2023

The Relationship Between Adverse Childhood Experiences, Hope, and Well-Being Among Rural Latine Adolescents

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This is to certify that the doctoral dissertation by

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Walden University
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Abstract

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MA, Union University, 2010

BS, University of Memphis, 2006

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Psychology

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Abstract

Considerable research has demonstrated that minority at-risk youth in rural environments experience more adverse childhood experiences (ACEs) and are more likely to suffer from poor academic performance and severe mental health issues. Results of recent studies of resilience and social support as potential mitigators of ACEs suggest that hope could also mediate these adverse effects. Hope is a component of motivation critical to goal attainment and coping with loss. This study was conducted to examine the role of hope as a mediator of the relationship between ACEs and well-being among rural Latine adolescents. Using Washington State Department of Health Healthy Youth Survey data, a purposeful sample of rural Latine students in 10th and 12th grades was created to examine the extent to which hope mediated the relationship between ACEs and well-being and indicators of academic risk moderated the mediating relationship. Data were analyzed using logistic regression. Results indicated a significant effect of hope as a mediator when ACEs scores are low, and ACEs and academic risk had a stronger influence on well-being than the mediating effect of hope. Further research on hope and other factors that can mitigate the effect of ACEs on academic performance and well-being is encouraged. The findings of this study could have implications for positive social change by guiding programs to help poor, rural adolescents who experience ACEs develop and practice hope skills that connect to their future and a societal purpose outside their own communities.

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Dedication

In dedication to my father, who believed educational institutions would be a place of safety, hope, and growth for all children and for his last blessing and encouragement to me before his passing in 2020 to finish my dissertation. In dedication to my daughter Isabella and my son Sebastian, they may know with greater confidence and hope—they can do hard things.

Acknowledgments

I want to acknowledge the Walden faculty, family members, and friends who have helped me reach this point in my academic career.

I am indebted to Dr. Marcus, who provided feedback, support, and guidance throughout the doctoral journey. I am grateful to my dissertation committee, Dr. Cox, Dr. Loun, and Dr. Tanguma, for their feedback and insights as I completed the dissertation at each step.

Lastly, I want to thank my friends and family for their continued love and support. I would like to thank my friends for always being there when I needed extra childcare support; their unwavering faith in me sustained me through my academic journey. To my son Sebastian, for braving independent play and offering hugs when I had to work overwhelming hours.

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Chapter 1: Introduction to the Study

In this final study, I examined two research questions. The first research question concerned the construct of hope as a mediator of the relationship between adverse childhood experiences (ACEs) and well-being among Latine adolescent minorities in rural academic settings (see Bryce et al., 2019; Gibson & Barr, 2015; Roesch et al., 2010). The second question was related to the extent that academic risk indicators moderate the relationship between ACEs, hope, and well-being among Latine adolescent minorities in rural academic settings.

In studies of ACEs, researchers have linked early traumatic experiences (e.g., physical abuse, sexual abuse, emotional abuse, mental illness, or substance abuse of a household member) to long-term consequences in adolescents and adults, including poor health outcomes, addiction, depression, underdeveloped cognitive flexibility, delayed physical function, and death (Felitti & Anda, 1998; Ginsburg & McClain, 2020; Hoying & Melnyk, 2016; Marks et al., 2020). ACEs have also been linked to poor academic performance (Bryce et al., 2020; Bruner, 2017; Dixson et al., 2018; Dixon et al., 2020; Garcia, 2018). Students identified with ACEs are more likely to act out in school, attend school less consistently, and at greater risk for dropping out (Dixson et al., 2018; Dixon et al., 2020; Garcia, 2018; Cozolino, 2013). More recently, researchers have examined potential mitigating risk factors and ameliorating protective factors that might offset ACEs' effects (Ginsburg & McClain, 2020).

The opportunity to implement programs and services that incorporate potentially mitigating interventions in schools serves immediate and long-term objectives for supporting the well-being of challenging students. Identifying factors that mitigate ACEs are particularly relevant for minority children in rural and urban environments. This population represents about 10%–20% of the U.S. national student body population (Castillo & Cromartie, 2020; Parker et al., 2020; Suh, 2021). Although population metrics in urban and rural areas have dramatically shifted since 2000 (Castillo & Cromartie, 2020; Parker et al., 2020), research has shown that Latine minority youth continue to struggle with low cognitive development, emotional regulation, and social anxiety, leading to school dropout (Suh, 2021; Swanson, 2008; Zeinalipour, 2021), particularly in areas of rural poverty (Ginsburg & McClain, 2020). Other studies have revealed that addiction and high-risk behaviors occur at a greater rate among minority adolescents than among non-minority adolescents (Bissonnette, 1998; Hoying & Melnyk, 2016; Marks et al., 2020; Child Welfare Information Gateway [CWIG], 2015). School-to-prison pipeline research has revealed that minority children and adolescents from impoverished backgrounds suffer from higher anxiety levels, poor social connections, and low access to advanced careers post high school (Hoying & Melnyk, 2016; Parker et al., 2020; Rocque & Snellings, 2018). The consequences of ACEs may also be revealed in Latine youths' struggles with academic performance.

Recent studies have been conducted concerning the relationship between ACEs and well-being among Latine youth focused on the negative factors that diminish well-

being (Liming, 2019; Liming & Grube, 2018; Ports et al., 2021). In contrast, I examined factors contributing to Latine adolescents' positive well-being in this study.

In sum, previous research has demonstrated that minority children are more likely to be exposed to ACEs and suffer from social stress factors, such as poverty, racism, or severe hardships **(**Kaplan et al., 2013; Marks et al., 2020); more likely to endure poor life and health outcomes (Felitti et al., 1998; Kaplan et al., 2013; Hoying, & Melnyk, 2016), systematic discrimination (Mabhoyi & Seroto, 2019; Rocque, & Snellings, 2018), and unjust incarceration (Rocque & Snellings, 2018); and are at greater risk of poor academic performance and/or failure (Dixon et al., Dixon et al., 2020; Garcia, 2018; Cozolino, 2013). Despite this, researchers and policymakers still advocate for schools to be where emotional and academic needs are nurtured and positive character traits such as hope are cultivated (Bernat, 2009; National Association of School Psychologists [NASP], 2019). Chapter 1 includes the background, problem statement, and purpose of this study. The research questions are presented along with an overview of the research design and procedures. Scope, delimitations, and methodological limitations are reviewed, followed by a brief discussion of the study's potential positive social change implications.

Background

Research into the impact of ACEs, both long-term and short-term has been conducted for decades. Little (1993) was one of the first researchers to find that 80% of adolescent mortality between ages 14 and 24 was predicated by unhealthy behaviors. Anda and Felitti's (1998) research correlated childhood traumas to mortality rates and

poor health outcomes among young adults. These findings ignited further research (McMillian & Reed, 1994; Spinazzola et al., 2005) and public awareness among health programs, academic institutes, and public service organizations and nonprofits (Ginsburg & McClain, 2020) about the long-term physical and mental health consequences of ACEs. Researchers have studied potential causal relationships between adverse school outcomes, discipline, and criminal behavior in what has become known as the school-to-prison pipeline (Dixon de Silva et al., 2020; Rocque & Snellings, 2018; Tuzzolo & Hewitt, 2006). The U.S. Children's Bureau (2015) and the U.S. Department of Health and Human Services (DHHS, 2021) released a report drawing a correlation between child abuse, neglect, and other family adversities and declines in cognitive, emotional, and physical developmental growth and increases in child mortality at a rate of 2.50 per 100,00 children in the United States. In response to these national studies and public reports, research over the last 10 years has followed one of two directions: (a) identifying protective factors such as high intelligence, easy temperament, the presence of a trusted adult, and meaningful relationships (Ginsburg & McClain, 2020) or (b) identifying risk factors like poverty, dysfunctional family life, toxic stress, and violence exposure (Harris et al., 2021) that influence adolescent and young adult well-being.

Congress, as part of the Children's Health Act of 2000, established the National Child Traumatic Stress Network (NCTSN, 2021) with an initiative encompassing three goals. First to raise the standards of care for those who have suffered from traumatic events, increase access to public health services, and finally to network providers and

researchers as partners to increase public awareness around the consequences of traumatic events to children and families. The Children's Health Act created a new direction for examining strength-based, protective care factors (Burnside & Gaylord-Harden, 2019; Burke, 2018; Centers for Disease Control and Prevention [CDC], 2018; CWIG, 2015; Ginsburg & McClain, 2020; NCTSN, 2021) that ameliorated health and quality of life among adolescents and young adults.

Historically, researchers have focused on the negative factors that diminish well-being (Liming, 2019; Liming & Grube, 2018) among adolescents in urban and rural areas. More recent research has illuminated that minority children are more likely to be exposed to ACEs (Garcia, 2018; Ports et al., 2021; Ginsburg & McClain, 2020) and suffer from social stress factors that impact their well-being, such as poverty, racism, and severe hardships **(**Kaplan et al., 2013; Marks et al., 2020). Minority children are more likely to endure poor living and health outcomes (Hoying & Melnyk, 2016; Kaplan et al., 2013), systematic discrimination (Mabhoyi & Seroto, 2019; Rocque & Snellings, 2018), and unjust incarceration (Rocque & Snellings, 2018).

There has been considerable research on social support, resilience, student–teacher relationships, and the intervening effects on well-being. Examining positive factors that might avert or mediate the relationship between early childhood experiences and well-being in at-risk minority adolescents has been a more recent trend (Ports et al., 2021; Ginsburg & McClain, 2020; Schafer et al., 2020). A promising construct that has

experienced limited use is the construct of hope as measured by the hope scale (Snyder, 1994; Snyder et al., 1997; Snyder et al., 2008).

Hope is described as an emotional appraisal of stressors that generates a cognitive assessment of various pathways around a stressor and the agentic motivation to move beyond the stressor. Hope could be an influential mediator of ACEs but has not yet been studied in this context (Bernat, 2009; McCoy & Bowen, 2015; Zeinalipour, 2021). Perhaps this research could better inform academic institutions on prioritizing and promoting well-being for at-risk Latine youth in teacher care and as an intervention to mitigate high school dropout rates among academically at-risk minority youth (U.S. Department of Education National Center for Education Statistics [NCES], 2020).

A challenge for researchers and policymakers interested in the positive factors that promote well-being is to ascertain the ability of variables like hope (as well as social support, resilience, and student–teacher relationships) to counteract the effects of existing factors that exert a substantive influence on the outcomes under study. Youth who experience ACEs who struggle in school present academic risk indicators (e.g., truancy, inappropriate behavior, poor grades) that have a negative influence on the student's well-being, academic success, and success later in life (Cozolino, 2013; Dixon et al., 2020; Garcia, 2018). Academic risk indicators may threaten students' well-being and confidence in their capacity to achieve. When students experience impaired learning, emotional dysregulation, and raised social stress due to ACEs, they can form a negative learner narrative that can become a blueprint for subsequent dysfunctional learning

experiences and patterns of poor academic success (Cozolino, 2013). Diminished educational participation combined with ACEs may intensify stress intolerance, leading to a reduced sense of well-being; however, it remains unknown the extent to which hope can mediate this relationship.

Problem Statement

This study was focused on two research questions. In the first research question, I examined the construct of hope as a mediator of the relationship between ACEs and well-being among Latine adolescent minorities in rural academic settings (see Bryce et al., 2019; Gibson & Barr, 2015; Roesch et al., 2010). In the second research question, I examined the extent to which academic risk indicators moderate the relationship between ACEs, hope, and well-being among Latine adolescent minorities in rural academic settings.

There has been limited research conducted on how ACEs influence well-being among Latine youth in the United States. This study examines the mediating impact of hope on well-being, and the moderating effect of academic at-risk status between hope and well-being for Latine, rural situated students. Rural geographic areas in other countries, or variants of Latine cultural identity (Mexican versus Argentinean), may demonstrate that other factors better mitigate ACEs among Latine adolescents specific to their cultural identities (Fraser et al., 2021; Zeinalipour, 2021). These researchers and policymakers have presented the need to identify protective factors that promote healthier development in Latine youth. Hopeful children are more likely to be resilient and become

healthier adults (Harris et al., 2021). School districts or public service organizations serving larger communities of Latine adolescents would benefit from understanding the agency thinking and pathways thinking Snyder (2000) hypothesized. Additionally, efforts to develop interventions in psychology, social work, and public health need research-based insights specific to Latine youth to encourage resilience, future-oriented perspectives, enhanced articulation of future goals, and a strong sense of hope (McCoy & Bowen, 2015).

In sum, specific research on Latine youth and the challenges they face in academic settings and in sustaining quality of life suggest that (a) ACEs are a significant risk factor for discontent, suffering, poor academic performance, and significant adult life challenges; and (b) protective variables like hope could improve well-being. In the absence of hope, ACEs contribute to academic risk behaviors such as absenteeism, poor grades, misbehaviors, and depreciated well-being among adolescents (Harris et al., 2021; Snyder, 2000; Snyder et al., 2008). Hopeful adolescents are able to regulate in-school behaviors better, focus on cognitive growth, and increase a sense of academic self-efficacy, leading to improved well-being (Cozolino, 2013). However, more research is needed to examine how hope mediates the relationship between ACEs and well-being among Latine adolescents in rural academic settings and to determine whether this relationship is sufficiently strong to diminish the moderating effect of academic risk behaviors (Bryce et al., 2019; Fraser et al., 2021; Gibson & Barr, 2015; Roesch et al., 2010; Zeinalipour, 2021).

Purpose of this Study

The purpose of this study was to examine the construct of hope as a mediator of the relationship between ACEs and well-being among Latine adolescent minorities in rural academic settings and to examine the extent to which academic risk indicators moderate the relationship between ACEs, hope, and well-being in this population. Using selected variables, archival data were exported from the Washington state Healthy Youth Survey (HYS, 2021) to conduct this study. The independent variable was ACEs, and the dependent variable was well-being. For the first research question, the mediating variable was hope. For the second research question, the moderating variable was a composite of academic risk indicators (unwanted behaviors, poor grades, absenteeism).

Research Questions and Hypotheses

RQ1: To what extent does hope mediate the relationship between ACEs and well-being among Latine adolescents in rural school districts?

$H_0$1: Hope does not mediate the relationship between ACEs and well-being among Latine adolescents.

$H_1$1: Hope does mediate the relationship between ACEs and well-being among Latine adolescents.

RQ2: To what extent do academic risk indicators (a composite of grades, behaviors, and attendance) moderate the mediating effect of hope on ACEs and well-being among Latine adolescents?

$H_0$2: Academic risk indicators do not moderate the mediating effect of hope on ACEs and well-being among Latine adolescents.

$H_1$2: Academic risk indicators do moderate the mediating effect of hope on ACEs and well-being among Latine adolescents.

Variables

The independent variables were ACEs measured by a composite score from the HYS (2021); hope measured by the Snyder et al.'s (1996, 1997) children's hope scale; and academic risk indicators measured by a composite score from the HYS (2021). The dependent variable of well-being was a composite score of psychometrically validated items from the HYS (2021; Department for the Education United Kingdom, 2019; Hsu et al., 2019). Selected demographic variables (gender, age, race, ethnicity, and rural context) were collected and analyzed to describe the sample characteristics.

