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Assessing Violence and Mental Health with the 2019 Nevada Youth Risk Behavioral Survey

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Walden University

College of Health Professions

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Samantha Graham

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Walden University
2021

Abstract

Assessing Violence and Mental Health with the 2019 Nevada Youth Risk Behavioral

Survey

by

Samantha Graham

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Public Health

Walden University

February 2022

Abstract

The effects from childhood trauma can interfere in all aspects of a child's life, including their education. School delivery systems need to be trained to identify these risks and how to reduce further risks of re-traumatization by applying trauma-informed practices. This study addressed the impact of adverse childhood experiences (ACEs) on mental health and behavioral issues. The study was guided by Bandura's social cognitive theory and the socioecological model. The correlation between ACEs and mental health as well as ACEs and physical violence were examined based on data from the 2019 Nevada Youth Risk Behavioral Survey, which was a high school survey with ACE questions. Results revealed a significance between ACEs and poor mental health outcomes among students as well as ACEs and students involved in physical violence on school campus. The implications for positive social change include a greater awareness of trauma during childhood, which can help identify and reduce adverse experiences and improve children's overall quality of life with the implementation of interventions.

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December 2021

Dedication

This doctoral study is dedicated to my former teacher, Karen Patrick Rodriguez Smither, who played a significant role in my education and life. You are deeply missed. Rest in eternal peace.

I would also like to dedicate this doctoral study to I.B., a child whose case fueled my fire to create social change for trauma-informed care practices in school delivery services.

Acknowledgments

I would like to express my sincerest gratitude to my parents and friends for their support throughout my doctoral journey and not letting me give up. To my dog, Harper, for her love and patience. To my committee members, thank you for all your support, leadership, and mentorship throughout the dissertation process. I could not have done this without you.

To the writers of *The Office*, if it were not for you, I would have finished writing this study months ago.

Table of Contents

List of Tables	iv
Section 1: Foundation of the Study and Literature Review	1
Background	1
ACEs and Mental Health in Youth	1
Trauma and School Violence	2
Youth Violence Prevention	2
Purpose of the Study	4
The Research Problem	4
Research Questions and Hypotheses	5
Theoretical Framework	6
Nature of the Study	8
Literature Search Strategy	8
Literature Review	9
ACEs, Violence, and Mental Health	11
Definitions	13
Assumptions	14
Scope and Delimitations	14
Significance, Summary, and Conclusions	15
Section 2: Research Design and Data Collection	17
Research Design and Rationale	17
Methodology	18

Population	18
Sample Size.....	19
Data Collection and Analysis.....	19
Threats to Validity	22
Summary.....	22
Section 3: Presentation of the Results and Findings.....	24
Data Collection of Secondary Dataset	24
Data Analysis	25
Results26	
Research Question 1	26
Research Question 2	27
Research Question 3	28
Interpretation of Findings	30
Summary.....	34
Section 4: Application to Professional Practice and Implications for Social	
Change	36
Key Findings.....	36
Limitations of the Study.....	38
Recommendations.....	40
Implications for Social Change and Applying to Practice.....	46
Conclusion	48
References.....	50

Appendix: 2019 Nevada High School Youth Risk Behavior Survey58

List of Tables

Table 1. Research Question 1 Correlations.....	26
Table 2. Research Question 2 Correlations.....	27
Table 3. Research Question 3 Correlations.....	29

Section 1: Foundation of the Study and Literature Review

Children who have multiple adverse childhood experiences (ACEs)—violence, injury, abuse, neglect, household substance abuse—have a greater risk of developing mental health issues when they are older such as substance abuse, anxiety, depression, and aggressive behavior (McLaughlin & Lambert, 2017). Exposure to ACEs at an early age can also have a significant impact on cognitive flexibility to stress (Kalia & Knauft, 2020). Childhood trauma exposure enhances threat processing mechanisms like identification of environmental threats, heightened emotional responses to potential threats, difficulty disengaging from negative emotional content, and disrupted learning mechanisms (McLaughlin & Lambert, 2017). In social situations, children who are exposed to trauma are more likely to generate hostile attributions and act on threatening cues. Research also suggests there is a correlation between childhood trauma and an increase of violent tendencies (Baron & Forde, 2019). However, supportive relationships with caregivers and interventions reducing the risk of onset psychopathology of childhood trauma (McLaughlin & Lambert, 2017) maybe mitigate the risks of ACEs.

Background

ACEs and Mental Health in Youth

Children who face ACEs have increased physical and mental health illnesses by the time they reach adolescence and adulthood (Hughes et al., 2017). Childhood exposure of chronic stress associated with direct and indirect mistreatment causes damage to the development of a child's nervous, endocrine, and immune system. This results in impaired cognitive, social, and emotional functioning as well as chronic physiological

damage. However, there is a gap in research regarding how ACEs frequently co-occur, and studies measuring the effect of multiple ACE types have not been done (Hughes et al., 2017). To ensure sustained improvements in public health, there needs to be a shift to include prevention of ACEs, increase resilience building, and ACE-informed service provision (Hughes et al., 2017).

Trauma and School Violence

There is a strong association between ACE and school-based violence (Forster et al., 2020). Experiencing school violence and depression can have a detrimental effect on student learning (Kim et al., 2020). Fighting, threats, and bullying have been associated with higher levels of school safety concerns and a declining mental health that caused a lower academic performance in students. But research that examines an association of adolescent reports of childhood trauma and school violence involvement is limited (Forster et al., 2020). Thus, it is important to study the personal impact of ACEs including physical violence and mental health to identify and decrease negative outcomes.

Youth Violence Prevention

Youth violence is a significant public health issue, as it is the third leading cause of death for adolescence (Tibbs et al., 2017). Violence exposure can have a lasting impact on children and adolescents as well as the health and growth of communities, leading to poor health outcomes (Tibbs et al., (2017). Youth violence also has a lasting economic impact. But understanding that violence is preventable can assist in setting the foundation to address it. Violence prevention can be implemented in local health departments and

agencies as they are frontline advocates who can lead communities to implement these strategies (Tibbs et al., 2017). A local health department's role in coordinating with community partners can support, implement, and evaluate programs to address violence prevention. Through surveillance local health departments can assist local agencies, like schools, to diagnose and investigate health hazards in the community as well as implement evidence-based prevention strategies and build the capacity within local communities. For example, in Maryland, Safe Streets Baltimore is a violence prevention initiative designed to reduce violence within targeted communities at a high risk of violence. Safe Street's model includes community mobilization, public education, faith-based leader involvement, and law enforcement participation. The program mediated 508 conflicts in the area it services, and 55% of those mediations occurred before an escalation of violence (Tibbs et al., 2017). Despite programs like these, there is a need to expand violence interruption strategies to schools to engage communities and youth where there is a risk of increased of violence.

A collaboration across agencies can yield the best possible outcomes. Identifying signs of ACEs can reduce risks of re-traumatization and increase the rate of recovery while reducing the risk of adverse life events and negative health or life problems, which can create positive social change in communities (Spratt & Kennedy, 2020). There is a need to acknowledge the trauma and abuse children face and its long-term impacts into adulthood (Spratt & Kennedy, 2020). This is a significant public health issue due to its lasting, harmful effects in populations. Therefore, this study used survey data from the

Centers for Disease Control (CDC) to help in identifying potential ACEs implement interventions to reduce these risks.

Purpose of the Study

The purpose of this study was to examine ACEs and the possible effects ACEs have on mental health and behavioral issues in youth based on the perception of youth and their current experiences. It is critical to identify trauma early to implement strategies and reduce further trauma before it begins as priority health risk behaviors contribute to the leading causes of morbidity and mortality rates (CDC, n.d.-b). Exposure to ACEs decreases well-being and overall health, and the substantial costs make it a significant public health concern (CDC, n.d.-b). By examining the possible effects of ACEs, this research can increase awareness and education of what ACEs are and how they can affect a child in school settings with hope to identify and reduce adverse experiences in a child's life and improve school success rates. It is beneficial to see how to implement knowledge of ACEs into school practice to increase awareness and reduce further re-traumatization to students in school delivery services. This study can provide a framework for future studies regarding this public health concern to improve education of ACEs and prevention of ACEs by aiding the improvement of awareness, while various school service workers can better identify trauma.

The Research Problem

In the past 20 years, there has been significant progress made to reduce the impact of trauma and toxic stress in childhood; however, there is a gap to implement practice and knowledge in schools (Raja et al., 2015). The goal is to build relationships in the

community and for school personnel to establish trust with the student and their family to reduce risks of re-traumatization of ACEs, providing social change in school delivery. Even with advances in care, there is still a significant public health need to identify childhood trauma. Since the research of ACEs began, it has emphasized the impact of preventing and addressing trauma across all service systems to utilize universal systematic approaches (Oral et al., 2016). The goal of this study was to identify whether there is an increase of ACEs leading to physical fighting and other negative outcomes such as mental health associated with ACEs.

Research Questions and Hypotheses

Research Question 1: Is there a correlation between how many times a youth has been in a physical fight on school property (physical fight) and has a youth ever been hit, beaten, kicked, or physically hurt in any way by an adult (ACEs)?

H₀1: There is a correlation between how many times a youth has been in a physical fight on school property (physical fight) and has a youth ever been hit, beaten, kicked, or physically hurt in any way by an adult (ACEs).

H₁1: There is no correlation between how many times a youth has been in a physical fight on school property (physical fight) and has youth ever been hit, beaten, kicked, or physically hurt in any way by an adult (ACEs).

Research Question 2: Is there a correlation between how many times a youth has been in a physical fight on school property (physical fight) and how often has an adult in your home ever sworn at you, insulted you, or put you down (ACEs)?

H₀₂: There is a correlation between how many times a youth has been in a physical fight on school property (physical fight) and how often has an adult in your home ever sworn at you, insulted you, or put you down (ACEs).

H₁₂: There is no correlation between how many times a youth has been in a physical fight on school property (physical fight) and how often has an adult in your home ever sworn at you, insulted you, or put you down (ACEs).

Research Question 3: Is there a correlation between a youth living with someone who was depressed, mentally ill, or suicidal (ACEs) and how many times within the past 12 months a youth did something purposely hurt themselves without wanting to die, such as cutting or burning yourself on purpose (mental health)?

H₀₃: There is a correlation between a youth living with someone who was depressed, mentally ill, or suicidal (ACEs) and how many times within the past 12 months a youth did something purposely hurt themselves without wanting to die, such as cutting or burning yourself on purpose (mental health).

H₁₃: There is no correlation between a youth living with someone who was depressed, mentally ill, or suicidal (ACEs) and how many times within the past 12 months a youth did something purposely hurt themselves without wanting to die, such as cutting or burning yourself on purpose (mental health).

