARMLINE 316-260-2340
- MENTAL HEALTH ASSOCIATION OF KANSAS
- ONECARE KANSAS

OKLAHOMA

- CALL/TEXT 988 SUICIDE PREVENTION HOTLINE
- NALOXONE SAVES LIVES
- 2-1-1 OKLAHOMA
- REACH-OUT 24/7 HOTLINE 1-800-522-9054
- MENTAL HEALTH ASSOCIATION OF OKLAHOMA
- OCARTA
- CRISIS TEXT LINE 741-741

TEXAS

- 2-1-1 TEXAS
- CRISIS TEXT LINE 741-741
- TEXAS YOUTH HOTLINE 800-989-6884
- MENTAL HEALTH ASSOCIATION OF TEXAS
- FAMILY VIOLENCE PROGRAM OF TEXAS

APPENDIX H: Post Survey Interview

1. What were the pros and cons of living in rural _____?

2. Can you explain more in detail about your personal experiences with ACEs?

3. What age did your ACEs begin, and what age did they end?

4. What resources were you able to take advantage of to help with your mental health?

5. Does your community have the proper necessities to provide mental health resources for their residents?