Theoretical Framework

Hope has been studied as a construct within psychology since 1950 (Lopez et al., 2018; Lopez & Shen, 2021). Snyder (2000) defined *hope* as the perceived agency to engage in pathways to desired goals and the motivation to achieve those goals using agentic thinking. Researchers have demonstrated that adolescents who identify future plans demonstrate hope, which helps them self-regulate and experience greater confidence (Harris et al., 2021; Jiang et al., 2019). According to hope theory (Snyder, 2000; Snyder et al., 2008), as adolescents develop agency and pathway thinking, their levels of well-being increase along with the elevation of positive emotions, personal

confidence, and prosocial behaviors (Liu et al., 2020; Zeinalipour, 2021). In this study, I examined if hope theory functioned similarly among Latine adolescents in rural areas—in other words, whether higher self-reported cognitive agency and pathway thinking mediated the influence of adverse childhood experiences on Latine adolescents' well-being. Hope was hypothesized to function as an adaptive mechanism to support well-being outcomes, despite impoverished child environments and poor performance in school.

Nature of the Study

To address the research questions in this quantitative study, I employed a non-experimental survey research design using secondary data collected by the Washington state Department of Health (WSDH) through the HYS (2021). The HYS is a statewide effort to capture students' voices across public schools at a variety of geographic levels (state, county, educational service district, school) in the state of Washington by the WSDH, the Office of Superintendent of Public Instruction (OSPI), the Department of Social and Health Services, and the Liquor and Cannabis Board. WSDH randomly samples student participants from public schools statewide and focuses on sixth grade, eighth grade, 10th grade, and 12th grade. Questions in the survey ask for opinions about self, friends, school community, and neighborhood. The survey is anonymous, and volunteer based and includes questions about identity, sexual activity, drug use, and well-being. The 2021 HYS also included questions from the children's hope scale (Snyder et

al., 1997), a children's ACE survey, and specific questions used to measure self-reported well-being (HYS, 2021).

Survey research design is a well-recognized method for quantitative studies examining relationships among two or more variables (Burkholder et al., 2020; Jose, 2013). In mediation and moderation studies, researchers often rely on survey research methods to capture the perceptions and events of respondents; these methods have been used extensively on adolescent populations (Liu et al., 2020; Zeinalipour, 2021). The archival survey data collected by the WSDH allowed me to examine (a) how hope mediates the relationship between ACEs and well-being and (b) the moderating effects of academic risk indicators that could influence the mediated relationship (see Baron & Kenny, 1986; Hayes, 2020; Jose, 2013). Details of the analysis plan are presented in Chapter 3.

Definitions

The following definitions are important terms developed by Snyder (1994, 2000) in research relevant to the development of this study and retrieved from the *Oxford Encyclopedia of Psychology* (2009), the American Academy of Pediatrics (Ginsburg & McClain, 2020) as well as additional sources as cited.

Academic risk indicator: According to the American Academy of Pediatrics and within the context of academic institutes (Ginsburg & McClain 2020), categorized students with known trauma exposure(s) and chronic toxic stress using prevalent and specific indicators. These indicators (e.g., poor school attendance, frequent unwanted and

escalating behaviors, and a low-grade point average) are used to identify students as at-risk (American Academy of Pediatrics, 2020; Van der Kolk, 2015). These factors are correlated with ACEs and predictive of increased morbidity and adult risk factors (Felitti et al., 1998; NCTSN, 2021). Among Latine adolescents, these academic at-risk factors have a high and significant impact on school success and adult life (Harris et al., 2021; Ports et al., 2021).

Adverse childhood experiences (ACEs): Severe childhood events experienced in the first 18 years of life that have lasting negative effects on cognitive development, health, behaviors, longevity of life, and quality of life (Felitti et el., 1998; Harris et al., 2021; HYS, 2021).

Agency thinking: Entails the perceived ability to initiate and sustain movement along a pathway (Snyder, 1994, p. 8); the skill of generating multiple paths guides hopeful thinking and elucidate a route toward the desired goal.

Dosage effect: Persons who have experienced four or more ACEs have shown increased health risks for alcoholism, drug use, depression, suicide attempt, smoking, cancer, violence, and other long-term health outcomes (Felitti et al., 1998). Although Felitti et al. (1998) focused on a sample middle-class, primarily Caucasian participants, many studies have explored how ACEs can best be measured at earlier ages.

Emotions: Conceptualized as a sequela of goal-directed thoughts and actions and function as feedback regarding goal pursuits and perceived success or failure (*Oxford Encyclopedia of Psychology*, 2009, p. 323).

Goals: According to Snyder (1994, 2000), goals are those cognitive mental targets that guide human behavior and can be either abstract or real (p. 5).

High hope: Behaving with superior academic and athletic performance, greater physical and psychological well-being, and enhanced interpersonal relationships (*Oxford Encyclopedia of Psychology*, 2009, p. 323).

Hope theory: The perceived ability to produce pathways to achieve desired goals and motivate oneself to use those pathways with agentic thinking (*Oxford Encyclopedia of Psychology*, 2009, p. 323; Snyder, 1994, p. 5).

Hope (variable): Defined by the American Psychological Association and characterized in the psychological literature in various ways, including as a character strength; an emotion; a component of motivation that is critical to goal attainment; a mechanism that facilitates coping with loss, illness, and other significant stresses; or an integrated combination of these features.

Pathways thinking: The perceived ability to generate multiple routes to desired goals (Snyder, 1994, p. 6).

Risk factors: Includes a lack of mentors or adult advocates, excessive exposure to community violence, low socioeconomic status (SES), inadequate health care and career opportunities, racially diverse and economically disadvantaged, higher exposure to adverse childhood experiences, increased absence from school, lower grade-point average, and overly penalized behaviors during school (Felitti at el., 1998; Harris et al., 2021).

Rural disparity: Population groups in rural environments suffer from significant disparities in health, public resources (medical, academic, health care, etc.), and academic opportunity compared to the population overall (Dixon De Silva et al., 2020). Disparities also increase the likelihood of experiencing traumatic events, community violence, social isolation, lower SES, increased mortality rates, limited job opportunities, and developing psychopathologies (Bellamy & Meit, 2017; CDC, 2021).

Well-being: A state of happiness and contentment, with low levels of distress, overall good physical and mental health and outlook, or good quality of life (American Psychological Association [APA], 2022).

Willpower: The driving force in hopeful thinking, the mental energy that propels a person from Point A to Point B (Snyder, 1994, p. 6).

Assumptions

Assumptions in this study were based on the integrity of the WSDH data collection procedures that took place prior to accessing the data for this research. I assumed participants were given a quiet, private, test-like environment with sufficient time to complete the survey instrument used to collect the data used in this study. I also assumed participants were given language options in their native language to enhance comprehension and were provided the opportunity to self-report honestly and accurately. Furthermore, I assumed students were given access to complete the survey electronically or on paper depending on preference. Lastly, I assumed that participants were informed of the importance of the HYS's purpose and the anonymity of the survey results.

Additionally, I assumed if a student did not comprehend a question or did not answer honestly for fear of discovery, answers might not have been honestly reported. Finally, I assumed that potentially confounding variables were not overlooked.

Scope and Delimitations

For this study, the target population was Latine adolescents in rural communities in the state of Washington. While a higher level of exposure to trauma has been reported in rural areas (Dixon De Silva, 2020; CDC, 2021), community or individual traumas may not be reported from the HYS (2021) except those included within the survey focus: (a) SES, (b) presence of community or individual substance use, (c) presence or access to community or individual weapons, (d) intimate partner violence, (e) access to healthcare, or (f) home dysfunction. The HYS was selected as the data source for this study due to the high volume of adolescents participating in the study across Washington, adding greater diversity (racially, SES, age, and geographic location) than I could have accessed on my own. Latine adolescents in rural poverty areas are an understudied population due to being considered a protected politically vulnerable population due to immigration status or age bracket CDC, 2021; HYS, 2021). Latine youth experience hopelessness regarding long-term opportunities more than other demographic groups (McCoy & Bowen, 2015). Elucidating what encourages well-being and influences achievement and aspirations for minority adolescents is critical for social workers, educators, and policymakers (McCoy & Bowen, 2015).

Limitations

The primary challenge in using archival data is the limitations related to the selection of variables. Potential barriers exist in applying for review and permissions through the WSDH review process. The WSDH's choice of variables were based on the most current survey and are psychometrically valid. This survey research has been conducted since 2002, ensuring standardized administration procedures and a rigorous control process to identify and remove unlikely or fallible data points.

Significance

With this study, I hoped to address a gap in the literature regarding whether hope mediates the relationship between ACEs and well-being among rural Latine adolescents with a moderating effect of academic risk indicators. These results will contribute to an understanding of the influence of hope on mediating ACEs in at-risk adolescents in rural communities. The findings of this study may aid school districts in informing specific support services for at-risk adolescents in their districts suffering from a cumulation of adverse experiences impacting their well-being. Education has long proven to be an environment for social change by addressing inequities present for minority students. Because minorities and at-risk adolescents pose a continued risk after high school, identifying relevant factors to ameliorate care for their well-being during vulnerable stages of development could increase the quality of life for these adolescents and the overall health of communities.

Summary

In Chapter 1, I introduced the research study by providing the topic of study, a brief historical background, nature, definitions, assumptions, research questions, scope and delimitations, and reliability and validity issues. Additional sections included an explanation of study limitations and how bias and validity are addressed in the study. Issues of methodology and social relevance were addressed, and ethical issues were confronted regarding using archival data on an adolescent group of participants. In Chapter 2, the historical background and literature search are discussed. In Chapter 3, the methodology and research analysis portion are presented. In Chapter 4, I report the results of the study, data collection, and descriptive characteristics of the variables. In Chapter 5, I summariz the findings, extend a comparison between the literature and findings, and offer recommendations for further research grounded in the strengths and limitations of the current study.

Chapter 2: Literature Review

Introduction

In this study, I focused on two research questions. With the first research question I examined the construct of hope as a mediator of the relationship between ACEs and well-being among Latine adolescent minorities in rural academic settings (see Bryce et al., 2019; Gibson & Barr, 2015; Roesch et al., 2010). In the second research question, I examined the extent to which academic risk indicators moderate the relationship between ACEs, hope, and well-being among Latine adolescent minorities in rural academic settings. Archival data were exported from the Washington state HYS (2021) using selected variables to examine the research questions.

The problem that prompted this study was the research on psychological and health dilemmas rooted in ACEs and their impact on learning and development in the academic environment. Researchers have examined how childhood traumas emerge because of impoverished conditions and, to a greater extent, have enduring effects on adolescents and adulthood. These effects include poor health outcomes, addiction, violence, depression, and underdeveloped cognitive and emotional function (Hoying & MeInyk, 2016; Marks et al., 2020). Latine minority children in rural and urban environments have been studied as a population, representing about 10%–20% of the U.S. national student body population (Resnick & Burt, 1996; Suh, 2021). Research has shown that this group struggles with low cognitive development, emotional regulation, and social anxiety leading to school dropout (Schmitsek, 2022; Suh, 2021; Swanson,

2008). Other research has revealed that addiction and high-risk behaviors occur at a greater rate among this population than among their non-minority counterparts (Bissonnette, 1998; Hoying & Melnyk, 2016; Marks et al., 2020; U.S. & CWIG, 2015). School-to-prison pipeline research has revealed that the most at-risk students are minority children and adolescents from impoverished backgrounds (Hoying & Melnyk, 2016; Rocque & Snellings, 2018).

In recent research, scholars have begun examining the relationship between ACEs and well-being among minority youth. Most researchers focused on negative factors that diminish well-being (Liming, 2019; Liming & Grube, 2018; Ports, K. et al., 2021). Research has demonstrated that minority children are more likely to be exposed to ACEs and suffer from social stress factors that impact their well-being, such as poverty, racism, and severe hardships (Kaplan et al., 2013; Marks et al., 2020). In addition, these children are more likely to endure poor life and health outcomes (Felitti et al., 1998; Hoying & Melnyk, 2016; Kaplan et al., 2013), systematic discrimination (Mabhoyi & Seroto, 2019; Rocque & Snellings, 2018), and unjust incarceration (Rocque & Snellings, 2018). This study aimed to understand to whether extent hope mediates the relationship between ACEs and levels of well-being among at-risk Latine adolescents in rural academic areas of poverty.

For immigrants coming to the U.S., the American dream has represented an opportunity to create a better life for themselves and their families (Hill & Torres, 2010). According to the U.S. Departments of Homeland Security (DHS) and the U.S. Census

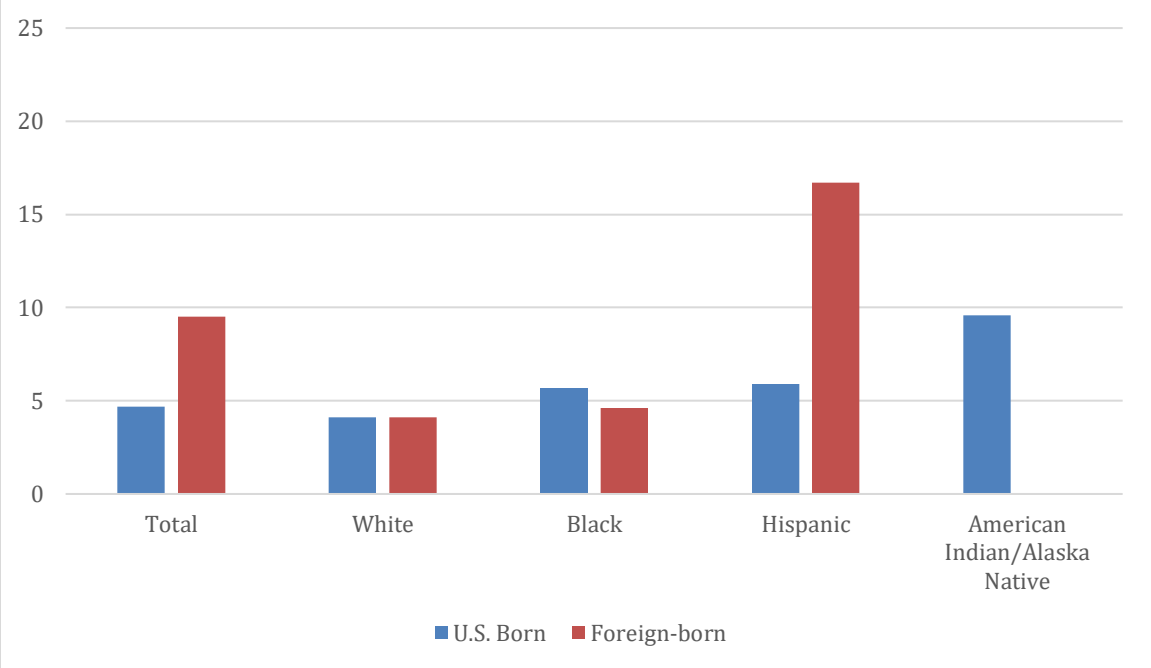
Bureau of 2020 (Migrant Policy Institute [MPI], 2020), the U.S. welcomed 62,080,044 immigrants into the country in 2020, with 23,392,800 Latin American (not including persons of Spanish descent) immigrants. Of those, 3,021,883 were between 15 to 17 years of age (MPI, 2020) and came to the United States expecting to contribute to the economic, social, and political fabric foundational to the nation. Hope was likely a salient factor contributing to their sense of purpose and belonging (Bryce et al., 2019). Despite increased attention to improving academic achievement gaps, only half of Latine students earn a high school degree (Balagna et al., 2013), and less than 13% percent have obtained a college degree since 2010 (National Center for Education Statistics [NCES], 2020).