Theoretical Framework

Albert Bandura's theory, social cognitive theory, and the socioecological model of ACEs were used to understand trauma and trauma-informed care in schools. The social cognitive theory was developed in 1986 by Albert Bandura. The social cognitive theory

suggests that experiences, actions of others, and environmental factors play a role in individual behaviors (Bandura 1989). According to Bandura (1989), sociocultural influences and fortuitous events exert influence throughout a person's life, as individuals will process and transform experiences into cognitive models for judgment and action. Social cognitive theory is used to understand the influence of social determinants of health and how a person's past experiences can cause a behavior change (Rural Health Information Hub, 2021). The theory supports my study based on how ACEs can influence emotional and behavioral changes following a trauma.

The socioecological model is a framework for understanding complex systems to use an informed lens in which the efforts promote health equity are situated (Danielson & Saxena, 2019). The socioecological model is used by the CDC as a framework for prevention against violence, which is a factor in ACEs and this study (CDC, n.d.-e). The goal is to stop violence and abuse before it begins. It is critical to understand the factors that influence violence and identify possible risks before they happen. The model consists of four levels: individual, relationship, community, and societal. The first level of the socioecological model, the individual level, identifies an individual's personal history that increases the likelihood of becoming a victim or the possibility of becoming a perpetrator of violence (CDC, n.d.-e). The second level of the socioecological model, the relationship level, assesses the close relationships that increases the risk of someone experiencing violence or abuse as a victim or perpetrator (CDC, n.d.-e). The third level of the socioecological model, the community level, looks at the environment that surrounds the social relationships that occurs around someone and seeks to identify the

characteristics of these settings that increase the risks of becoming victims or perpetrators of violence (CDC, n.d.-e). The final level of the socioecological level, the societal level, looks at the expansive societal factors that can assist with creating an environment where violence is encouraged (CDC, n.d.-e). Focusing on ACEs with the socioecological model provides a positive conceptual framework to guide prevention and to reduce this public health epidemic issue that contributes to the effects that personal and environmental factors have on behavior (Bellis et al., 2018).

Nature of the Study

This study is a quantitative research design that focused on secondary data from a correlational research method perspective. Archival data came from the 2019 Nevada Youth Risk Behavior Survey (YRBS) given to high school students to complete anonymously. The data were examined regarding the relationship between ACEs, the independent variable, and the dependent variables physical violence and mental health. I monitored student perception from the youth survey to identify current trends in youth experiences. The selected design was appropriate to hear directly what the target population has been experiencing within the last 12 months. Measuring outcomes can lead to a greater understanding of the connections between trauma and behavioral health issues to guide systems in handling issues surrounding trauma (Substance Abuse and Mental Health Services Administration, 2014).

Literature Search Strategy

The keywords or phrases I searched are *peer-reviewed ACEs, trauma-prevention in school delivery, YRBS, previous trauma-informed studies, ACEs* and *improved*

outcomes, and *ACEs and youth violence*, *effects of ACEs*, and *ACEs and mental health*. I used Walden University's scholarly article search engine as well as Google Scholar to find the appropriate articles. I used limited phrases in the search engines to expand my search for literature that could be beneficial for my study. In the beginning of my search, I researched literature that included all previous years to determine the need of further research. After examining previous research and identifying a need, I used to the search engines to find articles that were from 2016 to current to see what most recent research has been completed and where a gap lies in the research. This allowed me to formulate my study into a more precise search and advance my research questions further.

Literature Review

Impact of ACEs and importance of community support ACEs impact the health of youth, but the community can provide support and opportunities for children to develop resilience to reduce the risks of ACEs (Bellis et al., 2018). ACEs are associated with poor childhood health, behavior, and school attendance (Bellis et al., 2018). However, community resilience and access to a mentor has been linked to independent positive outcomes.

The need for evidence-based strategies to prevent and reduce negative consequences for further victimization when examining the relationship to ACEs and exposure to violence in adolescence (Fagan 2020). Data was examined for high-risk youth and caregivers participating in longitudinal studies of child abuse and neglect. The data inconsistent evidence of a relationship between ACEs and exposure to violence, but there is a support for greater data and interventions (Fagan, 2020).

ACEs increase the risk of violence perpetration and victimization using student reported data and research examining the associations between adolescent reports of ACE and school violence is sparse with a need to further examine this gap (Forster et al., 2020). The study examines adolescent reported ACE and multiple types of on-campus violence (bringing a weapon to school, being threatened with a weapon, bullying, fighting and vandalism). Students with ACE represented 19% no violence, 38% of victim only, 40% perpetrator only, and 63% victim/perpetrator groups (Forster et al 2020). This is critical because it shows evidence there is previous data out there involving ACE and youth violence, however, data of the two is sparse and there is a need to further examine the two and reduce trauma approaches to improve youth violence and what trauma does to youth mental health.

Exposure to early life adversities and stress can cause a range of stress related health issues in adulthood and early life adversities involve exposure to environmental experiences that deviate from normal stimulation in brain development, such as parental abuse (Kalia & Knauff, 2020). The article investigates if perceptions of chronic stress in adulthood can mediate the influences of ACEs within cognitive flexibility. The study consisted of questionnaires and survey scales. The results of the study show there is a correlation of ACEs affects ACEs with perceived stress and emotional regulation moderated it are influences of ACEs on chronic stress (Kalia & Knauff, 2020).

There are direct and indirect effects by gender and three forms of school violence – physical fighting, bullying, and threats of using a weapon: through safety concerns in schools, depression, and academic performance (Kim et al., 2020). Cross-sectional data

was used from the 2015 YRBS to test direct and indirect associations (Kim et al., 2020). Results showed all three forms of school violence were significantly associated with higher levels of concerns, which led to poorer academic performance in males and females.

ACEs, Violence, and Mental Health

According to Tibbs et al. (2017), youth violence is a significant public health issue and is the third leading cause of death for adolescents. These violent acts can range from bullying to assault and can affect an individual mentally and physically (Tibbs et al., 2017). As a Healthy People 2020 initiative through the CDC, the United States government has set a goal to reduce violence in youth (Office of Disease Prevention and Health Promotion, n.d.). According to the CDC (n.d.-a), ACEs have a significant impact on the future of violence victimization and perpetration. Like ACEs, common violence in youth can result in similar negative outcomes. After experiencing violence, it can cause a child unable to maintain focus in the classroom and decrease their academic performance and success (McGaha-Garnett, 2013). Risk factors that predict violence in youth include substance abuse, mental health issues, bullying, various childhood abuse or conflict from parents or caretakers; significantly physical violence as modeling behavior, and high-crime neighborhoods. It is critical to identify the ACEs in each child's life to reduce the risks of physical fighting and many other key issues associated with its long-term effects. According to Duke et al., (2010), ACEs should be considered risk factors for violence-related health outcomes and quality of life during adolescence and into adulthood. The greater the experiences the more the risk of violent perpetration increased, further adding

to this public health issue (Duke et al., 2010). Youth who have been exposed to violence and various other ACEs are at increased risk of becoming violent or having a mental illness (Hughes et al., 2017). In a recent study conducted by Fagan (2020), the lack of data and inconsistency of evidence of ACEs, and exposure to violence support the need for further studies to implement interventions. With further research we can reduce ACEs and their impact of violence exposure during adolescence.

The Substance Abuse and Mental Health Services Administration (2014), urges family protectiveness to reduce risks of youth violence. This includes the ability to discuss problems with parents, perceived parental or caregiver expectations regarding school performance, frequent activities among family members and caregivers, and constructive problem solving and coping skills. These ACEs include harms that directly affect children, such as abuse or neglect, and indirectly through their living environments, such as parental conflicts, substance abuse, and mental illness (Hughes et al., 2017). According to Hardt et al., (2015), ACEs, specifically early experiences with violence, are precursors to predict depression and suicidality. In a study conducted by Forster et al., (2017), ninth graders participated in a 2013 Minnesota Student Survey using logistic regression models and assessed there was an association between ACE and school-base violence. In this study about 30% of students were exposed to at least one ACE, being a strong graded relationship between ACE and the probability of school-based victimization. This included physical bullying for boys, being threatening with a weapon, theft or property destruction and perpetration (Forster et al., 2017). A study from the 2015 YRBS (Kann et al., 2016), suggests that the violence-related behaviors and mental

health issues are higher in males, however, rates of these overall behaviors from the Bureau of Justice Statistics have since increased from 2016 in both males and females. According to the Musu-Gillette et al. (2018), in 2016 students experienced 749,000 violence-related victimizations. In 2019, Musu et al., reported 827,000 violence-related victimizations in school. This shows the rates of violence-related behaviors have risen over the last few years.

Definitions

The definition of the independent variable, ACEs, are events that can be potentially traumatic that occur in an individual's childhood from birth to age 17. An example of ACEs is experiencing violence, abuse, or neglect; and a parent who is unstable (CDC, n.d.-b). The dependent variable, physical violence, is defined by the CDC (CDC, n.d.-c), as the intentional use of physical force with the potential harm to someone else. The other dependent variable, mental health, includes the state of our emotional, psychological, and social well-being. It affects how we think, feel, and act. It helps determine how individuals handle stress, relate to others, and make healthy choices (CDC,). Trauma-Informed Care or Trauma-Informed Practice is an approach in the human service field that assumes that an individual is more likely than not to have a history of trauma. Trauma-Informed Care recognizes the presence of trauma symptoms and acknowledges the role trauma may play in an individual's life (Substance Abuse and Mental Health Services Administration, 2014).

Assumptions

An assumption in this study is assuming that participants provided honest responses to questions. The survey measures that it presumes respondents will take the survey seriously and answer the questions the best they can. This assumption is given based on presuming respondents were honest to provide information to show current trends and issues youth encounter to identify their needs and determine a resolution for improved outcomes. There is an assumption that physical violence and mental health can be caused by a specific trauma from a youth experiencing ACEs. Without these assumptions there is no research or problem to explore.

Scope and Delimitations

The focus of this study is to determine if there is a relationship between ACEs and physical violence and mental health in high school students. The aspects investigated was to suggest how many youths with ACEs had a situation with physical violence and mental health. The aspects studied was feedback from high school student respondents selected at random. The researcher chose physical violence and mental health due to the rising public health issues of physical violence and mental health in the country and to see if there is a relationship, they could have with ACEs.

The survey used data from high school students in ninth through twelfth grade. The survey is conducted annually, however, ACEs questions are not included in the survey each year the survey is administered. There is a delimitation to not have ACEs questions annually. Another delimitation is a student being absent the day the survey is given, and

not having these questions administered to younger populations, such as middle school youth.

Significance, Summary, and Conclusions

Children who have multiple ACEs are at a greater risk of developing mental health issues when they are older. The psychopathology includes aggressive behavior that can escalate to physical violence. Exposure to childhood trauma can trigger an individual's threat processing mechanism, which can affect someone's daily living functioning and overall quality of life. Threats to cognitive flexibility can cause heightened emotional responses resulting in negative behaviors, both mentally and physically. Youth violence, a preventative issue, has a lasting effect as it is the third leading cause of death in adolescence.