As shown in Table 1, the dropout rate of Hispanic youth between ages 16 and 24 years old was 10.8%, calculated from those who were not enrolled in school and did not earn a high school diploma or general educational development equivalent (Department of Education [DOE], 2020). The U.S. DOE (2020) has listed common issues that predicted leaving school, including single parenthood, welfare, illegal activities, arrest, conviction, and prison. A primary variable predicting school dropout rates is SES. The probability of dropping out is elevated by three times for students from low-income homes and is as much as seven times more likely for students from the lowest SES groups (DOE, 2020). Impoverished economic conditions are also correlated with academic struggle and despair among Latine students (Dixson et al., 2018). On an individual level, as academic risk factors increase (negative behaviors, decline in grades, and absenteeism) and accumulate, a snowball effect occurs, positioning students at

greater risk of dropping out of school and experiencing deterioration in well-being and diminished hope (Dixson et al., 2018; Woodard, G. et al., 2021). Communities living in low SES simultaneously suffer from greater exposure to violence and fewer public and medical services, including health care clinics, parks, playgrounds, and other supportive services, which only perpetuate disparities (Dixson et al., 2018; NCES, 2021; Tucker et al., 2021).

Table 1

Status Dropout Rates of U.S. and Foreign-Born 16–24-year-old by Race/Ethnicity, 2019



Note. These data were pulled from the *Status and Trends in the Education of Racial and Ethnic Groups 2018* report, by de Brey, C., Musu, L., McFarland, J., Wilkinson-Flicker, S., Diliberti, M., Zhang, A., Branstetter, C., & Wang, X., 2019, National Center for Education Statistics (https://nces.ed.gov/pubsearch/)

Adolescents living in impoverished rural and urban areas also endure more significant adversity, with many barriers hindering developmental processes and stunting emotional well-being (Garcia, 2018; Liu et al., 2019; Love, 2019). These developmental exposures have been identified as ACEs (Felitti et al., 1998). For example, in one body of research, examinations were conducted into developmental effects of exposure to violence resulting in increased youth aggression, violence, and mental illness (Bruner, 2017; Coggshall et al., 2013). In other research, findings demonstrated how ACEs affect conduct problems and oppositional behaviors that negatively impact academic performance (Dixson et al., 2018; Tuzzolo & Hewitt, 2006).

Over time, prolonged and unmitigated stress become toxic to brain function, impairing social and emotional understanding (CDC, 2018; CWIG, 2015; Van der Kolk, 2015). When barriers such as poverty, lack of academic support, ACEs, experiences of prejudice, and discrimination hinder Latine students' progress, their internal health is also negatively impacted. These students are internally hijacked by hormones cortisol and estradiol, which can lead to behaviors like catatonic expression, anxiety, anger, and increased intolerance (CWIG, 2015; Love, 2019).

To encourage graduating Latine American adolescents to attend college, the U.S. Department of Agriculture (2021) donated $12 million to serve college institutions attracting Latine students into careers and higher education institutions. Nonetheless, only 60% of Latine students complete high school, with high school dropout rates increasing, possibly due to an internalized sense of failure and lack of purpose noted among these

adolescents (Kohler & Lazarin, 2007; Martinez, 2003; Swanson, 2008; Schmitsek, 2022). Research has shown that Latine adolescents are not achieving academically at the same rate as their White counterparts (Kohler & Lazarín, 2007). As the fastest growing demographic enrolled in public schools within the U.S. (MPI, 2020), Latine students are at risk of internalizing a sense of failure and mediocrity as they experience diminished opportunities academically and socially (Martinez, 2003).

Researchers have also examined factors thought to counterbalance or ameliorate the toxic effects of ACEs, including social, environmental, and internal factors (Bernat, 2009; Liming & Grube, 2018). These factors—such as resilience, social support, and mentoring programs—are believed to improve levels of well-being in at-risk adolescents and influence greater academic success (Bissonnette, 1998; Lopez et al., 2018). Researchers, policymakers, and academic stakeholders have pointed to the need for more research in this area (Lopez & Shen, 2021). In this research study, I focused on hope as a possible ameliorating construct in mediating the consequences of ACEs and well-being in at-risk youth (see Bryce et al., 2020; McCoy & Bowen, 2015; Snyder, 1994).

In this chapter, I describe the literature search strategy and provide a detailed review of hope as a theoretical framework. A description of Bronfenbrenner's theory follows this as a conceptual framework for understanding how well-being is nourished in the context of community. Then I present a review of the variables in the literature: ACEs, academic risk indicators, cumulative impact on well-being, adolescent well-being in special minority groups, and hope as a construct to understand a mediating relationship

between ACEs and well-being and the moderating influence of academic risk indicators between ACEs, hope, and well-being.

Literature Search Strategy

I used Walden University's library and PsycArticles, Thoreau, PsychNet, Ebscohost, Elsevier, PubMed, and Frontiers in Public Health to examine the variables and current measures and research on *positive psychology, adolescents, adverse childhood experiences, stress theories, well-being, hope,* and *moderating or mediating variables*. Other relevant terms included *resilience, interventions, at-risk youth, Latine youth, positive psychology theories, neurobiological responses to stress and trauma, posttraumatic stress disorder (PTSD),* and *trauma*. Google Scholar provided broad direction and access to topics on trauma relevant to the specific developmental stage of adolescence and the current context on ACEs. Additionally, I used my local library to locate expert authors and landmark studies on the theoretical framework and primary variables within the research. The topics of *positive psychology* and *adolescent trauma* were researched, providing up-to-date current insights on these topics, specifically within academic institutions. On the WSDH (2021) website, I explored how educational institutions and public health centers respond to adverse childhood experiences, trauma, and adolescent stress as a public health crisis.

Theoretical Foundation

Evolution of the Construct of Hope

The construct of hope is an essential part of psychology among behavior psychologists (Mowrer, 1960), social psychologists (Erikson, 1964), neuropsychologists, cognitive psychologists, and researchers. Yale psychologist Mowrer (1960) studied behavior and learning, developed field theory, and was among the first to define hope as a pleasure-seeking emotion in response to a stimulus that may be impeded by fear. Throughout Mowrer's studies, hope was expressed as a learned emotion in response to fear, disappointment, or relief—a conditioned, dependent on a stimulus affecting subsequent behavior adaptations. Soon after Mowrer's (1960) work on psychosocial development, Erikson (1964) incorporated the concept of hope in studies on the inner strengths humans develop or the lack of these that result in mental disturbances. Hope seeded during infancy—in combination with the nurturance of love, individual will, purpose, and competence—is a virtue believed to be essential at infancy to encourage normal emotional and cognitive development. Erikson considered hope to be the earliest and most crucial virtue developed in infancy and vital to sustaining life. Hope was viewed as both a spiritual and emotional construct that expands throughout maturity and relates to hopefulness and an individual's faith throughout their life (Erikson, 1964, p. 121).

Following Erikson (1964), Stotland (1969) explored the role of hope from a cognitive schema perspective and theorized that hope was obtained only when a goal was

held of high-level importance and with a heightened belief in the attainment of it (Stotland, 1969). Gottschalk (1974) studied the correlation between hope and psychological problems and developed a hope scale. Gottschalk analyzed participants' spoken words over a 5-minute span to measure internal level of hope. This scale demonstrates positive validity between relationships and achievement, which negatively connects to increased anxiety, aggression, and social alienation in patients with psychological instability.

Breznitz (1986) was the first to examine the relationship between hope and stress or impeding stressors and found that hope has a positive impact on the health and confidence of people when enduring stress. Breznitz studied how patients anticipating biopsy results, surgery, or other intense medical procedures navigate stress and examined the role of hope as a supportive emotion when navigating the stressful waiting period between diagnosis and recovery. Through qualitative interviews, Breznitz (1986, 1999) operationalized hope into five metaphorical images described as (a) a protected area, (b) a bridge, (c) an intention, (d) a performance, or (e) an end. Breznitz believed that hope and denial are similar in their capacity to disillusion a person from reality. The conclusion reached was that hope is an ongoing process in which an individual operationalizes hope by placing positive feelings over future negative feelings (Breznitz, 1986, 1999). If persistent, hope can stimulate serious physiological changes leading to well-being and higher levels of recovery. Breznitz's (1986, 1999) studies also introduced the pleasure

principle as a criterion when a person focuses on a future goal, necessitating both a cognitive and emotional component in hoping.

Marcel (1967) studied hope in prisoners of war and found that hope was an elevated emotion to cope with circumstances in which participants felt helpless or unable to change a given situation. Marcel defined hope as something natural and central to the person. It was measured as a contrast to despair and an inner sense (Godfrey, 1987). According to Ruehlman and Wolchik (1988), an individual's hope level depends on the successful navigation of obstacles and hindrances. When in pursuit of goals, if there were experiences of continual failure, correlational and experimental studies indicated that negative emotions were measured in participants and decreased well-being.

In 1989, Staats aligned with Erikson and Stotland in his definition of hope as an interacting variable between wishes and expectations. Staats created a scale to measure hope's cognitive and affective elements, called the expected balance scale. This scale consisted of 18 items, using a 5-point Likert scale to measure hope's cognitive, affective hope, hope-self, hope-other, wish, and expect. Staats also constructed the hope index, which stresses the cognitive over the affective aspect of hope; it contained 16 items and used a 6-point Likert scale to measure the degree to which a participant wished or expected something to happen (Staats, 1989).

Hall (1990) explored the concept of hope as experienced among 11 men who were diagnosed with HIV. She defined hope as something everyone needs until "their last breath" (Olsen, 2004, p.219). Hall additionally supported Erikson's (1964) view that

hope was essential in every developmental stage of life and advocated for hope to be a measured concept in the medical field (Hall, 1990). In 1990 Averill and colleagues introduced hope as a cognitive process when the goals are attainable, low level challenging to obtain, controllable, necessary, and socially or morally acceptable (Averill et al., 1990). The stories of hope were based on the achievement of the goal. Finally, Lazarus and Folkman (Herth, 1989; 1990) helped create the Herth Hope Scale, defined as an energized mental state with action-orientated behaviors and a positive future expectation that the goal will be obtained.

Examining the opposite of hopefulness, Landis et al. (2007) looked at hopelessness among low-income urban adolescents to understand how coping strategies moderated stressors related to hopelessness. Landis et al. (2007) highlighted in the study the importance of how adolescents cope with stress and its importance on resulting well-being. Hopelessness was higher among male adolescents who resorted to three specific coping strategies- social support seeking, distracting coping, and active coping. Stressors were more highly associated with hopelessness among girls when ruminative coping was used to mediate uncontrollable stressors.

Hope Theory

The origins of hope theory stem from the scientific study of positive psychology and factors rooted in the quality of life and the study of well-being. Positive psychology is the pursuit and analysis of what characteristics make life meaningful; it focuses on individuals' strengths and positive qualities. Hope theory was constructed in the 1970s as

Snyder and his peers explored why people distance themselves from and rationalize mistakes or failures (Snyder, 2000). Snyder conducted interviews and studied why people avoid things they do not want; through this, a curiosity to understand what motivated people to attain what they wanted also expanded. Snyder (1994) spent a sabbatical exploring the reason for people's hope and conceived the hope theory. These interviews explicated two tenants of hope, pathways thinking and agency thinking (Snyder, 1994; The Oxford Handbook of Positive Psychology, 2009).

Pathways thinking is defined as the perceived ability to generate multiple routes to the desired goal or the "willpower" energy mentally motivating a person from point A to point B (Snyder, 1994, p. 6). Agency thought entails the perceived ability to initiate and sustain movement along multiple paths (Snyder, 1994, p. 8). The skill of generating many ways around a block or through a stressor, nurturing hopeful thinking such as "I can do this" (Snyder, 1994, p. 9) until a route towards the desired goal is attained, and also described as a "way power," this is the capacity for generating multiple pathways towards the desired goal. Due to people's guiding nature, the ability to form mental goals and create action sequences to achieve these goals can vary in the short or long term. Goals can also differ in importance, specificity, or value. Based on how Hope Theory hinges on both pathways thinking and agentic thinking, The Oxford Handbook of Positive Psychology (2009) defined hope as "a positive motivational state is based on an interactively derived sense of successful (a) agency (goal-directed energy) and (b) pathways planning to meet the goals; (p. 324). Snyder's thesis focused on the cognitive

power to problem solve and be solution-oriented, leading to significant behavioral changes (Hellman et al., 2013; Hellman & Gwinn, 2017; Snyder, 2000).

Snyder believed that the pathways thinking was patterned before agentic thought and was modeled by primary caregivers. This does not mean that hope was believed to be a genetic characteristic but rather a cognitive-based skill in which a person learns to take on goal-directed thinking. Snyder acknowledged that guardian figures nurtured the hope skill in early childhood, with patterns of hope solidifying as early as two years old. Snyder's research indicated that if the primary caregiver and child have a poor attachment, low levels of hope would be correlated with poor attachment levels. Snyder (1994, 2000) stated that the construct of hope was a learned thinking pattern that is both biologically rooted and socially constructed and theorized that it was a critical factor in propelling people towards growth and development.

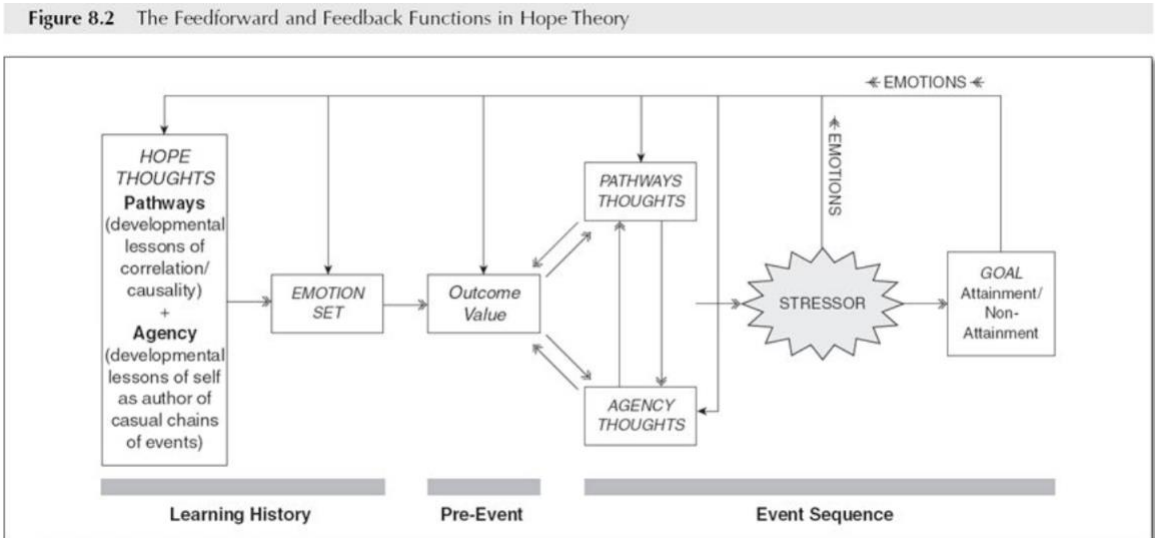
Hope Model

A review of the diagram in Figure 1 illustrates Snyder's theory, starting with pathway and agency thinking on the left. According to the model, the overall level of hope is dependent on a combination of the individual's learning history with problem-solving (feedback) and the individual's application of the learning history to a goal or challenge (feed-forward). As shown in the diagram, an individual responds to a problem or challenge first with pathways thinking based on their concepts and understanding of causal relationships, or alternately choose more agentic thinking dependent on lessons of self and life when attempting to navigate circumstances in a specific direction.

Depending on one's life experiences, an individual will lean one way or another. A particular emotion set combined with a value set drives the hope process forward. Pathway thinking or agentic thinking is applied to the obstacle or challenge, depending on whether the emotion set is positive or negative (Lopez et al., 2018; Lopez & Shen, 2021). When the hope process is interrupted by a stressor, goal attainment is inhibited. Depending on the positive emotion set, those energies encourage effort towards the goal or not. The experienced emotion set is based on personal learning history and goal achievement. If experience builds up beliefs, emotions, and experiences of success with goal pursuits, then positive emotions mobilize the person forward. In the case of failure to attain goals, the negative emotion set resurfaces when encountering a new goal, and the pursuit of this goal may be halted if the emotion set, past learning experience, and goal value are perceived as low. If the goal is perceived as a high-valued goal and the person can apply a positive emotion towards the goal, pathway thinking and agentic thinking are used, and movement is initiated.

Figure 1

The Feed–Forward and Feedback Functions in Hope Theory



Note. Adapted from *Positive Psychology: The Scientific and Practical Explorations of Human Strengths,* by S. J. Lopez, J. T. Pedrotti, and C. R. Snyder, 2019, SAGE.

Pathway thinking supports the belief that there are multiple paths around a specific problem and increases motivation toward the goal through the stressor (an obstacle or interference). People with high levels of hope can generate multiple routes to resolve a problem, depending on the difficulty and history of successful goal attainment. Confidence levels increase and function to empower the individual in the wake of an additional crisis or obstacle that can be found to attain the desired goal or resolve the issue. The agency aspect of hope is the inspirational fuel that reflects the thoughts about starting down a pathway and persisting. Agentic thinking embraces self-talk reflective of

phrases, such as “I can...” or “I am not going to be stopped” (Lopez et al., 2018, p. 258; Snyder, 1994, p. 9).

This agentic self-talk is most useful when the problem or impediment is most stressful to motivate the person towards an alternate route. As seen in the above diagram, an iterative cycle between pathway finding and agentic thinking is additive over time, as a goal-directed person builds on the pathway and agency practice. When an individual is faced with multiple obstacles and can assess the stressor, then mentally map a new way around the block, and generate the willpower and way power to persist along the new path to obtain the goal, the capacity to endure is strengthened, and the confidence in one’s capabilities increases (Snyder, 1994, pp. 6-9). Therefore, it is theorized that pathways and agentic thinking have an iterative relationship. When moving towards a goal, the cognitive process ignites pathways thinking, which supplements agentic thinking and increases pathways thinking. Emotions are only a result of this mental activity and are positive when a goal has been effectively met or attained. Alternately, negative emotions result when the cognitive process fails, and perceived blocks, setbacks, or stagnation hinder the achievement of the desired goal.

Along the path of goal attainment, a surprise stressor may emerge to jeopardize goal attainment. Pathways thinking and agentic thinking are the most iterative during this phase. Emotions function to appraise the stressor and determine whether the stressor is a challenge to overcome or an obstacle obstructing goal realization. Agency thinking will energize an individual forward, but low agentic thinking decreases overall motivation and

interrupts continued goal-pursuit. The feed-forward and feedback function of the hope model demonstrated how thoughts and emotions influence the cognitive process and disposition of the individual in a goal-pursuant situation (Snyder, 1994, p. 150).

A salient example of illustrating the fragile construction of hope can be seen in the following example. A young woman who had never faced any obstacles in life-quickly made friends and, without much effort, made good grades. She appears to be a high-hope individual because she is cheerful and states beliefs such as "everything will work out." However, when this young woman aims to marry and have children by the time she is 25 years old, she encounters obstacles such as not finding a suitable partner until she is 30 years old and then is unable to bear children. She may become depressed, select to divorce, and remain resentful and secluded. This example reveals that just because things go in a positive direction, or simply because they make goals and plans to achieve them, does not mean they have high hope. The quality of high hope in an individual necessitates a certain level of challenge and stress to develop the tenacity to assess a set of emotions and experiences and activate both will and way forward and determine the appropriate value to a goal intended to obtain. The distinction of these variables in the model above will be further explained in the discussion of the hope scale and measurement components.

Hope Scale and Measurement

The Hope Scale was developed as a self-report scale to measure levels of hope broken into three distinct components. The scale consists of a 12-item Likert Scale

measuring pathway thinking, agentic thinking, and distracters (Lopez et al., 2018). Participants respond to each item (4 for pathway thinking, 4 for agentic review, and 4 for distracters) on an 8-point scale, ranging from 1= definitely false to 8 = definitely true (Snyder, 2000). The alpha internal consistency and retest reliability have been measured in the .80 range or above (Lopez et al., 2018, p. 219). There is also a version for children, the Children's Hope Scale (Snyder et al., 1997). This version is used for children aged 8 to 15 and is limited to a six-item self-report measure. Three items focus on pathway thinking and three on agentic thinking on a 6-point Likert scale, with 1 = none of the time and 6= all of the time. The scale has been translated into Portuguese, Spanish, and English. All measures have been psychometrically validated (Lopez et al., 2018; Snyder, 2000).

Snyder and his colleagues also created the State Hope Scale (Snyder et al., 1997), consisting of 6 items, three measuring goal-directed thinking and three measuring pathways thinking. It measured from 1 - definitely false to 6 - definitely true along the 6-item self-report scale. The Hope Scales and iterations of have proven statistically valid across time even with the influence of other factors such as optimism, self-efficacy, personal growth, and self-esteem (Lopez et al., 2018; Snyder et al., 2006) or socioeconomic status and gender (Dixson et al., 2018; Snyder et al., 1997).

Subscales were constructed to capture and validate the unique cognitive processes of hope consisting of cognitive concepts, agency, and pathways. These subscales were created from the Hope Scale, the Dispositional Subscale, and the State Subscale (Snyder,

et al., 1996). Because hope was defined as a cognitive process based on a reciprocally derived sense of successful goal determination and successful planning to obtain goals, different measures were created to measure both interrelated cognitive constructs. Dispositional hope pertains to the element of time and circumstance in which a person's "temperament" of hope is measured at a given time in the person's life. Internal consistency and temporal variability of the State Hope Scale and Dispositional Hope Scale were initially statistically significant and consistent. They measured 444 participants, 211 men and 233 female students from the University of Kansas. The Cronbach alphas revealed high internal consistency on both scales (Snyder, Sympson, et al., 1996).

Application of the Hope Scales

Hope scales have been used to predict academic success (Dixson et al., 2018), academic self-efficacy (Zeinalipour, 2021), sports success, physical health, psychotherapy results (Yeung et al., 2015), an increase in intellectual function, buffer against emotional difficulties (Liu et al., 2020). and school engagement (Bryce et al., 2020; Zeinalipour, 2021). For example, Dixson et al. (2018) conducted two studies to see if hope partially mediated SES to contribute to academic achievement. The first study examined this construct among a large ethnically diverse group of adolescents. The second study examined the same construct but among a smaller participant group of non-diverse adolescents. Dixson et al. (2018) hypothesized that hope would partially mediate the effects of low SES in relation to academic achievement, with hope hypothesized as a

more substantial impact on the smaller minority participant group. The Children's Hope Scale measured 586 adolescents ranging from 11-18 years of age. Results demonstrated that low SES correlated to low academic achievement. Hope was a partial mediator in the relationship between SES and academic achievement (Dixson et al., 2018, p. 511). Hope did not have a more substantial mediating impact on the minority adolescents' perceptions of the obstacles and stressors they faced (Dixson et al., 2018).

Yeung et al. (2015) examined mediating roles of cognitive reappraisal and attentional preferences in adolescents' relationship between hope and psychosocial well-being, which was composed of happiness, anxiety, depressive symptoms, and interpersonal difficulties. Using survey research methods of 712 adolescents from Hong Kong, Yeung et al. (2015) found that attention to positive information partially mediated the relationship between hope and psychosocial well-being, particularly the measure of happiness.

Zeinalipour (2021) also conducted a study among 500 randomly sampled Iranian high school students in an academic context, exploring the effects of school connectedness and academic self-efficacy on academic performance with hope as a mediating variable. Using the Children's Hope Scale, the model showed that when students were connected in positive relationships and had a sense of belonging at school, self-efficacy levels were higher, and a sense of hope improved academic performance. The indirect relationships between variables in the model were also statistically significant, with hope reflected as a positive mediator between self-efficacy and academic

performance (Zeinalipour, 2021). Building on Snyder's belief that hope is constructed by setting goals and having positive experiences when reaching those goals. Zeinalipour (2021) agreed with Snyder (1994) and Lopez et al. (2018) that as youth achieve goals and then gain confidence that the plan will be completed, self-efficacy, and as a result, academics are strengthened.

Adaptations of Hope Theory

Roesch et al. (2010) conducted a study to examine the contribution of dispositional hope, the first version of the Hope Scale (Snyder, Sympson, et al., 1996), to the prediction of daily coping in a low socioeconomic status ethnic minority sample. Multilevel modeling analyses were used with 126 minority adolescent participants, measuring consistent use of everyday coping strategies over 5 days. Researchers found that ethnic minority adolescents high in hope–pathways used more coping strategies in dealing with daily stressors. Both components, pathways, and agentic thinking, of hope, were significantly associated with specific everyday coping strategies: hope–pathways with immediate problem solving, planning, positive thinking, religious coping, and distracting actions; and agentic with support for efforts. Research showed that hope pathways were directly and uniquely related to students' ability to problem solve, plan, process positive thinking, cope, and influence positive action.

This research is relevant to the proposed study because it applied Snyder's Hope theory to a minority participant population. It was hypothesized that participants would have less hope when their problems were not worked through or their goals attained.

When adolescents are faced with a challenge and stress is elevated, individuals high in hope can appraise the stressor as a challenge and process stressful feelings through pathways thinking. Therefore, Roesch et al. (2010) determined that cognitive flexibility was an essential coping mechanism. However, Roesch et al.'s (2010) refuted Snyder's (1994) conclusions that hope is not decreased or pathways blocked in ethnic minority populations. Roesch et al.'s (2010) study indicated that minority participants demonstrated higher levels of persistence and coping and increased levels of hope when practicing pathways thinking (Roesch et al., 2010, p. 195).

Hope is a tested quality among psychologists in positive psychology that points to growth and healing for minority adolescents facing multiple barriers (Roesch et al., 2010; Snyder et al., 2006). Snyder outlines the hope construct as a motivational factor and cognitive spark, enabling adolescents to have agency and access to mental pathways expanding their vision for attaining goals. Agency focuses on the ability to transition along a specific path(s) with motivation to pursue dreams, creating a positive affect response (Snyder, 2011). Pathways include the cognitive imagination along central or multiple paths to navigate an obstacle or obtain a goal (Snyder, 2011). Therefore, these two concepts work together, with hope-agency sparking the affective response motivating change and pathway-hope creating the mental map-making (Roesch et al., 2010; Snyder et al., 2006; Snyder, 2011).

Hope also mitigates the negative feelings caused by setbacks and adversities, sustaining positive belief that facilitates coping and continues movement forward

(Roesch et al., 2010). Hope functions as a resource or tool by which a teen can stabilize, cognitively process routes forward, and take on an optimistic view about problems. The continued practice of hope-agency and hope-pathway thinking ameliorates perceived problems, increases positive thinking, and bolsters self-efficacy as troubling events are overcome through adolescent development. Hope could potentially sustain improved coping and movement through challenges, adversity, and life obstacles for adolescents enduring hardship.

Hope Theory focuses on this iterative process between agentic thinking and pathway finding and posits that positive emotions are generated as individuals see their goals materialize (Lopez et al., 2018). The connection between cognitive pursuits and positive emotions is both correlational and causal. Due to this connection, the positive emotions evoked by achieving ambitions and valuable set goals correlate to the person's well-being. Alternately, when a person cannot accomplish their goals or navigate a critical problem, the negative emotions reported connect to poor well-being (Snyder, 1994; Lopez et al., 2018).

Conceptual Framework

Bronfenbrenner's Ecological Model

Bronfenbrenner's Ecological Model is proposed as the conceptual framework for framing the impact on Latine adolescents who experience adverse childhood experiences in social settings such as - broken families, neighborhood violence, and inadequate academic support. Bronfenbrenner (1994, 2005) provided powerful insights into how an

individual is impacted by social influences and interconnectedness between multiple systems of micro, meso, exo, macro, and chrono (Bronfenbrenner, 2005). These systems were used to create a paradigm that is the most tangible example illustrating intersectionality between individuals and their community, culture, and social environment. Providing insights into how human beings develop and nurture well-being. One leading insight supported by Bronfenbrenner's research is that individuals cannot thrive without a community of love, safety, protection, knowledge, and resource-sharing.

In Bronfenbrenner's Ecological Model (2005), the microsystem included social groups such as parents, neighborhood, and school, impacting adolescents' sense of safety and belonging. The child's beliefs and values were constructed and formed by those social structures surrounding them through their development and growth. In the mesosystem, the interactions between the child and their relationships, such as those they form with parents or teachers, are encompassed and interact within the microsystem. The next layer, the exosystem, embodies the informal social structures that influence the child, such as the neighborhood, workplace, their parents' friends, or mass media.

Cultural and socioeconomic elements are contained and function within the macrosystem and influence the child's development based on their socioeconomic status. The child's ethnicity also has a powerful impact on their development and represents one of the modems of the macrosystem. Within the larger cultural context, the macrosystem impacts whether the adolescent connects to a positive sense of hope about their future or long-term goals (Bronfenbrenner, 2005).

Lastly, the chronosystem functions as the final layer of Bronfenbrenner's Ecological Model and consists of the lifetime and historical time in which the child's development orients around major life events. An example of the chronosystem is when children are impacted at different ages if their parents were to divorce, interrupting a stage of development dependent on the time and age when the event occurred.