Using surveys to identify current trends can allow researchers and personnel a greater chance to identify potential ACEs and implement appropriate interventions to reduce these risks. This is important because it gives researchers and officials a chance to identify potential ACEs prior to victimizations. The purpose of this study is to examine adverse experiences and the affects ACEs may have on mental health and behavioral issues in youth. This is significant because with a greater sense of awareness that trauma during childhood is present, we can further identify and reduce adverse experiences and improve a child's overall quality of life with the implementation of interventions.

The quantitative research design focuses on secondary data from a correlational research approach from 2019 survey data from high school students in Nevada. The data looks at the relationship between ACEs, the independent variable, has on the dependent

variables, physical fight, and mental health. In Section 2: Research Design and Data Collection, I will discuss the research design of my study and the methodology's rationale in greater detail. I will also introduce information about the original ACE study and its significance in this research design.

Section 2: Research Design and Data Collection

ACEs include psychological abuse, sexual abuse, physical abuse, exposure to substance abuse, mental illness, violent treatment of a family member, a death of family member, and criminal behaviors and activity within the household (Raja et al., 2015). Additional research shows that ACEs are more likely to co-occur, such as poor childhood health, behavioral issues, and school absenteeism co-occurring, further increasing risks. ACEs influence mental health, physical health, and morbidity when children reach adulthood (Raja et al., 2015). Further, Americans who experience ACEs were more susceptible to have a higher mortality rate from the top 10 leading cause of deaths in the United States (CDC, n.d.-a). Thus, it is important to evaluate trauma exposure in childhood and its possible effects. By researching the current prevalence of ACEs, it will be easier to address and resolve this public health issue, reducing the risks of traumatization associated with ACEs and mental health issues.

Research Design and Rationale

This study addressed the relationship between ACEs, the independent variable, and the dependent variables physical violence and mental health. I looked at the correlation between the variables and whether their relationship is significant. The research design was a quantitative correlational approach. The correlational approach measures and assesses a suggestion of a statistical relationship between the variables with little control from the researcher.

I used data from a survey created and implemented by the CDC and given to states for high school students to complete in an effort to identify current trends in youth

(Diedrick et al., 2019). Frequent surveys can decrease risks associated with ACEs by identifying trends (Diedrick et al., 2019). For instance, violence and mental health issues in youth are signs of ACEs (Kim et al., 2020). The survey compares the 2019 Nevada YRBS estimates of behavioral health outcomes for students with different levels of exposure to ACEs (Diedrick et al., 2019). However, it is important to note that ACEs questions are not implemented into the survey every year, which reduces the knowledge researchers and personnel have of current trends of ACEs (Diedrick et al., 2019). With sporadic evidence-based data, there is a lapse in interventions being implemented, which questions whether trauma can be prevented. But the data used in this study specifically addressed the relationship between ACE exposure, violence and victimization, emotional health, sexual health, and substance use outcomes.

Methodology

Population

The population of the survey participants were high school students in ninth through 12th grade (Diedrick et al., 2019). The students were between the ages of 12 and 18 years old. The sex of the students was male or female. The survey was confidential, and no students gave their personal information when completing the survey. The students also completed the survey voluntarily. The survey participants required active or passive parent permission to participate, and the permission guidelines fluctuated based on school district protocols. The survey was a random cluster sample to 99 public, private, charter, and alternative high schools in the state of Nevada, in the United States. The University of Nevada, Reno's School of Community Health Sciences, administered

the 2019 Nevada YRBS on behalf of the Nevada Department of Education and the Nevada Division of Public and Behavioral Health. A general population total of 4,980 students from 99 schools participated in in the survey.

Sample Size

The sample size of the study was 1,409. The sample size was based on the number of responses received from the survey of students who participated. The regional data represented all counties in the state and all 17 school districts were grouped into eight regions in Nevada (Diedrick et al., 2019). The regional grouping helped ensure that individual schools could not be identified. The classes used to administer the surveys were randomly selected within every school with the probability based on a required margin of error in the sample size for each region. The classes of either all second period or all required English courses were randomly selected from each school to complete the 2019 Nevada High School YRBS. The questionnaire was administered to all students in sampled classes from February to May 2019.

Data Collection and Analysis

This section provides a step-by-step description of the procedures used to conduct the data collection and analysis to answer the following research questions:

Research Question 1: Is there a correlation between how many times a youth has been in a physical fight on school property (physical fight) and has a youth ever been hit, beaten, kicked, or physically hurt in any way by an adult (ACEs)?

*H*₀1: There is a correlation between how many times a youth has been in a physical fight on school property (physical fight) and has a youth ever been hit, beaten, kicked, or physically hurt in any way by an adult (ACEs).

*H*₁1: There is no correlation between how many times a youth has been in a physical fight on school property (physical fight) and has youth ever been hit, beaten, kicked, or physically hurt in any way by an adult (ACEs).

Research Question 2: Is there a correlation between how many times a youth has been in a physical fight on school property (physical fight) and how often has an adult in your home ever sworn at you, insulted you, or put you down (ACEs)?

*H*₀2: There is a correlation between how many times a youth has been in a physical fight on school property (physical fight) and how often has an adult in your home ever sworn at you, insulted you, or put you down (ACEs).

*H*₁2: There is no correlation between how many times a youth has been in a physical fight on school property (physical fight) and how often has an adult in your home ever sworn at you, insulted you, or put you down (ACEs).

Research Question 3: Is there a correlation between a youth living with someone who was depressed, mentally ill, or suicidal (ACEs) and how many times within the past 12 months a youth did something purposely hurt themselves without wanting to die, such as cutting or burning yourself on purpose (mental health)?

*H*₀3: There is a correlation between a youth living with someone who was depressed, mentally ill, or suicidal (ACEs) and how many times within the past 12

months a youth did something purposely hurt themselves without wanting to die, such as cutting or burning yourself on purpose (mental health).

H₁₃: There is no correlation between a youth living with someone who was depressed, mentally ill, or suicidal (ACEs) and how many times within the past 12 months a youth did something purposely hurt themselves without wanting to die, such as cutting or burning yourself on purpose (mental health).

I requested the data from the CDC. There was no permission needed to access the data; however, the dataset was not available on the CDC's website, so it had to be requested. I chose the CDC dataset because it contains questions for students to answer regarding ACEs, mental health, and violence behavior. I used the appropriate data to identify whether there is a correlation of outcomes reflected in the dataset to use as a guide to decrease negative outcomes with a focus on improving mental health in youth.

To answer the research questions, I utilized descriptive statistics to assess the strength of relationship between the two quantitative variables of the paired data using correlation analysis. This analysis was also helpful in identifying the risks associated with ACEs in the home, which can help recognize ACEs in the home to implement intervention strategies. After entering the data in SPSS and changing the name of the variables, I used descriptive statistics to look at the relationships between the variables. With SPSS, I measured the data by conducting a bivariate correlation and then chose to conduct a Pearson Correlation with a two-tailed significance.

Threats to Validity

Validity refers to the degree to which the study accurately reflects the specific concept the research is measuring (Howell et al., n.d.-a). External validity determines whether the knowledge gained from the study can be implemented into practice, and internal validity considers a causality between the action taken and the resulting change. There was no known bias in the questions, data, or SPSS syntax software I used; thus, the study accurately reflects the questions and data that was set out to be measured. Though the validity of the study can be threatened if the survey participants are not truthful or answered with bias when answering the survey questions (Howell et al., n.d.-a), no known bias or threats of validity are known in this study.

Summary

Section 2 explained the research design and data collection process. The variables in this study consist of ACEs, the independent variable, and mental health and physical violence, the dependent variables. I used a quantitative, correlational design to see whether there is a correlation between the independent variable and the dependent variables. The study used secondary data from the 2019 Nevada YRBS, which incorporated various ACEs related questions. The added survey questions focused on the relationship between ACE exposure and violence, victimization, emotional health, sexual health, and substance use outcomes. The survey was given to high school students in Grades 9 through 12 and were randomly clustered throughout 99 public, private, charter, and alternative high schools in the state. The data were analyzed using the SPSS syntax software. Measuring the data consisted of conducting a Pearson Correlation with a two-

tailed significance. A correlation significance was tailed to see if there was a significance between the variables. There was no known threat of validity in the study or the survey participants.

Section 3: Presentation of the Results and Findings

The quantitative correlational study design was used to determine if there could be a correlation between ACEs, physical violence, and mental health. Although there are studies around ACEs, physical violence, and mental health, there is a gap in the information from current trends of these experiences in youth and their perceptions of these experiences (Jorm & Mulder, 2018). In the previous chapters the information on this is included in the introduction of the study and information pertaining to the associated with ACEs problem and hypothesis. The results of this study allowed me to see the correlation between ACEs and the impact it can have on youth. This study can serve as a foundation of studies I hope to accomplish in the future.

Data Collection of Secondary Dataset

This research was conducted to explore how to decrease risks of traumatization in various service settings to improve mental health and behavioral health such as schools, which is significant to improve the overall quality of life for youth and to reduce ACE-related behaviors. The data used in this study was public data retrieved from the CDC's 2019 Nevada YRBS, which is a voluntary survey for students used to identify health behavior of high school students in Grades 9 through 12. The survey provides statewide data to that education and health professionals, policy makers, researchers, and community members can use to improve the health of Nevada's high school students. The survey questions are intended to identify various health behaviors that include tobacco use, drug use, sexual behaviors, behaviors that contribute to violence, unhealthy dietary behaviors, and inadequate physical activity among youth. The survey was given

to high school students from 36 randomly chosen different schools in Nevada. There were 1,409 students who participated that were in ninth through 12th grade in regular public, charter, and alternative schools and parental permission was required dependent on the school district. The classes in these schools were randomly chosen. The survey was given to all students in sampled classes from February through May 2019. The data from the 2019 Nevada YRBS included prevalence estimates of behavioral health outcomes for students with different levels of exposure to ACEs, focusing on the relationship between ACE exposure and important violence and victimization, emotional health, sexual health, and substance use outcomes. In this study, I focused on physical fighting and mental health questions (dependent variables) paired with ACE questions (independent variable) from the survey.

Data Analysis

After entering the dataset, the Pearson Correlation test was used to test whether there is a correlation between the variables as well as the strength of a relationship between variables. The two-tailed significance test was also used to see if there was a statistically significant correlation between the variables because there was no assumption if the variables were positive or negative. By default, SPSS marks a two-tailed statistical significance of a 0.01 level. When running the test, I flagged for significant correlations.

Results

Research Question 1

The first research question I analyzed was “Is there a correlation between how many times a youth has been in a physical fight on school property (physical fight) and has a youth ever been hit, beaten, kicked, or physically hurt in any way by an adult (ACEs)?” In SPSS, the questions were entered as “How many times have you been in a physical fight on school property?” and “Have you ever been kicked, beaten, or physically hurt by an adult?” See Table 1 for the results of the SPSS correlations. The Pearson Correlation is represented as 1, which indicates that there is a positive relationship between the variables. An absolute value of one indicates a perfect linear relationship. Because of the p -value of .001, I rejected the null hypothesis, meaning that there is a statistically significant relationship between being in a fight and being physically hurt by an adult. Though there were 16 missing answers for the ACEs question and two missing answers for the physical fight question, this does not influence the significance between the two variables. Additionally, this study cannot differentiate if there is a causation; however, by correlation if one variable decreases the other will decrease as well. Thus, reducing the times a youth is physically harmed may reduce the chances a youth would be in a physical fight in school.