Guy-Evans (2020) summarized Bronfenbrenner's Ecological Systems Theory into four applicable concepts relevant to this study:

- Children's developmental stages occur in a complex arrangement and interaction of relationships between family and extended culture, laws, values, and traditions.
- A child's development had to be analyzed from the lens of its environment and interaction with the larger social constructs surrounding the child.
- Of the five systems, the microsystem (consisting of home life and school) was the most significant to the child's development.
- Bronfenbrenner viewed the child's educational environment as one of the most dynamic to their thriving and growth.

The five Bronfenbrenner systems described are both interconnected and influenced by the relationship of one system to another. The microsystem, consisting of a child's health care organizations, family, school, peers, neighborhood, and religious environment, is also inextricably connected to the chronosystem. Circumstances or events occurring in the external social environment, political environment, or significant

historical events are identified within time and impact the individual's role and development (Bronfenbrenner, 1994; Guy-Evans, 2020).

The Bronfenbrenner framework provided a holistic approach to understanding the impact of external childhood adversities on a child. A limitation of the ecological system is that the direct effect could not be assessed. It did not bear out, for example, that a child living in poverty will always result in the development of maladaptation. In another example, Mabhoyi and Seroto (2019) investigated the impact of socio-economic status on at-risk students in two secondary schools in Chitungwiza, Zimbabwe. Three male and three female students from the secondary schools engaged in semi-structured interviews to ascertain whether poor SES positively correlated with at-risk status. Academic qualities determined at-risk statuses, such as irregular school attendance, dropout rates, poor grades, and depressed academic success. The interviews supported previous research linking poor socio-economic conditions to a statistically positive causal relationship to at-risk status among adolescents. Bronfenbrenner's Ecological System Theory provided the supporting lens to comprehend how these students developed within a complex system of relationships (Mabhoyi & Seroto, 2019). Similarly, Bronfenbrenner's Ecological Theory justifies analysis of the nuanced relationship between ACEs as an environmental and social factor influencing the micro-level experience of well-being.

Literature Review Related to Key Variables

The study investigates the relationship between the variables ACEs and well-being, addressing hope as a potential mediating variable and academic risk indicator as a moderating variable. For this review of literature, studies are identified in which researchers approached these variables and analyzed the problems, strengths, and weaknesses evidenced in this literature. Additionally, the reviewed literature addresses topics relevant to the population of interest in the proposed study: at-risk Latine adolescents in rural poverty areas. In so doing, the identified gap in the literature is addressed with the proposed research.

In the following sections, the preliminary discussion focuses on variables ACEs and well-being, both as separate entities and in relationship to each other and other constructs related to academic success. The literature discusses the construct of hope (previously addressed in the Theoretical Foundation section) related to the topic of the proposed study. Next, the relevant literature on disparities and challenges affecting at-risk adolescents, adolescents living in poverty in rural areas, and Latine adolescents are addressed.

Adverse Childhood Experiences

Previous studies have examined the relationships between ACEs and health risk behaviors and disease (Amaya-Jackson et al., 2021; Felitti et al., 1998; Garrido et al., 2018). For example, researchers have investigated psychosis correlated with ACEs (Varese et al., 2012), focusing specifically on diagnosed schizophrenia in adults who

have suffered from childhood trauma (Read et al., 2001). Additionally, researchers have investigated ACEs and brain development (Geidd, 2001), ACEs and well-being, and ACEs and long-lasting effects on health, as well as the connection between ACEs and attachment to maternal figures (Ports et al., 2021) and ACEs and negative behavioral outcomes (Department of Health & Human Services, 2021; Franke, 2014; Sacks et al., 2014). Furthermore, the relationship of ACEs to poor SES has been rigorously analyzed to consider how ACEs may contribute to or diminish community capacity and thriving (Garcia, 2018; Mabhoyi & Seroto, 2019). Researchers have examined the relationship between SES and ACEs and their long-term impacts on well-being (Liming, 2019; Liming & Grub, 2018; NCTSN, 2021). This study will analyze ACEs related to an academic risk indicator, hope, and well-being.

Adverse Childhood Experience Survey

The CDC and Kaiser Permanente joined in 1998 to launch the Adverse Childhood Experience Study, the most extensive analysis of childhood trauma correlating adverse experiences to adult health and well-being (Felitti et al., 1998). For this study, the CDC and Kaiser Permanente defined ACEs as events in a person's life causing long-term neurological, emotional, biological, psychological, and psychosocial impairments (Anda et al., 2006, Felitti et al., 1998). This study involved about 17,337 participants of middle-class SES who had previously undergone a medical evaluation from their health maintenance organization (HMO) and were followed up with a public health survey called the Adverse Childhood Experience Survey. The survey included seven categories

of questions pertaining to psychological abuse, physical abuse, sexual abuse, witnessing violence, and household dysfunction. Survey results were then compared to adult risk behaviors, health indicators, and adult disease. Logistic regression was used to analyze the relationship between the cumulative number of ACEs and risk factors leading to a probable cause of death (Felitti et al., 1998). Results from the self-report surveys indicated that 11% of respondents had been emotionally abused as children, 30.1% were exposed to family alcoholism and abuse, 18.8% were exposed to mental illness, 12.5% witnessed their mothers being harmed or violently abused, and 4.9% reported drug abuse of some form in the home (Felitti et al., 1998).

Categories and Measures of ACEs

Questions from the ACEs public health survey were developed as a measure of adverse childhood experiences occurring prior to the age of eighteen years old. The abuse was measured in three separate categories- physical, sexual, or emotional - and included witnessing violence. Adversity experienced in the home was organized by types of household dysfunction. It included exposure to alcoholism or drug abuse, exposure to or caring for a parent figure with mental illness, violent treatment, criminal behavior, or extreme loss (such as that experienced during divorce). In the original ACEs study survey (see Appendix C), participants responded to each question as “yes” or “no,” with each “yes” response serving as a value of 1 score (Felitti et al., 1998). Each experience from one of these categories during childhood equates to a number correlating to an ACEs score (see Appendix C).

For example, one experience of witnessing violence in the home equates to a score of 1 on the ACEs survey. Witnessing violence in the home and growing up with an alcoholic father would cumulatively equal a score of two and so forth. An individual's score is then correlated to a dose-response relationship measuring cumulative stress between the ACE event and outcomes of negative health and well-being (alcoholism, substance abuse, depression, heart disease, vulnerability to sexually transmitted infections). With each increased exposure to an adverse childhood experience, there was a resulting increased probability of negative health and well-being outcomes across the lifespan. Participants with a score of 4 or greater had a higher prevalence of mental health disturbances, depression, anxiety, somatic disturbances, sleep disorders, obesity, and hallucinations. Moreover, substance abuse, aggressive behaviors, and sexual promiscuity increased among participants with scores of 4 or higher in the ACEs survey (Anda et al., 2006: Felitti et al., 1998). In the current study, the HYS (2021) created a unique child ACEs screener that was provided to participants and is sampled in Appendix D. The HYS ACEs survey included 11 questions instead of only 10, was modified for children reflecting on their life experiences and not adults and was recoded by the HYS (2021) in the final analysis to reflect the same values 0 = no adverse experiences or 1= presence of adverse experiences.

Felitti et al. (1998) and Anda et al. (2006) research connected this information to predict direct health outcomes, such as - more significant risk of heart disease, asthma or lung disease, obesity, and a causal relationship to the top 7 leading causes of death in the

nation. With recurring stress and scores of 4 or higher on the ACEs survey, adolescents specifically showed high corticosteroids and adrenal levels, leading to dysregulation of the nervous system resulting in reactive, aggressive outbursts (Anda et al., 2006, p 180: Felitti et al., 1998). Felitti et al. (1998) confirmed a significant relationship between ACEs and heightened adolescent experiences of suicide, alcoholism, drug abuse, sexual promiscuity, obesity, and sexually transmitted diseases. ACE was validated to directly affect children's mental, emotional, and behavioral health as they progress through developmental stages. Replications of this study done every two years and expanding across the United States since 1998 revealed the consistent prevalence of childhood adversity and confirmed negative impact on adolescents and adult health over a lifetime. The following section will review, to date, the continued application, and findings from the ACEs study.

Enduring Effects of ACEs

Due to such enduring effects from adverse childhood experiences, the UCLA-Duke University National Center for Child Traumatic Stress (NCCTS) collaborated with the National Child Traumatic Stress Network (NCTSN) in 2001 to provide education, standards of care, policy, and practice of care, and research on the effects of trauma and evidence-based practice. Their mission precisely strove to identify and serve underserved children impacted by poverty and trauma. The National Center Programs served as the data and evaluation branch of the NCTSN, and the Clinical Improvement through Measurement Initiative (CIMI) served sustained treatment, monitoring, and application of

the national data. The CIMI annually collected data on approximately 20,000 children and adolescents from the expanded NCTS Network to evaluate the long-term impact of evidence-based practice, clinical initiatives, and trauma response treatment.

Their yearly report showed that an estimated 3 million children endured abuse or neglect. When two-thirds of adolescents prior to age 16 were exposed to at least one traumatic event, and one-third of adolescents have been exposed to multiple traumatic events, the pervasiveness of ACEs and the causal relationship to emotional, behavioral, and psychosocial long-term impairments are evident. This has created urgency in the psychological, medical, and social sectors that ACEs should be recognized as an ongoing public health and social welfare epidemic with consistent health risk behaviors and diseases that manifest into adulthood and reduce the life expectancy of those with multiple ACEs (Anda et al., 2006; CIMI, 2021; Felitti et al., 1998; NCCTS, 2020). The NCCTS (2008) supported research on the development of reoccurring, chronic trauma that pervaded a child's life through adolescents into young adulthood.

Anda et al. (2006) and the U.S. Department of Health & Human Services (USDHH, 2021), Administration for Children and Families (ACF, 2021), Administration on Children (AC), Youth and Families, Children's Bureau (YFCB, 2021), and the NCTSN (2021) articulate the long-term impact on adolescents suffering from multiple adverse childhood experiences. These organizations worked in collaboration with the National Child Traumatic Stress Network (NCTSN) with the following research intentions: to build on the research and public awareness from the landmark ACEs

research, to bring a trauma-informed approach to public organizations, and to promote wellbeing and recovery of children and families who have experienced adversity (NCTSN, 2021). Data from the original ACEs study (Anda et al., 1998) showed a direct linkage between adverse childhood experiences and altering cognitive function, brain structure, and the stress response in the neurobiological system. The implications were that health and well-being were negatively impacted by maltreatment during childhood with an extended impact into adult years (Anda et al., 2006; Layne et al., 2014). The brain is impacted in specific ways due to stress exposure experiences that, when dysregulated or repeatedly overwhelmed by stress-responsive hormones, impact memory, learning, and the ability to cognitively endure normal levels of stress (Anda et al., 2006; Van der Kolk; 2015).

Van der Kolk (2015), a clinical psychologist and researcher from Boston University Medical School, offered landmark studies on topics such as PTSD and trauma. As the co-director of the National Child Traumatic Stress Network Community Program (2005), his work and colleagues (Amaya-Jackson et al., 2021; Spinazzola et al., 2005) led to the development of the new diagnosis in the stress field, developmental trauma disorder. Developmental trauma disorder is defined as ongoing chronic mistreatment or abuse multiple times throughout an individual's life (Van der Kolk, 2015). Prior to the onset of the disorder, an individual may experience what Van der Kolk called complex trauma, the multiple experiences of prolonged, developmentally adverse traumatic events (p. 2).

This diagnosis was developed by examining participants under an fMRI as well as through therapy appointments to understand the experience, both neurologically and emotionally, measuring heart rate, sweat, brain activity, and emotional responses to lived experiences of trauma. Van der Kolk (2015) stated that "for every one soldier that serves at war, there are 10 children in danger in their own homes", whose enemies are their own caretakers (p. 43). For these children, a complex form of trauma manifests in multiple areas of functioning and could include depression, mental illness, or impulsive, self-destructive behaviors.

Both studies from Anda et al. (2006) and Van der Kolk (2015) showed that dysregulation of the hypothalamic-pituitary-adrenocortical (HPA) system is caused by stress in early environments during childhood development. Neural regeneration is measured to increase when a child is nurtured in positive, safe environments, but neurogenesis is measured to decrease during deprivation or high-stress experiences. Chronic trauma interrupts neuro-biological development and the regulated flow between sensory, emotional, and cognitive information. This dysregulation then sets the stage for further social and mental health issues as increased stress will perpetuate unwanted, eruptive behaviors (Van der Kolk, 2015).

Adversity brings in a level of nuance that, dependent on sensitive levels of support, can be complex. When various systems in a person's life accumulate into chronic toxic stress, a person can collapse or implode (Felitti et al., 2019). This implosion can be seen in the disruption of regulatory systems or an explosion manifesting in

unwanted behavioral reactions (Anda et al., 2006; Van der Kolk, 2015). Whether through regulatory system disruption or behavioral maladaptation, the long-term impact affects the quality of life and long-term well-being throughout the lifespan (Anda et al., 2006).

Greeson et al. (2013) expanded the initial 10 ACEs events in their research, examining behavioral outcomes with a diverse array of traumatic events. Using a sample of 14,088 children ranging from ages 1.5 to 18 years of age and assessing exposure to traumatic events (including natural disasters, loss, school violence, and community violence) and the consequential dose relationship to behavioral, psychosocial, and emotional problems. The most common problems among Latine adolescents suffering from multiple ACEs were anxiousness/depression, somatic complaints, and withdrawn behaviors, with female Latine adolescents also demonstrating increased somatic and attention problems (Greeson et al., 2013).

ACEs Among Latine Adolescents

The NCTSN (Greeson et al., 2013**)** examined complex trauma in a sample of participants from foster care centers. Complex trauma includes adversity such as physical abuse, sexual abuse, emotional abuse, neglect, or domestic violence. From this study, 70.4% reported having complex trauma, with 11.7% reporting exposure to all types. In fact, "1/3 of children living in urban neighborhoods have PTSD, which is twice the rate reported for troops returning from Iraq war zones" (Hammond, 2020, p. 33)**.** Children identified as suffering from PTSD have cognitive problems, dysregulation of the

neurological system, and hormonal levels are altered to the degree that there is a deficit in social attachment and mood regulation (Anda et al., 2006; Greeson et al., 2013).

Greeson et al. (2013) analyzed the relationship between the total number of ACEs experienced, adolescent behavior problems, and the association between trauma types and behavior problems, as shown below. The data set was pulled from the National Child Traumatic Stress Network (NCTSN), assessing an adolescent sample of 11,028 ranging from 1.5 to 18 years of age from across the United States. As designed by the NCTSN (2021), 20 distinct trauma types from the Core Data set also included youth assessed and treated for trauma (Greeson et al., 2013). The extended list of trauma types includes: (a) traumatic loss/separation/bereavement, (b) domestic violence, (c) impaired caregiver, (d) emotional abuse, (e) physical abuse, (f) neglect, (g) sexual abuse, (h) community violence, (i) sexual assault, (j) school violence, (k) other trauma, (l) serious injury, (m) physical assault, (n) illness/medical trauma, (o) interpersonal violence, (p) natural disaster, (q) kidnapping, (r) forced displacement, (s) war/terrorism/political violence outside the United States, and (t) war/terrorism/political violence inside the United States (Greeson et al., 2013).

Logistic regression analyses indicated that as adverse childhood experiences increased, so did adolescent misconduct and behaviors in a trauma dose to the behavior response effect. Some of the increased misbehaviors were diagnosed using the Child Behavior Checklist (CBCL) and measured high rates of stress internalization, post-

traumatic stress, and clinical symptoms among participants as adolescents (Greeson et al., 2013).

Greeson et al.'s (2013) research demonstrated that age was a significant predictor among older youth, such that lower odds were seen on the aggressive behavior, rule-breaking, social problems, sleep problems, and thought problems syndrome scales compared to younger age participants. Older youth did show higher significance on the anxious/depressed, somatic complaints, and withdrawn/depressed scales. Gender showed female adolescents with significantly lower behaviors of aggressive behavior, rule-breaking, and withdrawn/depressed scales while male adolescents showed significantly higher levels. Female participants did show higher on attention problems and somatic complaints than male adolescents. Greeson et al.'s research points afresh to the concern for childhood traumas and their long-term impact on adolescents and beyond and the predictive relationship between ACEs' dose-response to externalized and internalized behavior and extended social problems.

When Anda et al. (2006) examined clinical populations among abuse victims, the PTSD effect on participants' brains showed smaller hippocampal volume, deficit hippocampus function, and poor memory activation in conjunction with high, persistent stress levels. The irregular formation was noted in the corpus callosum, cerebellum structure, and frontal cortex and measured dysregulation in the sympathetic nervous system response among the children in these studies. The younger the individual was when the abuse experiences occurred, the higher cortisol and norepinephrine hormone

levels persisted. These changes in the neural function and formation of the brain and nervous system cause multiple abnormal functions and behaviors throughout development (Anda et al., 2006).

Researchers have found that ACEs are more prevalent and the exposure dose levels of adverse experiences higher among Latine adolescents than their counterparts among African American or Caucasian adolescents (Garcia, 2018). Although the dosage rate is highest among Latine adolescents, the mental health services or intervening programs decrease (CDC, 2021; Garcia, 2018) for this vulnerable age and population. Latine adolescents' most prevalent ACEs were physical health problems, neglect, community violence, and domestic violence.

Academic At-Risk: Grades, Attendance, and Behaviors

The chapter will discuss the academic risk indicator variable in the following section. A student is considered academically at-risk when, according to the American Academy of Pediatrics (Ginsburg & McClain, 2020), the following indicators are prevalent in their academic career - poor school attendance, frequent unwanted and escalating behaviors, and a low-grade point average (American Academy of Pediatrics, 2020; Van der Kolk, 2015). These factors are correlated with ACEs and predictive of increased morbidity and adult risk factors (Felitti et al., 1998; NCTSN, 2021). Among Latine adolescents, these academic at-risk factors have an elevated and significant impact on school success and adult life (Harris et al., 2021; Ports et al., 2021).

The National Association of School Psychologists report provides annual reports on indicators for student success and well-being (NASP, 2019). Indicators of success included internalized and externalized behaviors as responses observed in academic school. Additionally, attendance rates and grades influenced academic achievement and demonstrated the presence of underlying detrimental emotional and cognitive malfunction (Jiang et al., 2019). When students associate school with a happy, safe place, the result is increased attendance and better academic achievement. Since exposure to trauma negatively impacts academic functioning, behavioral outcomes, and attendance, these three variables are essential in predicting adverse long-term outcomes (Henry et al., 2021; Ginsburg & McClain, 2020).

Ginsburg & McClain (2020) noted that school function is broadly conceptualized by academic achievement (or grades), school behaviors, attendance, and student-teacher relationships. The study examined patterns between parental involvement in urban schools and adolescents' academic functioning in low SES Latine groups. Ginsburg and McClain (2020) recruited 64 students participating in a Cognitive Behavioral Intervention for Trauma in Schools (CBITS) to understand whether female students functioned at a higher level than male students when there was high parental school involvement. The student participation age ranged from 10-14 years old with a racial/ethnic makeup of Latine or a combination of those exposed to high levels of community violence or trauma, using the Child PTSD Symptom Scale. Regression analyses indicated that females exhibited better academic school functioning when there was a significant

parental presence at school. Schmitsek (2022) also defined positive school function in a qualitative cross-national comparative study to understand the correlation of positive school factors to issues of early dropout rates. The study examined what influences sustained school engagement across three countries and led to high school completion and career success post-graduation. The term *at risk* was specifically applied to students who were on a trajectory for dropping out of school (Schmitsek, 2022).

Rocque and Snellings's (2018) research on the school-to-prison pipeline correlated negative school behaviors related to direct involvement in the juvenile judicial system. Racial disparities in which students of color are treated with more extreme punishment and the relationship between future involvements in the juvenile system indicate that ACEs are a typical prerequisite on this trajectory. The parallels between unwanted school behaviors leading to excessive expulsions, school dropout, and juvenile delinquents created mass incarceration of youth in the United States over the previous 30 years. Public schools have established discipline measures that are severe and specifically biased towards minorities, promoting disengagement and high dropout rates. Students at-risk of academic failure are statistically disproportionately entangled in the school-to-prison pipeline (Rocque & Snellings, 2018; Schmitsek, 2022; Swanson, 2008).

Well-Being Among Adolescents

In this section, the variable of well-being is discussed and defined by the American Psychological Association (APA, 2022) along with researchers Prado Gasco et

al. (2018) and Diener (2009). A review of the literature on the construct of well-being related to adolescents, specifically Latine adolescents, is relevant to the proposed study.

Well-being was defined as a state of happiness and contentment, with low levels of distress, overall good physical and mental health and outlook, or good quality of life (APA, 2022). Prado Gascó et al. (2018) examined the moderating role of feelings between trait emotional intelligence and indicators of well-being (life satisfaction, self-perceived stress, and somatic complaints). Feelings could be synonymously linked to positive affect or positive experiences. The target sample consisted of 1,273 students from 10 different high schools, ranging between 12 and 16. Results indicated that feelings did not play a moderating role in the relationship. Improved well-being was evidenced in adolescents when there was low attention to emotions, high comprehension of emotional states (high or low), and stress regulation resulting in fewer somatic complaints and higher levels of self-reported well-being (Prado Gasco et al., 2018).

Similarly, Jiang et al. (2019) examined the relationship between stressful life events and well-being in a sample of Chinese rural and urban migrant adolescents, using the stress mindset as a moderator variable in the relationship construct between stressful life events and well-being. In the study, 396 rural to migrant adolescents between the ages of 10 to 14 completed self-report questionnaires on stressful life events, stress mindsets, depression, and life satisfaction. Stressful life events were negatively associated with life satisfaction and positively associated with depression. Stressful life events also predicted levels of well-being. Results indicated that a stress mindset was a

protective factor and was positively connected to girls' well-being but not adolescent boys (Jiang et al., 2019). This study illuminates the importance that gender may play in the role of moderating well-being.

Scientists have also investigated the moderating impact of many variables on adolescent well-being, including passive social media browsing (Valkenburg et al., 2022) and stress, coping, and parental support as variables that moderate well-being (Wang et al., 2021). Duration of sleep facilitates the capacity for coping to moderate well-being (Wang & Yip, 2020). Lorenzo-Blanco et al. (2019) examined cultural stressors and the neighborhood characteristics that moderate adolescent well-being (emotional and behavioral) among Latine families. Additionally, studies have explored if emotional intelligence mitigates the potential adverse effects of the fear of terror on psychological well-being (Asad Ali Shah et al., 2018). Asad Ali Shah et al. (2018) surveyed 385 adolescents from Pakistan. Results revealed that fear of terrorism negatively correlated with adolescents' psychological well-being. The negative relationship was stronger for those adolescents with low emotional intelligence and weaker for those adolescents with high emotional intelligence.

In Kleszczeqska et al.'s (2019) study, sleep duration, sedentary behaviors, the perspective of social environment, and physical activity were examined to determine if they had a moderating impact on predicting levels of well-being. In Poland, 3,693 adolescents from secondary schools between 15 and 17 were surveyed. The analyses showed that gender, duration of sleep, and perception of the environment were predictors

of mental health. Physical activity appeared to have a protective impact if the adolescent was from a less supportive environment. Lastly, Ahmed et al. (2011) conducted structured interviews to explore if religion (private or public) moderated well-being in African American and European at-risk youth. Participants included 186 youth with poor psychological and behavioral patterns. At-risk adolescents who expressed personal religious habits proved to have a positive moderating relationship with well-being in the face of high levels of stress. For at-risk adolescents from strict families, religious practices did not buffer emotional problems caused by stress (Ahmed et al., 2011).

Well-Being Among Latine Adolescents

Well-being was defined by Diener (2009) as a positive emotional state that a person subjectively determines and is the combination of two constructs (Lopez et al., 2018; Lopez & Shen, 2021). The first construct consists of the presence of positive affect with the absence of negative affect. The second construct of well-being is the general perception of life satisfaction and is often synonymous with the quality of happiness. Over the last 20 years, the literature has focused on both the cognitive and behavioral reactions of positive affect when a person has general well-being (happy, self-assured, and attentive) combined with the negative effect of general distress (Diener, 2009).

Watson et al. (1988) designed the PANAS scale (the Positive and Negative Affect Schedule) to measure positive and negative affect as two separate dimensions of an emotional experience. They later designed the X-PANAS scale, a 20-item Likert scale, to measure the two variants of positive or negative affect. Their studies indicated that

women are impacted by the negative stressor dimension more than men resulting in physical implications such as cancer, diabetes, and cardiovascular disease. Watson et al.'s (1988) studies indicated that the positive or negative affect impacts not all cultures and that this should be examined further. As previously discussed, Jiang et al. (2019) examined the negative effect of stressful life events on psychological and behavioral outcomes among migrant adolescents to identify what protective factors might attenuate distress and ameliorate well-being for at-risk youth. Jiang et al. (2019) used multiple questionnaires to collect data on at-risk migrant youths' mindsets towards stressful life events. Similar to Snyder (2000), Jiang et al. (2019) hypothesized that the mindset or cognitive process towards adverse life events might serve as a protective skill affecting a person's capacity to engage and thrive. This cognitive lens framing pain and adversity in life depended on either a positive or a negative sense of well-being. Researchers have not yet explored whether hope mediates the relationship between adversity and well-being among Latine at-risk adolescents in various rural social contexts (Zeinalipour, 2021).

Little is known about the factors that influence well-being among Latine adolescents. Even less is known about how Latine adolescents cultivate hope and whether this mediates or moderates the effects of ACEs with compounding academic risk indicators on their well-being. There have been studies of similar variables. For example, McCoy and Bowen (2015) applied structural equation modeling to analyze how parental and neighborhood relationships fostered self-efficacy and future aspirations among a sample of 489 adolescents from Chicago. The sample of adolescents was from

concentrated poverty areas, high-risk environments, and a mixed population inclusive of white, Black, Latine, and other adolescents aged 15 years old. The results predicted that high positive relationships with family and neighbors were significantly correlated to higher levels of hope and predicted a positive impact on academic self-efficacy (McCoy & Bowen, 2015).

Liming and Grube (2018) synthesized empirical research on the correlation between early childhood ACEs, focused on the 0 to 7 years old development phase and well-being pertaining to physical growth, social, behavioral, and emotional wellness. Secondary data analyses supported Anda et al.'s (2006) research pointing to a direct causal relationship between high dose-response of ACEs to prolonged behavioral issues and poor health outcomes. Children exposed to three or more ACEs predicated increased behavioral and physical problems (Liming & Grube, 2018).

Zeinalipour (2021) explored the mediating relationship between hope and the effects of school connectedness and academic self-efficacy beliefs on academic performance among 500 Iranian adolescents. The Children's Hope Scale was used as one of the three questionnaires to survey levels of hope. The structural equation modeling evaluated a significant positive relationship between the variables, and hope was associated as a positive mediator in the relationship between self-efficacy and academic performance (Zeinalipour, 2021).

Research by Liming and Grube (2018) and Garcia (2018) emphasized negative outcomes affecting at-risk adolescents from ACEs (Anda et al., 2006). Jiang et al. (2019)

and McCoy and Bowen (2015) focus on the protective factors that might ameliorate well-being among at-risk Latine adolescents. Bronfenbrenner (1994) identified schools as second to the home as the best place for adolescents to develop positive relationships and identities. NASP (2019) promoted schools as being the most important place where students nurture positive social, emotional, and academic growth.

There is limited research exploring the relationship between ACEs and well-being among at-risk Latine adolescents and even more limited research into the ameliorating power of hope to moderate or mediate the effects of ACEs among adolescents. This study will contribute to an understanding of what factors diminish the impact of ACEs and contribute to well-being, exploring whether hope might buffer adverse childhood experiences to ameliorate well-being among at-risk Latine youth in rural academic areas.

Hope and Well-Being

In this section, the construct of hope is defined as a separate entity in relation to well-being. The literature on the construct of hope is discussed separately from the theory of hope (Snyder, 1998) and is analyzed as a moderating variable impacting well-being in adolescents. Relevant literature is presented on hope in adolescents, hope as nurtured in the Latine adolescent population, and hope and the intersection of well-being.

The American Psychological Association (2022) defines hope as the expectation that one will have positive experiences or that a potentially threatening or harmful situation will not materialize or result in a favorable state of affairs. Hope has been characterized in the psychological literature in various ways, including a character

strength, an emotion; a component of motivation critical to goal attainment; a mechanism that facilitates coping with loss, illness, or other significant stressors.

As a mechanism that facilitates coping with loss and significant stress, it is best expressed as an emotional mechanism that inspires action. Moreover, action or behavioral decisions are always first cognitive decisions ignited by emotions (Ginsburg & McClain, 2020). Immordino- Yang et al. (2009), curious to understand how the brain expressed hope, inspiration, or admiration, examined the neurophysiological reactions in an fMRI experiment exposing 13 participants (6 women and 7 men) to narratives about people's lives to measure this interplay between neurobiological and emotional responses connected to behavioral change. Narrative descriptions were intended to evoke compassion or admiration, precisely admiration as a virtue, respect as a skill, and compassion towards people's pain or physical pain. It was hypothesized that neural functions correlated to homeostatic, somatosensory, and consciousness-related systems would ignite during an emotional response to hearing about another person's pain- pain that was either psychosocial or physical. The narratives were true accounts of real people and were shared through scripted verbal readings and visual video imagery. A scanner tested each participant's blood-oxygen levels, respiration rates, and heart rates while viewing/listening to the narrative. ANCOVA random-effects analysis measured the contrast between the psychophysiological changes from the correlated changes in compassion or admiration. A bootstrap procedure was used to compare each emotion's duration and peak levels. These emotional experiences were linked to neurobiological

reactions when listening to narratives about people's conditions resulting from a significant change in the participants' behavior, increased empathy, and elevated self-awareness (Immordino-Yang et al., 2009, p. 8022).