Table 1

Research Question 1 Correlations

	Have many times have you been in a physical fight on school property	Have you ever been hit, kicked, beaten or physically hurt by an adult?
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Have many times have you been in a physical fight on school property	Pearson Correlation Sig. (2-tailed) <i>N</i>	1 1,321	.096** .001 1,307
Have you ever been hit, kicked, beaten or physically hurt by an adult?	Pearson Correlation Sig. (2-tailed) <i>N</i>	.096** .001 1,307	 1,393

** . Correlation is significant at the 0.01 level (2-tailed).

Research Question 2

The second research question I analyzed was “Is there a correlation between how many times a youth has been in a physical fight on school property (physical fight) and how often has an adult in your home ever sworn at you, insulted you, or put you down (ACEs). In SPSS, the variables were entered as, “How many times have you been in a physical fight on school property?” and “How often has an adult sworn, insulted, or put you down?” See Table 2 for the results of the correlation test. Again, the Pearson Correlation is 1, which indicates there is a linear relationship and led to a rejection of the null hypothesis. Thus, there is a statistically significant relationship between how many times respondents were in a physical fight and how often they were verbally abused by an adult. Though there were two missing answers for the physical fight question and 12 missing for the ACE question, this does not influence the significance between the two variables.

Table 2

Research Question 2 Correlations

	Have many times have you been in a physical fight on school property	How often has an adult sworn, insulted, or put you down?
Pearson Correlation	1	.530**

Have many times have you been in a physical fight on school property	Sig. (2-tailed) <i>N</i>	1,321	.000 1,311
How often has an adult sworn, insulted, or put you down?	Pearson Correlation Sig. (2-tailed) <i>N</i>	.530** .000 1,311	1 1,397

** . Correlation is significant at the 0.01 level (2-tailed).

Just as with Research Question 1, the results show that there is a relation between the two variables, which serves as a foundation for more studies to be done to greater explore this relationship. This study cannot differentiate if there is a causation; however, by correlation if one variable decreases the other will decrease as well. If the ACE of a youth being harmed by an adult's verbal abuse can be reduced, then it may be possible to reduce the chances a youth would be in a physical fight in school.

Research Question 3

The third research question I analyzed was “Is there a correlation between a youth living with someone who was depressed, mentally ill, or suicidal (ACEs) and how many times within the past 12 months a youth did something to purposely hurt themselves without wanting to die, such as cutting or burning yourself on purpose (mental health)?” In SPSS, the variables were entered as “Have you ever lived with someone who was depressed, ill, or suicidal?” and “During the past 12 months have you harmed yourself?” The correlation of a youth living with someone who was depressed, mentally ill, or suicidal (ACEs) with itself ($r = 1$) and the number of non-missing respondents for the variable was 1,352. The correlation of the two variables was .676 based on 1,352 respondents with paired-missing values. There were 9 missing answers for the mental health question and 57 missing for the ACE question. This does not influence the

significance between the two variables. The correlation of a youth living with someone who was depressed, mentally ill, or suicidal (ACEs) and how many times within the past 12 months a youth did something to purposely hurt themselves without wanting to die, such as cutting or burning yourself on purpose (mental health) was .676. The correlation of how many times within the past 12 months a youth did something to purposely hurt themselves without wanting to die, such as cutting or burning yourself on purpose (mental health) was 1,400. The significance level for the two variables were .676, which is statistically significant ($p < .000$) based on the 1,352 respondents. The Pearson Correlation is 1, which indicates there is a linear relationship. Because of the p-value of .000, we would reject the null hypothesis of no relationship and conclude that the relationship is statistically significant. Though there were nine missing answers for the mental health question and 57 missing for the ACE question, this does not influence the significance between the two variables.

Table 3

Research Question 3 Correlations

		Have you ever lived with someone who was depressed or suicidal?	During the past 12 months have you harmed yourself?
Have you ever lived with someone who was depressed or suicidal?	Pearson Correlation	1	.676**
	Sig. (2-tailed)		.000
	<i>N</i>	1,352	1,352
During the past 12 months have you harmed yourself?	Pearson Correlation	.676**	1
	Sig. (2-tailed)	.000	
	<i>N</i>	1,352	1,400

** . Correlation is significant at the 0.01 level (2-tailed).

Just as with Research Question 1 and 2, this is important because it shows there is a relation between the two variables, which serves as information as a foundation for more studies to be done to greater explore this relationship. This study cannot differentiate if there is a causation, however, by correlation if one variable decreases the other will decrease as well. This shows there is a significance in these findings. If we can reduce the ACE of a youth being harmed by an adult's mental health, which is categorized as an ACE, then it may be possible to reduce the chances a youth would use self-harm behaviors.

Interpretation of Findings

While examining the data analysis for the first research question, "Is there a correlation between how many times a youth has been in a physical fight on school property (physical fight) and has a youth ever been hit, beaten, kicked, or physically hurt in any way by an adult (ACEs)?" The data shows there is a correlation between the two variables with a significance level of .096, which is statistically significant ($p < .001$). While examining the findings for question two, "Is there a correlation between how many times a youth has been in a physical fight on school property (physical fight) and how often has an adult in your home ever sworn at you, insulted you, or put you down (ACEs)?" The data shows there is a correlation between the two variables with a significance level of .530, which is statistically significant ($p < .001$). While examining the findings for the third research question, "Is there a correlation between a youth living with someone who was depressed, mentally ill, or suicidal (ACEs) and how many times within the past 12 months a youth did something to purposely hurt themselves without

wanting to die, such as cutting or burning yourself on purpose (mental health)?" The data shows there was a correlation between the two variables of .676, showing the two are statistically significant ($p < .001$). With the data in each question showing a correlation and there is a statistically significant relationship we would reject the null hypotheses.

Research implications from these results suggest there is a need to further examine how to identify ACEs and how ACEs can hinder mirrored physical violence and mental health issues among youth. This is critical to potentially reduce further traumatization, as well as prevent possible trauma from occurring before it begins.

When looking at the relationship between mental health and physical violence suggests there is an association with ACEs. The findings of my study show there is a greater need to examine current and future trends of ACEs among high school youth. There is a dire need to prioritize ACE prevention and the wide variety of adverse outcomes supported to improve health to create social change by reducing risks associated with the effects of trauma in childhood. Understanding the relationship between what the variables are, as well as identifying youth in trauma can reduce ACEs and have a societal and personal impact. Understanding and reducing ACEs is what makes this social-ecological model critical. This is essential to understanding the various ACEs. Children with a higher number of ACEs are more likely to have higher numbers of mental health diagnoses, an individual education plan, have behavioral health issues that includes physical violence, and be disengaged in the classroom (Overstreet & Chafouleas, 2016).

Intrapersonal Level

ACEs on an intrapersonal level can affect the individual's behavior, attitude, developmental, and emotional abilities. Exposure to ACEs can significantly reduce an individual's health status and overall quality of life, as discussed in previous sections. These adverse experiences influence and guide an individual's personality and how they interact with other people. This can create a barrier of interpersonal growth that may not promote health behaviors from a biological and psychological point of view.

Childhood trauma exposure enhances threat processing mechanisms on an intrapersonal level that facilitate rapid processing bias identification of environmental threats, heightened emotional responses to potential threats, difficulty disengaging from negative emotional content, and disrupted learning mechanisms (McLaughlin & Lambert (2017). The trauma from these experiences negates healthy brain development, causing a pathologic stress response to their daily lives (McLaughlin & Lambert, 2017). As previously stated, according to Hughes et al., (2017), childhood exposure of chronic stress associated with direct and indirect mistreatment causes damage to the development of a child's nervous, endocrine, and immune system. This results in impaired cognitive, social, and emotional functioning, as well as chronic physiological damage, which not only affect the survivor on an intrapersonal level, but it spreads to other levels within the survivor's life as well. The ACEs an individual faces not only affects the survivor, but it will leak into the interpersonal relationships, as well as the environmental factors which can gradually spread depending on the severity of a survivor's trauma.

Interpersonal Level

On an interpersonal level, ACEs affect the individual's relationships with family, friends, colleagues, etc. ACEs can compromise an individual's emotional and behavioral stability that carry with them into adulthood. This instability can cause anxiety, depression, and present additional challenges in healthy interpersonal relationships. My data analysis recognizes that there is a correlation between ACEs and physical violence, which can cause violent and aggressive tendencies in a relationship – potentially leading to further issues (Cprek et al., 2020). An individual who has been exposed to an ACE are more inclined to feel betrayed in relationships, resulting in trust issues and relationship drifts, and may have a lack of sense of safety which can result in social isolation and social anxiety. In a study conducted by Poole et al. (2018), childhood adversities played a role on interpersonal functioning into adulthood and an association of emotional dysregulation is enhanced in interpersonal difficulties.

Community Level

On a community level ACEs can cause difficulties at schools, workplaces, and in neighborhood where social relationships occur. It is important to improve the social environment by creating safe places where people live, work, and spend time. ACEs play a role in neighborhood poverty, increased acts of violence, instability, and drug or alcohol use (CDC, n.d.-a). Creating safe places in the community and increasing awareness for interventions can decrease risk factors from ACEs, which can teach social-emotional learning and family engagement leading to adaptive outcomes.

Summary

Section 3 provided an overview of results and information from the study. The data showed there was a significance between variables for RQ 1, RQ 2, and RQ 3, therefore, rejecting the null hypothesis. For RQ 1, the question, “Is there a correlation between how many times a youth has been in a physical fight on school property (physical fight) and has a youth ever been hit, beaten, kicked, or physically hurt in any way by an adult (ACEs)”; analyzes if there is a correlation between a youth being in a physical fight in school and if they have been experiencing being physically abused at home, which is an ACE. The Pearson Correlation, being .096, represents a linear relationship and the p-value being .001 rejects the null hypothesis, therefore, making this statistically significant. Even though there were 16 missing answers for ACEs and 2 missing answers for physical fight, this did not influence the data.

For RQ2, the question, “Is there a correlation between how many times a youth has been in a physical fight on school property (physical fight) and how often has an adult in your home ever sworn at you, insulted you, or put you down (ACEs)”; analyzes if there is a correlation between if a youth has been in a physical fight on school property and if an adult they live with has ever verbally abused them, which is an ACE. The Pearson Correlation, being .530, represents a linear relationship and the p-value being .000 rejects the null hypothesis, therefore, making this statistically significant. Even though there were 2 missing answers for physical fight and 12 for ACEs this did not influence the data.