Immordino-Yang et al.'s (2009) research found that neural functions did correlate with homeostatic, somatosensory, and consciousness-related systems, with three specific emotions creating the greatest stimuli in the limbic system and brain stem. These high stimulating emotions were compassion, empathy, admiration, and inspiration. Empathy is elevated when an individual has a cognitive appraisal of another person's life, pain, or challenge. Emotions related to another person's state of being ignited the lateral parietal cortices connecting to the musculoskeletal system and the anterior insula and lateral parietal cortices connecting to the homeostasis of the body's regulatory systems. Results suggested that social emotions are stimulated not by a particular emotional response but rather by the content or context of the event or scenario. In specific tasks associated with cognitive appraisal or perspective in social processing, the insula and inferior/posterior cingulate were activated. This could be illustrated pertaining to reported higher levels of compassion and hope when a person witnessed social pain or the presentation of virtue. This research suggests that neural mechanisms peak and are substantially co-opted when participants experience pain or reflect on or observe others' pain. The research could imply that development and operationalizing of social and moral systems in academic institutions may induce experiences of inspiration, reflection, and regulation at higher levels (Immordino-Yang et al., 2009).

To nurture the whole child, the term biopsychosocial offers a systematic view of health with an integrated perspective of the biological, psychological, and social approach to well-being (APA Dictionary of Psychology, 2022). These three human components overlap in a feedback cycle, impacting one another in complex, multi-faceted iterative layers between social influence, self-perception, and brain chemistry affecting external or internal behaviors. As discussed in the section on complex trauma, acute or chronic adverse childhood experiences manifest in behavioral, social, and health outcomes due to dosage effects (Felitti et al., 1998; Van der Kolk, 2015). As trauma has a multidimensional effect, intervening remedies such as hope must potentially ameliorate the adolescent's overall well-being. Recently, the neurological underpinnings of hope have been analyzed to determine the impact on dimensions of emotional and cognitive function.

Further research by Immordino-Yang and Yang (2017) shows that with social neuroscience, a complex phenomenon such as hope or trauma can be interpreted through a biopsychosocial perspective in which emotional experiences are processed through the broader context of culture, in turn shaping the biological responses. The connection between neurobiological interactions and social behavior has provided some evidence that hope is not merely a cognitive habit or willpower but is also rooted in neurochemical and neurobiological functions (Immordino-Yang and Yang, 2017). Immordino-Yang et al.'s research categorized the construct of hope as a strong positive emotion that can have a facilitative role in guiding individuals to introspection, regulation, and even prosocial

choices as they inspect their behavior and long-term goals. This research is relevant to this study by demonstrating that social emotions such as hope are foundational to social and moral behavior and could contribute to complex layers of healing among participants.

Based on past research (Fraser et al., 2021; Zeinalipour, 2021) and hope theory (Snyder, 2003; Snyder, 2011; Lopez et al., 2018), hope may have predictive value in understanding well-being in adolescents. Hope has been reported to ignite positive thinking and positive emotions, leading to the improved well-being of adolescents (Lopez et al., 2018; Lopez & Shen, 2021; Snyder et al., 2006). This research is relevant to examining how hope may serve as a mediating construct between adverse childhood experiences and well-being. When emotions themselves can evoke and guide prosocial behavior, promoting a potential need for deliberate development of hope practices in schools.

Disparities Among Children in Impoverished Rural Areas

The final section discusses striking disparities and obstacles experienced by the Latine community in rural academic settings. Rural academic communities offer a unique perspective on community thriving and academic achievement. The following research examines the geographic effect on the Latine adolescent community.

The CDC (2021), in a recent report on communities facing distinct challenges, reported that 46 million Americans live in rural areas. Rural disparities exist due to social and public service isolation as well as systemic inequities positioning rural residents at

increased risk for illness (CDC, 2021), mental health (Dixon De Silva et al., 2020), and higher risk for experiencing community or family traumatic events (Dixon De Silva, 2020; Jiang et al., 2019). Bronfenbrenner suggested that the integrated dynamics between the mesosystem (school, SES, media, social services) and the microsystem (family, school, friends, faith, neighborhood) would serve as a supportive construct encouraging individual thriving or, when toxic, create emotional instability in the absence of these positive frameworks (Bronfenbrenner, 2005). Dixon De Silva et al. (2020) performed multiple mediation analyses to evaluate how family variables affected the relationship between traumatic exposures and psychopathologies. Findings pointed to an increased posttraumatic stress disorder, particularly present among Latine adolescents who experienced comorbidity of family dysfunction and community or school-related trauma exposure resulting in a positive association with externalized behaviors (Dixon De Silva et al., 2020; Edwards et al., 2007).

Due to the deficit of medical and public health services, a lack of access to community resources leaves rural students more vulnerable to the effects of ACEs than adolescents in urban academic environments (Dixon de Silva et al., 2020). Dixon De Silva et al. (2020) ran multiple mediation analyses to examine the relationship between family process and values affecting internalizing and externalizing symptoms among rural Latine youth exposed to trauma. Participants were 13-19 years old, from rural, low-income Latine communities, enrolled in a rural public school in California. Among participants, 316 males and 332 female students from a rural public school in California,

three scales were used: the Traumatic Events Screening Inventory for Children (TESI-C) to measure trauma, the Youth Self Report (YSR) assessed emotional and behavioral problems in participant sample, and the Familism Scale to assess family levels of support, socially and emotionally (Dixon de Silva et al., 2020).

Results indicated that the average number of traumatic experiences was 7.73; the mean number was about the same among female adolescents at 7.77 and male adolescents at 7.69. The highest recorded traumatic events were "hearing about terrorism" 82.7%, a "close family member dying" 72.6%, "and witnessing community violence 67.1% or a severe accident 67.6%. The total effect number of traumatic events predicting externalizing symptoms was 1.02, and the effect number of family support (or conflict) on externalizing symptoms was significant at .20. This study showed that family variables are differentially impacted by trauma and impact mental health for Latine youth in two ways- when there is support and closeness, adolescents experienced protective factors protecting mental health outcomes. Where there is family conflict, adolescents experienced increased externalized behaviors and deterrence of posttraumatic growth. The limitation of medical, public, and mental health services and constraints on rural schools to access these services place Latine adolescents in rural areas at a grave disadvantage (Dixon de Silva et al., 2020).

Protective Factors Mediating ACEs

Analyses of risk and protective factors have been a point of focus since the 1980s, as academia seeks to understand what measures guide prevention and intervention

programs for at-risk youth (McCoy & Bowen, 2015). Risk factors predict negative outcomes, and protective factors point towards predictable positive outcomes and positive development (McCoy & Bowen, 2015). For minority youth in impoverished rural areas, researchers are curious about whether hope acts as a mediating factor to buffer deleterious ramifications impacting well-being and quality of life (Liu et al., 2020; McCoy & Bowen, 2015; Quinn, Mollet & Dawson, 2021; Yun et al., 2021; Zeinalipour, 2021).

As described in previous sections, hope and hope theory are long-established constructs that have only been recently examined as essential factors for successful adolescent life (Bryce et al., 2020). Hope has been shown to promote agency thinking and pathways and has been studied as an energizing agent for academic success (Shorey & Rand; 2006; Snyder, 2011) as a source of human experience and an integral element of faith (Webb, 2007) and as a motivating emotion to fuel prosocial behaviors (Immordino-Yang et al., 2009; Lopez et al., 2018). Researchers have not yet explored whether hope mediates the relationship between adversity and well-being among minority adolescents in various rural social contexts (Zeinalipour, 2021).

Optimism, resilience, and hardiness are positive psychological factors studied previously to understand their effect on mediating adversity among adolescents. For example, Carver and Scheier (2002) defined optimism as a general expectation that good things will happen and a focused avoidance of adverse outcomes (Abramson, Seligman & Teasdale, 1978). Hardiness (Kobasa, 1979) is a construct buffering stressful events and

illness. Hardiness is characterized by commitment, control, and challenge (Kobasa, 1979), moderating the relationship between stress and physical illness. According to Lopez, Pedrotti, and Snyder (2018), resilience is defined as the ability to bounce back or positively adapt in the face of adversity or challenge (p. 596). These three falls within the framework of positive psychology, which aims to understand people's strengths and gain insights into what is right when people positively function (Lopez et al., 2018). This framework sets the stage for analyzing how hope may fuel internal and external transformations when at-risk Latine adolescents endure childhood adversity but navigate forward on a path of healing despite deficiencies that exist in their social and personal environments.

Summary and Conclusions

An extensive review of the literature in this Chapter has shown that minority children are more likely to be exposed to ACEs and suffer from social stress factors that have an impact on their well-being, such as poverty, racism, and severe hardships (Kaplan et al., 2013; Marks et al., 2020). These children are more likely to endure poor life and health outcomes (Felitti et al., 1998; Hoying & Melnyk, 2016; Kaplan et al., 2013) and systematic discrimination (Mabhoyi & Seroto, 2019; Rocque & Snellings, 2018), as well as unjust incarceration (Rocque & Snellings, 2018).

Researchers have recently examined positive factors that might avert or mediate the relationship between early childhood experiences and well-being (Schafer, Pels, & Kleinert, 2020) in at-risk minority adolescents. There has been considerable research on

social support, resilience, student-teacher relationships, and the intervening effects on well-being. Hope is a promising construct that has been less well-studied, as measured by the Hope Scale (Snyder, 1994; Snyder et al., 1997; Snyder et al., 2006). Hope is defined as the will or way forward and the capacity to navigate obstacles (Dixson et al., 2018; Gibson & Barr, 2015). Hope and hope theory is long established construct that has only been recently examined as an essential factor for successful adolescent life (Bryce et al., 20). Hope has been examined as a source of human experience, an integral element of faith (Webb, 2007), and a motivating emotion to fuel prosocial behaviors (Immordino-Yang et al., 2009). Hope has been shown to promote agency thinking and pathways for academic success (Snyder, 1994; Snyder, Shorey & Rand; 2006), and these results suggest that hope might be a valuable construct to explore in at-risk youth. Researchers have not yet explored the extent to which hope mediates the relationship between adverse childhood experiences, academic risk indicators, and well-being among at-risk minority adolescents in rural social contexts (Zeinalipour, 2021). The design and procedures for the proposed study are presented in Chapter 3.

Chapter 3: Research Method

Introduction

In this study, I focused on two research questions. With the first research question I examined the construct of hope as a mediator of the relationship between ACEs and well-being among Latine adolescent minorities in rural academic settings (see Bryce et al., 2019; Gibson & Barr, 2015; Roesch et al., 2010). In the second research question, I examined the extent to which academic risk indicators moderate the relationship between ACEs, hope, and well-being among Latine adolescent minorities in rural academic settings. Archival data were exported from the Washington state HYS (2021) using selected variables to examine the research questions.

Hope theory (Snyder, 1994) is a theoretical framework defining hope. In this study, Bronfenbrenner's (2005) ecological systems theory served as the conceptual framework guiding the interpretation of community factors that influence the well-being of adolescents and justifies the inclusion of the ACE survey measuring trauma. Chapter 3 includes the research design and the rationale, variables, sample size, sample process, data collection steps, instrumentation, analysis, the validity of the study, ethics, and the overall methodology before data collection.

Research Design and Rationale

Study Variables

Study variables included four constructs and five demographic variables. The demographic variables were age, grade in school, rural/urban statewide, sex/gender

assigned at birth, and ethnicity (Latine alone or combination). Demographic variables were collected to describe the sample's summary characteristics. The four constructs included ACEs, hope, and an academic at-risk indicator, as independent variables, and well-being as the dependent variable. The items that operationalize these constructs are part of the 2021 HYS, Form B (Garcia, 2018; NCTSN, 2021; Schmitsek, 2022; Woodard et al., 2021). ACEs were a composite score of five items asking about relational violence; physical, verbal, and mental abuse; and witnessing violence. Well-being was a composite score of specific items focused on quality of life and mental health (Department for Education United Kingdom, 2019; Hsu et al., 2019). Hope was a composite measure of four item pathways and agentic thinking (Snyder et al., 1997). The academic at-risk indicator was a composite score of four items: grades, attendance, wanted behaviors, and unwanted behaviors.

Design Rationale

A survey research design using archival data was the data source for this study (see Fawcett, 2012). Survey research designs have advantages and disadvantages. Survey research works well in collecting data directly from participants to study, explore, and explain relationships among variables (Burkholder et al., 2020). However, survey research designs are at greater risk for poor internal validity as there are no control groups. Further, survey research designs may be unreliable in representing the constructs under study due to measurement error and uncontrolled variability in data collection.

Conducting this study with archival data presents further constraints as I was limited to the variables collected by the primary data source (see Fawcett, 2012).

Mediation and moderation models are often tested using data from survey research. This type of research design has been effectively used in prior studies. For example, Zeinalipour (2021) explored the mediating effect of hope on academic performance in the relationship between school connectedness and academic self-efficacy beliefs and used a correlational design. Liu et al. (2020) also used this design to examine the effects of bullying victimization on students' well-being with hope and school connectedness as mediating variables in a mediation model.

The data collected in archived survey research allow for examinations of the strength of the relationships in the two models I examined in this study. First, I examined how hope mediates the relationship between ACEs and well-being. Then, I examined the moderating effects of the at-risk academic risk indicator that could influence the mediated relationship (Baron & Kenny, 1986; Hayes, 2020; Jose, 2013).

Research Questions and Hypotheses

RQ1: To what extent does hope mediate the relationship between ACEs and well-being among Latine adolescents in rural school districts?

$H_0$1: Hope does not mediate the relationship between ACEs and well-being among Latine adolescents.

$H_1$1: Hope does mediate the relationship between ACEs and well-being among Latine adolescents.

RQ2: To what extent do academic risk indicators (a composite of grades, behaviors, and attendance) moderate the mediating effect of hope on ACEs and well-being among Latine adolescents?

$H_0$2: Academic risk indicators do not moderate the mediating effect of hope on ACEs and well-being among Latine adolescents.

$H_1$2: Academic risk indicators do moderate the mediating effect of hope on ACEs and well-being among Latine adolescents.

Methodology

Population

The study's target population was Latine (or combined with Latine) students ranging in age between 15 and 18 years and situated in either 10th or 12th grade who come from rural and urban public school districts. The inclusion sample consisted of Latine high school students categorized as from rural public-school districts. The population sample included Latine as self-reported by students, including other racial or ethnic labels such as Hispanic, Hispanic mixed, or Hispanic and other.

Sampling and Sampling Procedures

A purposeful sample of participants from the HYS data who met the criteria for inclusion were selected. Inclusion criteria included adolescents ranging in age from 15 to 18, in 10th or 12th grade, Latine (or combination of), and geographically located in rural school districts in the state of Washington. The HYS is free to school districts and voluntary and anonymous for participants. Most recently, the survey was administered in

2021 to over 15,447 secondary students; the survey covered 228 school districts. The HYS adds a rural/urban indicator to the data set based on standard criteria selection not determined by students and not located in the survey sample itself. Two forms, Form A or Form B, are randomly assigned (either electronically or on paper) to participants.