For RQ3, the question, “Is there a correlation between a youth living with someone who was depressed, mentally ill, or suicidal (ACEs) and how many times within the past 12 months a youth has purposely hurt themselves without wanting to die, such as cutting or burning yourself on purpose (mental health)”; analyzes if there is a correlation between if a youth was living with someone who has mental health issues, which is an ACE, and if the youth had mental health issues. The Pearson Correlation, being .676, represents a linear relationship between and the p-value being .000 rejects the null hypothesis, therefore, making this statistically significant. Even though there were 9 missing mental health answers and 57 ACE questions this did not influence the data. Overall, the data showed there is a correlation that ACEs can hinder a child’s mental health and behavior.

Section 4: Application to Professional Practice and Implications for Social Change

Delinquency, school behavior issues, difficulty concentrating, and increased school absences are additional symptoms of trauma to be addressed in schools (Maynard et al., 2019). The data implicates a significant correlation between mental and behavioral health and ACEs. Based on the results of the study, there must be further support implemented in schools to aid students' mental health and address behaviors. It is important is to address the root causes of behaviors before they occur (Srivastav, Strompolis, et al., 2020). More awareness is needed regarding the feasibility and significance of primary prevention of ACEs (Srivastav, Strompolis, et al., 2020). Addressing childhood adversities can build resilience across multiple levels of influence to promote health, equity, and well-being (Srivastav, Spencer, et al., 2020). There is a multi-level approach needed to improve ACEs from a public health perspective, which includes understanding, support, inclusion, connection, and growth (Srivastav, Spencer, et al., 2020).

Key Findings

The findings of this study play a critical role in the relationship ACEs have on mental health and behavior. The first research question addressed whether there was a correlation between how many times a youth has been in a physical fight on school property and whether they were hit, beaten, kicked, or physically hurt in any way by an adult. The results revealed that if a youth has experienced an ACE, such as being hit, beaten, kicked, or physical hurt by an adult, it may cause an increase of physical violence on school property. Identifying that a youth has experienced this adverse childhood

trauma might help reduce physical violence as well as implement strategies to help them heal and reduce further risks of traumatization.

The second research question was analyzed to see if there was a correlation between how many times a youth has been in a physical fight on school property and how often an adult in their home ever sworn at them, insulted them, or put them down. The results revealed that if a youth has experienced an ACE, such as an adult swearing or insulting them, it may cause an increase of physical violence on school property. Just like Research Question 1, the data suggest that identifying this adverse childhood trauma can potentially reduce physical violence as well as lead to strategies to assist them.

The final research question was analyzed to see whether there was a correlation between a youth living with someone who was depressed, mentally ill, or suicidal and how many times in the past 12 months a youth did something purposely hurt themselves without wanting to die such as cutting or burning themselves. Just like Research Question 1 and 2, the results suggest that identifying youth's ACEs can help reduce mental health struggles and prevent further traumatization.

The literature review supports these findings. Exposure to early life hardships can increase stress-related disparities throughout a person's lifetime. ACEs can impact cognitive flexibilities, hindering emotional regulation as someone gets older and reducing the stress response (Kalia & Knauff, 2020). The more ACEs a youth experiences, the more likely they are having behavioral and mental health issues (Bellis et al., 2018). Previous research also suggested a relationship among physical violence, depression, and academic performance (Kim et al., 2020); however, there is no information if ACEs were

involved, suggesting further research needs to be done regarding ACEs, mental health, and physical violence in schools. Additionally, using student reported data is important to examine ACEs and the increased risks of violence perpetration and victimization (Forster et al., 2020). The literature supports my key findings and the need for more evidence-based data. There is also a need of consistency in research surrounding ACEs and exposure to physical violence. Further, there is a need for further evidence-based strategies for prevention (Fagan, 2020). The results suggest that there is a need to further examine how to identify ACEs and how ACEs can hinder mirrored behavior of physical violence and mental health issues among youth. This is critical to reduce traumatization as well as prevent possible trauma from occurring before it begins.

Limitations of the Study

The concept of ACEs is conceptually new. There are data and secondary sources available; however, this is still a growing public health issue, and as with all new concepts, there are challenges and barriers to confront with a lack of evidenced-based data and resources (Becker-Blease, 2017). Thus, one way the study was limited was identifying current trends in youth solely using data from high school students. Data are almost non-existent in younger youth, such as middle school, which would have been beneficial to further identify trends with a younger age.

A limitation to the study is a correlational research method was used in the design of the study. A correlational research method cannot determine what variable will have the most influence on another. A correlational research method can be used to make predictions. It is difficult to determine if adverse childhood experiences caused an

influence on physical violence and mental health. A correlational research method can determine if there is a potential relationship between the variables, however, it does not determine a causation between the relationships of the variables.

Learning about a person's trauma provides information about their experiences resulting in dysregulation and symptoms that do not always correspond to their situation, specifically the mind-body system. These experiences can decrease reactivity and limit service providers' ability to design interventions and practical skills – which is an essential building block for wellbeing and modulating reactivity. The self-regulation of the mind-body system relies on the attention of individual patterns of activating the mind and calming of the body. There are two primary objectives. The first primary objective is by having an immediate, feasible way to manage and reduce symptoms of distress to activate clinical intervention. The second primary objective is to use neuro-education as a resource to understand symptoms and behaviors to motivate skills in practice to utilize neuroplasticity to re-wire increased resilience and decrease power stressors that re-traumatize reactivity (Leitch, 2017). This sensory information of what trauma and self-regulation does makes it critical to manage trauma and continue to research trauma intervention methods as an aid to improve lives and reduce further public health risks (Leitch, 2017). This information is significant to further understand behavior issues and mental health in youth. This study is not a guarantee that a child who is battling mental health or behavioral issues is in trauma but educating how to identify the key signs of trauma and learning more about how we can reduce the risk of violence and improve mental health which can improve the overall quality of life in youth.

Recommendations

The data in this study shows there is a correlation between high school students with ACEs and physical violence, as well as ACEs and mental health. According to the National Association of School Psychologists (2016), given the “prevalence of childhood adversity and trauma, promoting trauma-sensitive school approaches has the greatest potential to positively impact all students, regardless of trauma history. Trauma-sensitive schools promote (a) feelings of physical, social, and emotional safety in students; (b) a shared understanding among staff about the impact of trauma and adversity on students; (c) positive and culturally responsive discipline policies and practices; (d) access to comprehensive school mental and behavioral health services; and (e) effective community collaboration”. In section 4108 of Every Student Succeeds Act, in Activities to Support Safe and Healthy Students, it is discussed the dire need to implement evidence-based trauma-informed practices for students and increase trauma-informed training to educators and administrators (114th Congress of the United States of America, 2019). This bill supports the recommendation that school leaders and employees should incorporate trauma in their policies and procedures every day. This is important to have positive educator response that encourages the physical, social-emotional, mental, and academic safety of the student and without trauma-informed policies and procedures there is a greater chance that educators can misinterpret and punish students for misbehaviors while mistakenly retraumatizing a student (Phifer & Hull, 2016).

Many of the various issues in children who experience trauma overlap when they are in school and are in need of greater resources. I recommend that the trauma-informed

care framework of treatment and the core of its organizational structure of identifying ACEs can improve school success rates and promote search and evaluation designs intended to create patterns of enhancing the decrease of distress and the potential for re-traumatization (Leitch, 2017). It is critical not only to implement trauma-informed care in schools to not only assist with identifying an ACE, but to assist to intervene as well. This is important to enhance student support for the growing awareness of trauma and how exposure to trauma affects children at a young age (Overstreet & Chafouleas, 2016). In a compilation of research to support trauma-informed approaches to school service delivery, the research shows that current evidence-based data for trauma-informed schools is limited by exclusive reliance of uncontrolled or advocacy-driven evaluation studies that creates sound, objective knowledge of implementation processes; and evidence-based outcomes to ensure those efforts result in expected outcomes (Overstreet & Chafouleas, 2016). There is a significant need to apply trauma-informed practice by increasing education in school services and increasing education of trauma, by improving the implementation methods in schools, as well as provide greater quantitative studies associated with trauma-informed care practices.

The gap between applying trauma-informed practice in school services and increasing education requires further evidence-based research to promote trauma-informed practice. Current policies, practices, and programs offer strategies to increase service delivery climates of empathy and compassion for school service workers to work with individuals and families facing trauma – however, it does not implement into practice, and the question is why and how this can be done (Leitch, 2017). Using the

socio-ecological model connects ACEs and trauma-informed care. With trauma-informed care, instead of focusing on what is wrong with an individual, it is changing the approach to ‘what happened to them’ to create social change in action. It focuses on a therapeutic oriented service instead of disciplinary action (Spratt & Kennedy, 2020). For example, if a child is in a classroom and has an outburst that stems from a phrase their teacher says or the positioning from a hand during a high five, there is an excellent chance that an individual who is not trauma-informed will believe there is a behavior issue and may not identify there is a past trauma and how to approach it. Types of negative behaviors that can stem from trauma are socio-emotional dysregulation, difficulty forming relationships with peers and teachers, poor academic success, youth violence, disengagement in the classroom, etc. Using a trauma-informed lens can help school personnel and mental health professionals proactively prevent and deescalate various negative behaviors that would impact students' success (Lang et al., 2015).

There are five principles to the trauma-informed framework. The principles are safety, transparency and trustworthiness, choice, collaboration and mutuality, and empowerment. Within these principles are elements that demonstrate the base of trauma-informed interventions. The principles can help practitioners realize the impact of trauma, recognize the signs and symptoms of trauma, respond by interpreting, knowledge of trauma-informed practices, and resisting re-traumatization. My study suggests there is a need to further identify ACEs, as the data shows there is a significance between mental health and ACEs, and physical violence and ACEs. It is my recommendation that a trauma-informed care approach would be a useful tool to mitigate these conditions by

overcoming barriers youth may face associated with the effects ACEs can cause. This tool can be useful to have practitioners and school officials trained to identify symptoms of behavior in trauma and how to react can enhance youth quality of life and decrease the level of distress for youth. This is beneficial as a student survey is not conducted every year including ACE questions.

The use of trauma-informed practices is a suggestion to improve ACEs and a child's overall quality of life. This can be done by articulating trauma-informed care practices to have an understanding and knowing there is a trauma present. It is essential to identify ACEs and incorporate a trauma-informed approach with students to create social change, reduce violence, and aid in mental health services. There is a great need to understand trauma and identify if there is a trauma present in youth and whether a trauma-informed care is a suggested approach in this study. Emphasizing why schools should be trauma-informed provides a physical, psychological, and emotional safety for their students. The practice of Trauma-informed care is meaningful as it minimizes the potential for various forms of care to become traumatic or cause re-traumatization reactions (Marsac et al., 2016). Trauma-informed care practice advocates to address the treatment of the whole person. Trauma-informed care can help a survivor rebuild their sense of empowerment and control. Trauma-informed practice influences all providers to realize a specific impact of trauma to reduce risks of further trauma within their care (Marsac et al., 2016). It is critical to understand the widespread impact of trauma and the paths to recovery as the symptoms and signs of trauma are not often recognized and not having a clear understanding of this can potentially cause re-traumatization – which is

why trauma-informed services are significant (Marsac et al., 2016). It is also critical to address the lack of trauma-informed education, ACE knowledge, and resources available for professionals to utilize to implement this strategy (Marsac et al, 2016).

There is a gap regarding the varying attitudes of mental health disorders and the diagnostic labeling of trauma-informed care not being identified or acknowledged across communities and cultures (Leitch, 2017). The inadequate knowledge and implementation of trauma-informed care, as described from Leitch (2017), is where the gap lies in the literature. Trauma-informed practice needs further detailed information about what happens in the implementation process and with the challenges an agency can face of action during this process. Professionals who do have some forms of trauma-informed education are unaware of how to apply trauma-informed care within their practice, resulting in a gap in their practice (Leitch, 2017). This is important because it assists in building a foundation to conduct further research about trauma-informed care practice.

According to Kazlauskas (2017), there are not enough trained professionals who are familiar with trauma-informed care concepts to implement this, which results in a gap. In a breakout group from the National Council of State Education Associations (2019), educator participants cited a critical need for greater professional training to understand the impact of trauma on brain development and student behavior, as well as emphasizing the importance of trauma training in teacher training preparation programs. After extensive research of data for how many trauma-informed schools there are or how many professionals are trauma-informed there is no exact data throughout the United States, just as there is inconsistent data to identify current trends of ACEs. This suggests

there is a greater need to see where to implement further training and there is a gap for evidence-based research. In a 2015-2016 National Teacher and Principal Survey from the Department of Education, there were 49 million children enrolled in public schools and 44,210 national full-time psychologists employed by schools. The ratio is around 1,115 to 1. That data may not include experience with trauma and does not specify the specialty of the psychologist (U.S. Department of Education, 2016).

There is a gap of evidence-based research for practice guidelines of what trauma-informed care is to implement into practice (Marsac et al., 2016). My study supports this gap by using trauma-informed care to identify and respond to ACEs. While using trauma-informed care as an intentional practice, this can help to reduce or eliminate the gap (Raymond, 2019). According to Overstreet & Chafouleas (2016), there is a gap in professional training to educators and school personnel; as well as meaningful tools to measure the significance of training. Since President Obama's Every Student Succeeds Act of 2015, there is training involved in these agencies before implementation begins. My recommendation is there is a greater need to implement more evidence-based research consistently to continue to monitor current trends of youth who experience ACEs.

Barriers toward conventional trauma-informed approaches include a lack of available training, acknowledgment of the model, and unclear practice guidelines as trauma is still a relatively new field, which shows a gap in practice and understanding how to approach trauma (Becker-Blease, 2017). By reducing barriers, it reduces optimal outcomes to reduce ACEs and to influence service systems (Substance Abuse and Mental Health

Services Administration, 2014). The gap shows how ACEs can be implemented to disclose previous trauma to increase positive treatment outcomes (Leitch, 2017). There were no data from the ACE study in regard to the protective and strength-oriented factors, which can limit the factors of understanding that can shape service delivery and research (Leitch, 2017).

These principles were used in Walla Walla Public Schools in Washington State. Among these objectives were to create conditions aimed at overcoming barriers from ACE and increasing youth resilience, creating safe, non-judgmental social environments that are respectful and warm, build personal skills that initiate the development of socio-emotional regulation that increases self-awareness, implementing mastery skills that involve problem solving and self-sufficiency while fostering learning and accountability skills (Longhi & Brown, 2017). Data is collected from an annual survey distributed by the Educational Success Survey from Walla Walla Public Schools for educators, students, and parents to improve trauma-informed practices through their success indicators goals for social and emotional needs. According to Plumb et al., 2016), within a year of implementation of a trauma informed approach, there were only 135 suspensions and 30 expulsions. Prior to the trauma informed approach there were 798 suspensions and 50 expulsions (Plumb et al., 2016). Within five years office discipline referrals reduced to 95 from the original 600 office discipline referrals (Plumb et al., 2016).

Implications for Social Change and Applying to Practice

Identifying trauma early on can reduce risks of re-traumatization and increase the rate of recovery while also reducing the risk of adverse life events and negative health or

life problems. This can ultimately create positive social change in communities and in the lives of youth (Spratt & Kennedy, 2020). If we can identify trauma and implement early interventions in local settings, we can create a safe place for children to heal and grow; further creating a space of social change (Leitch, 2017). There is not only a need to identify trends in high school students but to identify in younger youth to reduce risks associated with trauma earlier before it negatively affects a child's life and the community. Assessing priority health risk behaviors that contribute to the leading causes of morbidity and mortality rates can also measure the progress towards reaching the national health objectives for the Healthy People 2020 initiative (CDC, n.d.-b). This is significant to identify trends in youth health risk behaviors but to also reduce possible future risk behaviors if identifying risks associated with ACEs and implementing interventions are initiated at a younger age.

Closing the gap between knowledge and practice in delivery services requires additional education for personnel about trauma and the impact ACEs plays on a child's development (Raja et al, 2015). It is important to employ skills and strategies in practice to prevent and reduce the psychological, emotional, and physical effects it has on children (Raja et al, 2015). There is a great need to increase trauma awareness in the classroom to expand the multi-teared network of support. According to Thomas et al., (2019); this requires more teacher and school personnel education, changes to policies and procedures, and positive and restorative responses to negative behaviors. There is a great need of additional evidence-based data to support these recommendations to further

a growth of literature which I plan to explore in years following my completed dissertation.

Conclusion

The purpose of this study was to examine the effect ACEs can have on mental health and behavioral issues in youth. The study focused on current trends and data that ACEs can have on youth. Data was collected over a three-month period in 2019 with about 33 high schools in Nevada participating. There was a size of 1,409 students from random classes that participated. The data showed there was a relationship between ACEs and physical violence, as well as ACEs and mental health. This chapter discusses my findings, recommendations, limitations, and conclusions.

My quantitative correlational analysis successfully identified a significant relationship between my independent and dependent variables. In the data I found there is a correlation between youth who experience ACEs within their home environment and their mental health. I also found there is a correlation between youth who experience ACEs within their home environment and their physical behavior at school. Their findings suggest that there is a need to implement strategies and early intervention to youth in school settings in a sense to look at the child's entire daily environment if there are behavioral and mental health issues identified in school settings. By conducting and analyzing my research, I assisted in filling the gap to identify potential ACEs in a child's life and measuring the effect ACEs has.

Trauma-informed care focuses on identifying and measuring ACEs by recognizes symptoms of trauma and effectively listening to cues – which aligns with the foundation

of my study as the survey questions related to ACEs is used to recognize systems of trauma and effectively listening to cues. This can be beneficial in assisting children in the future to receive additional support and implementing strategies in school and social settings to guide them through their trauma stemming from ACEs. I recommend these interventions because if we can implement trauma-informed approaches like what Walla Walla accomplished in Washington State this can reduce barriers, create social change, and improve success rates among students.

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Appendix: 2019 Nevada High School Youth Risk Behavior Survey

This survey is about health behavior. It has been developed so you can tell us what you do that may affect your health. The information you give will be used to improve health education for young people like yourself.

DO NOT write your name on this survey. The answers you give will be kept private. No one will know what you write. Answer the questions based on what you really do.

Completing the survey is voluntary. Whether or not you answer the questions will not affect your grade in this class. If you are not comfortable answering a question, just leave it blank.

The questions that ask about your background will be used only to describe the types of students completing this survey. The information will not be used to find out your name. No names will ever be reported.

Make sure to read every question. Fill in the ovals completely. When you are finished, follow the instructions of the person giving you the survey.

Thank you very much for your help.

Directions • Use a #2 pencil only.

- **Make dark marks.**
- **Fill in a response like this: A B ● D.**
- **If you change your answer, erase your old answer completely.**

1. How old are you?
 A. 12 years or young
 B. 13 years old
 C. 14 years old
 D. 15 years old
 E. 16 years old
 F. 17 years old
 G. 18 years old or older
2. What is your sex?
 A. Female
 B. Male
3. In what grade are you?
 A. 9th grade
 B. 10th grade
 C. 11th grade
 D. 12th grade
 E. Ungraded or other grade
4. Are you Hispanic or Latino?
 A. Yes
 B. No
5. What is your race? **(Select one or more responses.)**
 A. American Indian or Alaska Native
 B. Asian
 C. Black or African American
 D. Native Hawaiian or Other Pacific Islander
 E. White
6. How tall are you without your shoes on?
 Directions: Write your height in the shaded blank boxes. Fill in the matching oval below each number.

Feet	Inches
③	①
④	①
⑤	②
⑥	③
⑦	④
	⑤
	⑥
	⑦
	⑧
	⑨
	⑩
	⑪

7. How much do you weigh without your shoes on?
Directions: Write your weight in the shaded blank boxes. Fill in the matching oval below each number.
8. Are either of your parents or other adults in your home serving on active duty in the military?
A. Yes
B. No

Weight		
Pounds		
①	①	①
①	①	①
②	②	②
③	③	③
	④	④
	⑤	⑤
	⑥	⑥
	⑦	⑦
	⑧	⑧
	⑨	⑨

9. Do you currently qualify for or get free or reduced price lunches at school?
A. Yes
B. No
C. Not sure

The next 5 questions ask about safety.

10. During the past 30 days, how many times did you **ride** in a car or other vehicle **driven by someone who had been drinking alcohol**?
A. 0 times
B. 1 time
C. 2 or 3 times
D. 4 or 5 times
E. 6 or more times
11. During the past 30 days, how many times did you **drive** a car or other vehicle **when you had been drinking alcohol**?
A. I did not drive a car or other vehicle during the past 30 days
B. 0 times
C. 1 time
D. 2 or 3 times
E. 4 or 5 times
F. 6 or more times

12. During the past 30 days, how many times did you **ride** in a car or other vehicle **driven by someone who had been using marijuana** (also called pot, weed, or cannabis)?
- 0 times
 - 1 time
 - 2 or 3 times
 - 4 or 5 times
 - 6 or more times
13. During the past 30 days, how many times did you **drive** a car or other vehicle **when you had been using marijuana** (also called pot, weed, or cannabis)?
- I did not drive a car or other vehicle during the past 30 days
 - 0 times
 - 1 time
 - 2 or 3 times
 - 4 or 5 times
 - 6 or more times
14. During the past 30 days, on how many days did you **text or e-mail** while **driving** a car or other vehicle?
- I did not drive a car or other vehicle during the past 30 days
 - 0 days
 - 1 or 2 days
 - 3 to 5 days
 - 6 to 9 days
 - 10 to 19 days
 - 20 to 29 days
 - All 30 days

The next 10 questions ask about violence related behaviors.

15. **During the past 12 months**, on how many days did you carry a **gun**? (Do **not** count the days when you carried a gun only for hunting or for a sport, such as target shooting.)
- 0 days
 - 1 day
 - 2 or 3 days
 - 4 or 5 days
 - 6 or more days
16. During the past 30 days, on how many days did you **not** go to school because you felt you would be unsafe at school or on your way to or from school?
- 0 days
 - 1 day
 - 2 or 3 days
 - 4 or 5 days
 - 6 or more days
17. During the past 12 months, how many times has someone threatened or injured you with a **weapon** such as a gun, knife, or club **on school property**?
- 0 times
 - 1 time
 - 2 or 3 times
 - 4 or 5 times
 - 6 or 7 times
 - 8 or 9 times
 - 10 or 11 times
 - 12 or more times
18. During the past 12 months, how many times were you in a **physical fight on school property**?
- 0 times
 - 1 time
 - 2 or 3 times
 - 4 or 5 times
 - 6 or 7 times
 - 8 or 9 times
 - 10 or 11 times
 - 12 or more times

19. Have you ever been hit, beaten, kicked, or physically hurt in any way by an adult? (Do not include being spanked for bad behavior.)
A. Yes
B. No
20. Have you ever seen or heard adults in your home slap, hit, kick, punch, or beat each other up?
A. Yes
B. No
21. How often has an adult in your home **ever** sworn at you, insulted you, or put you down?
A. Never
B. Rarely
C. Sometimes
D. Most of the time
E. Always
22. Have you ever been physically forced to have sexual intercourse when you did not want to?
A. Yes
B. No
23. During the past 12 months, how many times did **someone you were dating or going out with** force you to do sexual things that you did not want to do? (Count such things as kissing, touching, or being physically forced to have sexual intercourse.)
A. I did not date or go out with anyone during the past 12 months
B. 0 times
C. 1 time
D. 2 or 3 times
E. 4 or 5 times
F. 6 or more times
24. During the past 12 months, how many times did **someone you were dating or going out with** physically hurt you on purpose? (Count such things as being hit, slammed into something, or injured with an object or weapon.)
A. I did not date or go out with anyone during the past 12 months
B. 0 times
C. 1 time
D. 2 or 3 times
E. 4 or 5 times
F. 6 or more times

The next 2 questions ask about bullying. Bullying is when 1 or more students tease, threaten, spread rumors about, hit, shove, or hurt another student over and over again. It is not bullying when 2 students of about the same strength or power argue or fight or tease each other in a friendly way.

25. During the past 12 months, have you ever been bullied **on school property**?
A. Yes
B. No
26. During the past 12 months, have you ever been **electronically** bullied? (Count being bullied through texting, Instagram, Facebook, or other social media.)
A. Yes
B. No

The next question asks about hurting yourself on purpose.

27. During the past 12 months, how many times did you do something to purposely hurt yourself without wanting to die, such as cutting or burning yourself on purpose?
A. 0 times
B. 1 time
C. 2 or 3 times
D. 4 or 5 times
E. 6 or more times

The next 6 questions ask about sad feelings and attempted suicide. Sometimes people feel so depressed about the future that they may consider attempting suicide, that is, taking some action to end their own life.

28. During the past 12 months, did you ever feel so sad or hopeless almost every day for **two weeks or more in a row** that you stopped doing some usual activities?
 A. Yes
 B. No
29. During the past 12 months, did you ever **seriously** consider attempting suicide?
 A. Yes
 B. No
30. During the past 12 months, did you make a plan about how you would attempt suicide?
 A. Yes
 B. No
31. During the past 12 months, how many times did you actually attempt suicide?
 A. 0 times
 B. 1 time
 C. 2 or 3 times
 D. 4 or 5 times
 E. 6 or more times
32. **If you attempted suicide** during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?
 A. **I did not attempt suicide** during the past 12 months
 B. Yes
 C. No
33. When you feel sad, empty, hopeless, angry, or anxious, how often do you get the kind of help you need?
 A. I do not feel sad, empty, hopeless, angry, or anxious
 B. Never
 C. Rarely
 D. Sometimes
 E. Most of the time
 F. Always

The next 5 questions ask about cigarette smoking.

34. Have you ever tried cigarette smoking, even one or two puffs?
 A. Yes
 B. No
35. How old were you when you first tried cigarette smoking, even one or two puffs?
 A. I have never tried cigarette smoking, not even one or two puffs
 B. 8 years old or younger
 C. 9 or 10 years old
 D. 11 or 12 years old
 E. 13 or 14 years old
 F. 15 or 16 years old
 G. 17 years old or older

36. During the past 30 days, on how many days did you smoke cigarettes?
- A. 0 days
 - B. 1 or 2 days
 - C. 3 to 5 days
 - D. 6 to 9 days
 - E. 10 to 19 days
 - F. 20 to 29 days
 - G. All 30 days
37. During the past 30 days, how did you **usually** get your own cigarettes? (Select only **one** response.)
- A. I did not smoke cigarettes during the past 30 days
 - B. I bought them in a store such as a convenience store, supermarket, discount store, or gas station
 - C. I got them on the Internet
 - D. I gave someone else money to buy them for me
 - E. I borrowed (or bummed) them from someone else
 - F. A person who can legally buy cigarettes gave them to me
 - G. I took them from a store or family member
 - H. I got them some other way
38. How difficult do you think it would be for you to get cigarettes, if you wanted some?
- A. Very difficult
 - B. Fairly difficult
 - C. Fairly easy
 - D. Very easy
 - E. Not sure

The next 5 questions ask about electronic vapor products, such as JUUL, Vuse, MarkTen, and blu. Electronic vapor products include e-cigarettes, vapes, vape pens, ecigars, e-hookahs, hookah pens, and mods.

39. Have you ever used an electronic vapor product?
- A. Yes
 - B. No
40. How old were you when you first tried an electronic vapor product?
- A. I have never tried an electronic vapor product
 - B. 8 years old or younger
 - C. 9 or 10 years old
 - D. 11 or 12 years old
 - E. 13 or 14 years old
 - F. 15 or 16 years old
 - G. 17 years old or older

41. During the past 30 days, on how many days did you use an electronic vapor product?
- A. 0 days
 - B. 1 or 2 days
 - C. 3 to 5 days
 - D. 6 to 9 days
 - E. 10 to 19 days
 - F. 20 to 29 days
 - G. All 30 days
42. During the past 30 days, how did you **usually** get your own electronic vapor products? (Select only **one** response.)
- A. I did not use any electronic vapor products during the past 30 days
 - B. I bought them in a store such as a convenience store, supermarket, discount store, gas station, or vape store
 - C. I got them on the Internet
 - D. I gave someone else money to buy them for me
 - E. I borrowed them from someone else
 - F. A person who can legally buy these products gave them to me
 - G. I took them from a store or another person
 - H. I got them some other way
43. How difficult do you think it would be for you to get electronic vapor products, if you wanted some?
- A. Very difficult
 - B. Fairly difficult
 - C. Fairly easy
 - D. Very easy
 - E. Not sure

The next question asks about other tobacco products.

44. During the past 30 days, on how many days did you use **chewing tobacco, snuff, dip, snus, or dissolvable tobacco products**, such as Copenhagen, Grizzly, Skoal, or Camel Snus? (Do not count any electronic vapor products.)
- A. 0 days
 - B. 1 or 2 days
 - C. 3 to 5 days
 - D. 6 to 9 days
 - E. 10 to 19 days
 - F. 20 to 29 days
 - G. All 30 days

The next 5 questions ask about drinking alcohol. This includes drinking beer, wine, wine coolers, and liquor such as rum, gin, vodka, or whiskey. For these questions, drinking alcohol does not include drinking a few sips of wine for religious purposes.

45. During your life, on how many days have you had at least one drink of alcohol?
- 0 days
 - 1 or 2 days
 - 3 to 9 days
 - 10 to 19 days
 - 20 to 39 days
 - 40 to 99 days
 - 100 or more days
47. During the past 30 days, on how many days did you have at least one drink of alcohol?
- 0 days
 - 1 or 2 days
 - 3 to 5 days
 - 6 to 9 days
 - 10 to 19 days
 - 20 to 29 days
 - All 30 days
49. How difficult do you think it would be for you to get alcohol, if you wanted some?
- Very difficult
 - Fairly difficult
 - Fairly easy
 - Very easy
 - Not sure
46. How old were you when you had your first drink of alcohol other than a few sips?
- I have never had a drink of alcohol other than a few sips
 - 8 years old or younger
 - 9 or 10 years old
 - 11 or 12 years old
 - 13 or 14 years old
 - 15 or 16 years old
 - 17 years old or older
48. During the past 30 days, on how many days did you have **4** or more drinks of alcohol in a row, that is, within a couple of hours (if you are **female**) or **5** or more drinks of alcohol in a row, that is, within a couple of hours (if you are **male**)?
- 0 days
 - 1 day
 - 2 days
 - 3 to 5 days
 - 6 to 9 days
 - 10 to 19 days
 - 20 or more days

The next 5 questions ask about marijuana use. Marijuana also is called pot, weed, or cannabis.

50. During your life, how many times have you used marijuana?
- 0 times
 - 1 or 2 times
 - 3 to 9 times
 - 10 to 19 times
 - 20 to 39 times
 - 40 to 99 times
 - 100 or more times
51. How old were you when you tried marijuana for the first time?
- I have never tried marijuana
 - 8 years old or younger
 - 9 or 10 years old
 - 11 or 12 years old
 - 13 or 14 years old
 - 15 or 16 years old
 - 17 years old or older

52. During the past 30 days, how many times did you use marijuana?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times
54. How difficult do you think it would be for you to get marijuana, if you wanted some?
- A. Very difficult
 - B. Fairly difficult
 - C. Fairly easy
 - D. Very easy
 - E. Not sure
53. During the past 30 days, how did you **usually** use marijuana? (Select only **one** response.)
- A. I did not use marijuana during the past 30 days
 - B. I smoked it in a joint, bong, pipe, or blunt
 - C. I ate it in food such as brownies, cakes, cookies, or candy
 - D. I drank it in tea, cola, alcohol, or other drinks
 - E. I vaporized it
 - F. I dabbed it using waxes or concentrates
 - G. I used it some other way

The next question asks about synthetic marijuana use. Synthetic marijuana also is called Spice, fake weed, K2, King Kong, Yucatan Fire, or Skunk.

55. During your life, how many times have you used synthetic marijuana?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times

The next 3 questions ask about the use of prescription pain medicine without a doctor's prescription or differently than how a doctor told you to use it. For these questions, count drugs such as codeine, Vicodin, OxyContin, Hydrocodone, and Percocet.

56. During your life, how many times have you taken **prescription pain medicine** without a doctor's prescription or differently than how a doctor told you to use it?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times
57. During the past 30 days, how many times did you take **prescription pain medicine** without a doctor's prescription or differently than how a doctor told you to use it?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times

58. How difficult do you think it would be for you to get **prescription pain medicine**, if you wanted some?
- A. Very difficult
 - B. Fairly difficult
 - C. Fairly easy
 - D. Very easy
 - E. Not sure

The next 6 questions ask about other drugs.

59. During your life, how many times have you used **any** form of cocaine, including powder, crack, or freebase?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times
61. During your life, how many times have you used **methamphetamines** (also called speed, crystal meth, crank, ice, or meth)?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times
63. During your life, how many times have you used a needle to inject any **illegal** drug into your body?
- A. 0 times
 - B. 1 time
 - C. 2 or more times

The next 11 questions ask about sexual behavior.

64. Have you ever had sexual intercourse?
- A. Yes
 - B. No

60. During your life, how many times have you used **heroin** (also called smack, junk, or China White)?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times
62. During your life, how many times have you used **ecstasy** (also called MDMA)?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times
64. During the past 12 months, how many times did you attend school under the influence of alcohol or other illegal drugs, such as marijuana or cocaine?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times

65. How old were you when you had sexual intercourse for the first time?
- A. I have never had sexual intercourse
 - B. 11 years old or younger
 - C. 12 years old
 - D. 13 years old
 - E. 14 years old
 - F. 15 years old
 - G. 16 years old
 - H. 17 years old or older

66. During your life, with how many people have you had sexual intercourse?
- I have never had sexual intercourse
 - 1 person
 - 2 people
 - 3 people
 - 4 people
 - 5 people
 - 6 or more people
69. Did you drink alcohol or use drugs before you had sexual intercourse the **last time**?
- I have never had sexual intercourse
 - Yes
 - No
71. The **last time** you had sexual intercourse, what **one** method did you or your partner use to **prevent pregnancy**? (Select only **one** response.)
- I have never had sexual intercourse
 - No method was used to prevent pregnancy
 - Birth control pills
 - Condoms
 - An IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon)
 - A shot (such as Depo-Provera), patch (such as Ortho Evra), or birth control ring (such as NuvaRing)
 - Withdrawal or some other method
 - Not sure
73. During your life, with whom have you had sexual contact?
- I have never had sexual contact
 - Females
 - Males
 - Females and males
75. Some people describe themselves as transgender when their sex at birth does not match the way they think or feel about their gender. Are you transgender?
- No, I am not transgender
 - Yes, I am transgender
 - I am not sure if I am transgender
 - I do not know what this question is asking
67. During the past 3 months, with how many people did you have sexual intercourse?
- I have never had sexual intercourse
 - I have had sexual intercourse, but not during the past 3 months
 - 1 person
 - 2 people
 - 3 people
 - 4 people
 - 5 people
 - 6 or more people
70. The **last time** you had sexual intercourse, did you or your partner use a condom?
- I have never had sexual intercourse
 - Yes
 - No
72. How many times have you been pregnant or gotten someone pregnant?
- 0 times
 - 1 time
 - 2 or more times
 - Not sure
74. Which of the following best describes you?
- Heterosexual (straight)
 - Gay or lesbian
 - Bisexual
 - Not sure

The next 7 questions ask about food you ate or drank during the past 7 days. Think about all the meals and snacks you had from the time you got up until you went to bed. Be sure to include food you ate at home, at school, at restaurants, or anywhere else.

76. During the past 7 days, how many times did you drink **100% fruit juices** such as orange juice, apple juice, or grape juice? (Do **not** count punch, Kool-Aid, sports drinks, or other fruit-flavored drinks.)
- A. I did not drink 100% fruit juice during the past 7 days
 - B. 1 to 3 times during the past 7 days
 - C. 4 to 6 times during the past 7 days
 - D. 1 time per day
 - E. 2 times per day
 - F. 3 times per day
 - G. 4 or more times per day
77. During the past 7 days, how many times did you eat **fruit**? (Do **not** count fruit juice.)
- A. I did not eat fruit during the past 7 days
 - B. 1 to 3 times during the past 7 days
 - C. 4 to 6 times during the past 7 days
 - D. 1 time per day
 - E. 2 times per day
 - F. 3 times per day
 - G. 4 or more times per day
78. During the past 7 days, how many times did you eat **green salad, carrots, potatoes, or other vegetables**? (Do **not** count french fries, fried potatoes, or potato chips.)
- A. I did not eat any vegetables during the past 7 days
 - B. 1 to 3 times during the past 7 days
 - C. 4 to 6 times during the past 7 days
 - D. 1 time per day
 - E. 2 times per day
 - F. 3 times per day
 - G. 4 or more times per day
79. During the past 7 days, how many times did you drink a **can, bottle, or glass of soda or pop**, such as Coke, Pepsi, or Sprite? (Do **not** count diet soda or diet pop.)
- A. I did not drink soda or pop during the past 7 days
 - B. 1 to 3 times during the past 7 days
 - C. 4 to 6 times during the past 7 days
 - D. 1 time per day
 - E. 2 times per day
 - F. 3 times per day
 - G. 4 or more times per day
80. During the past 7 days, how many **glasses of milk** did you drink? (Count the milk you drank in a glass or cup, from a carton, or with cereal. Count the half pint of milk served at school as equal to one glass.)
- A. I did not drink milk during the past 7 days
 - B. 1 to 3 glasses during the past 7 days
 - C. 4 to 6 glasses during the past 7 days
 - D. 1 glass per day
 - E. 2 glasses per day
 - F. 3 glasses per day
 - G. 4 or more glasses per day
81. During the past 30 days, how often did you go hungry because there was not enough food in your home?
- A. Never
 - B. Rarely
 - C. Sometimes
 - D. Most of the time
 - E. Always
81. During the past 7 days, on how many days did you eat **breakfast**?
- A. 0 days
 - B. 1 day
 - C. 2 days
 - D. 3 days
 - E. 4 days
 - F. 5 days
 - G. 6 days
 - H. 7 days

The next 4 questions ask about physical activity.

82. During the past 7 days, on how many days were you physically active for a total of **at least 60 minutes per day**? (Add up all the time you spent in any kind of physical activity that increased your heart rate and made you breathe hard some of the time.)
- A. 0 days
 - B. 1 day
 - C. 2 days
 - D. 3 days
 - E. 4 days
 - F. 5 days
 - G. 6 days
 - H. 7 days

84. In an average week when you are in school, on how many days do you go to physical education (PE) classes?
- A. 0 days
 - B. 1 day
 - C. 2 days
 - D. 3 days
 - E. 4 days
 - F. 5 days

The next 5 questions ask about other health-related topics.

86. Have you ever lived with someone who was depressed, mentally ill, or suicidal?
- A. Yes
 - B. No
 - C. Not sure

88. When was the last time you saw a dentist for a check-up, exam, teeth cleaning, or other dental work?
- A. During the past 12 months
 - B. Between 12 and 24 months ago
 - C. More than 24 months ago
 - D. Never
 - E. Not sure

83. On an average school day, how many hours do you watch TV, play video or computer games, or use a computer for something that is not school work? (Count time spent playing games, watching videos, texting, or using social media on your smartphone, computer, Xbox, PlayStation, iPad, or other tablet.)
- A. I do not watch TV, play video or computer games, or use a computer for something that is not school work
 - B. Less than 1 hour per day
 - C. 1 hour per day
 - D. 2 hours per day
 - E. 3 hours per day
 - F. 4 hours per day
 - G. 5 or more hours per day

85. During the past 12 months, on how many sports teams did you play? (Count any teams run by your school or community groups.)
- A. 0 teams
 - B. 1 team
 - C. 2 teams
 - D. 3 or more teams

87. Have you ever lived with someone who was a problem drinker or alcoholic or abused street or prescription drugs?
- A. Yes
 - B. No
 - C. Not sure

89. On an average school night, how many hours of sleep do you get?
- A. 4 or less hours
 - B. 5 hours
 - C. 6 hours
 - D. 7 hours
 - E. 8 hours
 - F. 9 hours
 - G. 10 or more hours

The next 6 questions ask about your home and your school.

90. During the past 12 months, how would you describe your grades in school.
- Mostly A's
 - Mostly B's
 - Mostly C's
 - Mostly D's
 - Mostly E's
 - None of these grades
 - Not sure
91. How often do you talk to your parents or other adults in your home about your problems?
- Never
 - Rarely
 - Sometimes
 - Most of the time
 - Always
92. How often do you talk to your parents about what is right and wrong?
- Never
 - Rarely
 - Sometimes
 - Most of the time
 - Always
93. How often do you feel comfortable talking to your parents about personal matters?
- Never
 - Rarely
 - Sometimes
 - Most of the time
 - Always
94. How often do you feel close to people at your school?
- Never
 - Rarely
 - Sometimes
 - Most of the time
 - Always
95. How often are you happy to be at your school?
- Never
 - Rarely
 - Sometimes
 - Most of the time
 - Always
96. How often do the teachers at your school treat students fairly?
- Never
 - Rarely
 - Sometimes
 - Most of the time
 - Always

The next 4 questions ask about your perception of risk related to substance use.

97. How much do you think people risk harming themselves physically or in other ways when they have five or more drinks of an alcoholic beverage once or twice a week?
- No risk
 - Slight risk
 - Moderate risk
 - Great risk
98. How much do you think people risk harming themselves physically or in other ways if they smoke one or more packs of cigarettes per day?
- No risk
 - Slight risk
 - Moderate risk
 - Great risk
99. How much do you think people risk harming themselves physically or in other ways if they smoke marijuana once or twice a week?
- No risk
 - Slight risk
 - Moderate risk
 - Great risk
100. How much do you think people risk harming themselves physically or in other ways if they use prescription drugs that are not prescribed to them?
- No risk
 - Slight risk
 - Moderate risk
 - Great risk

The next 4 questions ask about your perception of parental disapproval of substance use.

101. How wrong do your parents feel it would be for you to have one or two drinks of an alcoholic beverage nearly every day?
- A. Not at all wrong
B. A little bit wrong
C. Wrong
D. Very wrong
102. How wrong do your parents feel it would be for you to smoke tobacco?
- A. Not at all wrong
B. A little bit wrong
C. Wrong
D. Very wrong
103. How wrong do your parents feel it would be for you to smoke marijuana?
- A. Not at all wrong
B. A little bit wrong
C. Wrong
D. Very wrong
104. How wrong do your parents feel it would be for you to use prescription drugs not prescribed to you?
- A. Not at all wrong
B. A little bit wrong
C. Wrong
D. Very wrong

The next 4 questions ask about your perception of peer disapproval of substance use.

105. How wrong do your friends feel it would be for you to have one or two drinks of an alcoholic beverage nearly every day?
- A. Not at all wrong
B. A little bit wrong
C. Wrong
D. Very wrong
106. How wrong do your friends feel it would be for you to smoke tobacco?
- A. Not at all wrong
B. A little bit wrong
C. Wrong
D. Very wrong
107. How wrong do your friends feel it would be for you to smoke marijuana?
- A. Not at all wrong
B. A little bit wrong
C. Wrong
D. Very wrong
108. How wrong do your friends feel it would be for you to use prescription drugs not prescribed to you?
- A. Not at all wrong
B. A little bit wrong
C. Wrong
D. Very wrong

**This is the end of the survey.
Thank you very much for your help**