Procedures for Recruitment, Participation, and Data Collection

Purposeful sampling from archival data from the HYS (2021) related to at-risk adolescents administered by the OSPI, the WSDH, Health Care Authority, Division of Behavioral Health and Recovery, and the Liquor and Cannabis Board. The WSDH assisted in establishing a data-sharing agreement for access to de-identified state-level data. The HYS is administered across the state of Washington in three secondary grades—eighth, 10th, and 12th—every 2 years.

The HYS (2021) is administered in a test-like setting, using random sampling and random administration of two forms to students in secondary grades. Form A and Form B are disseminated by paper or electronically, whichever the school requests. An estimate of half and half of each form is administered randomly. The survey is anonymous and voluntary.

Recruitment

Purposeful sampling took place on the online platform data collector HYS. Participants are those students from Washington state public schools who volunteered to complete a virtual, anonymous survey. Participants were not singled out, and identifiers were removed from the survey data.

Participation and Data Collection

The Washington HYS began conducting student surveys in 1988 to understand the nature and extent of risk behaviors that contribute to adolescent health behaviors, morbidity, mortality, and social problems. The HYS (2021) meets state and local needs for:

- Empirical needs assessment data in the planning and prevention of intervention programs.
- Insights on the effectiveness of drug education programs funded under the federal Safe and Drug-Free Schools and Communities Act and the state Omnibus Alcohol and Controlled Substances Act.
- Awareness of public health objectives and the progress of state-funded programs
- Data on the risk and protective factors that state agencies and local academic or community groups may apply with the intent to improve intervention programs.

The 2021 HYS consisted of three different survey versions, Form A, Form B, and Form C. Forms A and B are used in secondary grades: eighth, 10th, and 12th. These surveys can be administered electronically or (when requested) via paper and pencil. Form B was selected for use in this study based on its inclusion of the hope scale, student ACE-based scale, and quality of life and well-being scale. The Form B survey was randomly distributed among secondary students statewide in Washington public schools in 2021, and approximately half of the students randomly received Form A or Form B.

Measures

Archival Data

The main study completed by the WSDH offers the HYS to all public schools in the state of Washington, not related to the size of the school, geographic location within the state of Washington, and not limited by the size of student enrollment. Student anonymity is ensured by suppressing local results where any survey-specific cell is represented by fewer than 10 students. Local school participation is voluntary, and schools have the option to exclude specific questions even within the core question items.

Prior to gaining access to the data set, I received approval from the Walden IRB (#07-21-22-1010539). To gain access to the data set, I sent an email on September 10, 2021, requesting a collaborative relationship between the WSDH and the primary epidemiologist in the Office of Science, Health and Information from the WSDH. As seen in Appendix G, email verification and approval with the epidemiologist launched the collaboration via email. Permissions for gaining access to the raw data were given, and the primary epidemiologist wrote up a data share contract. This data share agreement was shared with the Walden University Institutional Review Board (IRB) for approval.

Figure 2

2021 Healthy Youth Survey Core Items

Form	Grade Level**	Content
A*	Secondary (Grades 8, 10, and 12)	Core items*** Risk and protective factor items Additional alcohol/drug-related items
B*	Secondary (Grades 8, 10, and 12)	Core items*** Nutrition, fitness, health conditions, health care, mental health, unintentional injury behaviors, intentional injury behaviors, tobacco and vaping, and WAH-ACEs Six questions on sexual behavior and sexual abuse were optional. Schools could request these questions be removed from their survey at registration.
C	Elementary (Grade 6)	Subset of the core items Subset of the noncore items from both Forms A and B

Note. Pulled from the Healthy Youth Survey Analytic Report provided by Washington state. Healthy Youth Survey (https://www.askhys.net/Reports/Analytic).

Core questions are consistent across all versions with high school-designated forms A, B, and C with separate survey forms used in elementary level schools. Item questions considered core questions present in both Form A and Form B include questions about demographics, substance use (alcohol, marijuana, tobacco, vaping, etc.), bullying, school climate, fighting, gangs, weapons, mental health, texting and driving, COVID-19, general disease prevention, and hope. Core questions of sexual orientation and gender identity were added to the 2021 HYS survey. Schools have permission to remove specific categories of questions during registration. Two secondary versions of

the summary containing core and unique questions allow for a greater number of questions within the test-survey allotted time.

Instrumentation and Operationalization of Constructs

In this study, data from four measures will be analyzed to examine the mediation effects of hope in the relationship between ACEs, academic at-risk, and well-being and the influence of these relationships. The HYS (2021) dataset and related questions will analyze ACEs, Hope, Academic At-Risk, and Well-being.

Table 2

Variables Proposed for the Present Study

Descriptive demographic variables	
Demographics Age Grade in school (10th, 12th) Rural/urban statewide Sex/gender assigned at birth Ethnicity (Latine alone or in combination)	Appendix B
Mediating variable	Appendix E
Hope scale	Children's Hope Scale (Healthy Youth Survey Analytic Report, 2018; Snyder et al., 1997)
Independent variable	Appendix D
Adverse childhood experiences	Unique ACE survey (Felitti, 1998; Healthy Youth Survey Analytic Report, (2021)
Dependent variable	Appendix F
Well-being	Hsu, Chang, & Yip, 2019; Department for Education United Kingdom, 2019
Moderating variable	Appendix G
Academic risk indicators: Attendance Behaviors Grades	Garcia, 2018 NCTSN, 2021 Woodard et al., 2021 Schmitsek, 2022

Data Collection Tools

Hope is measured by the Children's Hope Scale (Snyder, 2000) computed from questions 77-80, as seen in Appendix D. Questions reflect the Snyder (2000) definition of hope pathway thinking and agentic thinking. Question responses range from a/1= "none of the time" to f/6= "all of the time." The items are summed and divided by 3 for a single score.

ACEs include adversity as measured by severe childhood stressors and family dysfunction that occur during a person's first 18 years of life. The original ACEs study questions were designed for adults to reflect on childhood experiences during their life. The Washington Department of Health constructed a unique ACEs children survey consisting of eleven questions embedded in the HYS, Form B. The eleven question items relate to the original categories of the ACEs survey such as physical, sexual, and emotional abuse, neglect, alcohol abuse in the home, partner violence, or witnessing violence in the home. These question items are arranged randomly throughout the survey (Questions 20, 63, 65, 71-72, 88-92, 104), but are listed in order as shown in Appendix C. The WAH- ACEs (2021) created a dichotomous score for each of the 11 questions, where 1 equated to presence of adverse experiences and 0 equated to the absence of adverse experiences. The score was then totaled for each student to determine the ACEs score.

Well-being is measured by specific questions constructed in the HYS related to the quality of life and mental health with examples in Appendix E. Hsu, Chang, and Yip (2019) and the Department for Education United Kingdom (2019) identified supporting

justification for using these items as measures of well-being. There were 10 quality of life questions and 9 mental health questions within the characteristic questions related to well-being, however within Form B only three were present. The selected questions focused on Quality of life, (Q 21) “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?” and (Q 70) “How often did you enjoy school?”. The third question selected focused on mental health and well-being (Q22) “During the past 12 months, did you ever seriously consider attempting suicide?”. Responses for Question 21 and 22 were a 1/a= “yes” or 2/b= “no” and question 70 responses ranged from a= “never” to e= “almost always” (see Appendix E). These questions were recoded with responses to questions 21 and 22, where “yes” equated to a value of 0 and “no” equated to a value of 1. Question 70, was recoded such that response selections a = “never” and b= “seldom” equated to a value of 0, and c =“sometimes” through e = “almost always” equated to a value of 1. Questions were added together with participants receiving a score of 0 signified a low well-being score and a score of 1 signified a positive well-being score.

The Academic Risk indicator is based on the following three identifiers: attendance, grades, and behaviors during school. These three identifiers are common indicators that are applied in academic institutes, K-12th grade, to flag students who were potentially at-risk for underlying ACEs, unwanted behaviors, school drop-out, or mortality rates among adolescents in public schools (Garcia, 2018; Ginsburg & McClain, 2020; NCTSN, 2021; Woodard et al., 2021; Schmitsek, 2022). As seen in the survey and

demonstrated in Appendix G, four questions were identified in the HYS (HYS) Form B (2021), measuring the academic risk identifiers. Behaviors and the academic risk factor are measured in question 19, which asks about aggressive or violent behaviors that may lead to detention or expulsion depending on the severity of the behavior. Question 19 asked, “During the past 12 months, how many times were you in a physical fight?”. Responses range from a= 0 times to e= 6 or more times. Question 32 asks about drug use on school property and responses ranged from 1/a = I have not been on school property in the past 30 days to 6/f = Alcohol to describe the use of drugs on a school campus. Question 66, measures absence from school over 30 days with a = “0 days missed” to c = “3 or more days missed”. Question 69, measures grades with a = “mostly As” and e = “mostly Fs”. The following four questions summarize academic risk factors that serve as a moderating variable in the present study. A composite score will be created by recoding responses to a value of 0 or 1, with 1 signified some academic risk and 0 signified no academic risk.

Demographic variables (age, grade, geographic location, race/ethnicity, gender as assigned at birth) will be collected to describe the summary characteristics of the sample. As seen in the survey, samples of these questions can be found in Appendix B and are located on the front page of the HYS (2021).

Data Analysis

Data analysis will be conducted with the PROCESS model using IBM’s SPSS v.28 software (Hayes, 2022). The data will be exported from WA-HYS in an Excel file

once they have cleaned and screened the data. Invalid surveys, such as surveys where responses are unanswered or incomplete surveys, will be removed. The dataset shared from the HYS will contain only valid surveys.

Preliminary analyses examining all measures' descriptive and distributional properties will be calculated. Appropriate tests will be conducted to ensure that the measures and relationships between variables are consistent with the assumptions for all inferential examinations (e.g., normality of residuals, homogeneity of variance, minimal multicollinearity) and those composite variables have sufficient internal consistency (e.g., Cronbach's alpha).

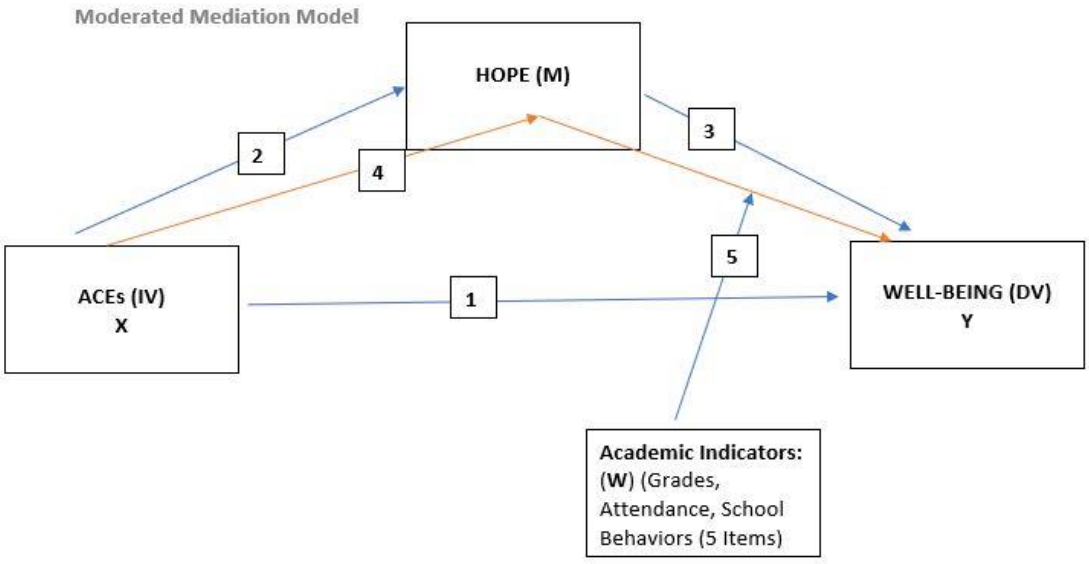
In the PROCESS model, well-being (Y) will be set as the dependent outcome variable, ACE (X) will be set as the independent variable, academic identifiers (grades, attendance, and behaviors) will be set as a moderating variable (W), and hope will be set as the mediating variable (M). The SPSS PROCESS macro model will be used to run the mediation models attempting to explain the existing relationship between predictor and outcome variables (Baron & Kenny, 1986; José, 2013).

The two research questions tested the hypothesized mediation and moderation relationships, as shown in Figure 3. For the first research question, I hypothesize that (a) ACEs will negatively predict well-being, (b) hope will positively predict well-being, and (c) that in the presence of hope, the effects of ACEs on well-being will be diminished. For the second research question, I predict that (a) students high on the academic risk indicator variable will exert a more powerful negative relationship between ACEs and

well-being; (b) that students high on the academic risk indicator variable will reduce the influence of hope on well-being; and (c) that students high on the academic risk indicator variable will diminish the mediating effect of hope.

Figure 3

Moderated Mediation Model



Threats to Validity

Internal Validity

Mediation analysis creates meaningful causal connections in relationships between variables (Pek & Hoyle, 2016). There is no control group, which could create internal validity errors, but the survey is believed to be sufficiently valid and reliable as per the continued use of questions from established surveys, standardized administration procedures, and quality control (HYS, 2021). The HYS survey has undergone extensive

field testing, and multiple reiterations have been tested with youth focus groups. The CDC (2018) ensures internal validity when surveying adolescents when students perceive the importance of the survey and are confident of anonymity. The HYS seeks to ensure validity by promoting with school administrators that the students be given time in class to complete the exam in a "test-like" environment. Students should be informed that the survey is important and explain the purpose and use of the survey. Validity is also secured when students are allowed to complete the survey electronically in a private space where increased honest responses can be self-selected.

The disadvantage of archival data is the lack of control over the data. The disadvantage of the correlational designs is that it has limited internal validity. Archival data can also be biased; the survey is lengthy and requires a quiet, test-like environment that may not have been consistently secured across all participants' schools. Submitted surveys that were incomplete at the time of submission were omitted from the final dataset.

Due to the high number of participant responses collected, potential bias or margin of error will be reduced. Minus 5% is applied to form a confidence interval and allow for a margin of error.

External Validity

Regarding external validity, the HYS (2021) conducts a census design encompassing all students on three different geographic levels: schools, school districts, and small counties. A complex sampling design is used with random sample selection in

larger population areas, with particular grades of interest included in the participant pool. On a state level, three simple random samples of public schools in the state of Washington containing grades 6, 8, 10, and 12 are recruited for the state sample. All students in these grades are invited to participate in the survey. A clustered sampling design is used to reduce student-to-student variability. An analysis that adjusts for clustered sampling design compensates for the reduced variability due to intra-correlation within schools and provides error estimates. Schools that are not selected for the state sample are invited to participate in the survey for local-level results. A random sample design allows for generalized data beyond the particular students surveyed.

Ethical Procedures

The data will be provided by the HYS and shared with the institutional review board of Walden University, along with a separate one as required by the State of Washington and the Department of Health. Requirements from the WA IRB and the Walden University IRB will be followed to ensure ethical compliance. The approval from the WA IRB will be shared with the IRB of Walden University to ensure the approvals' alignment.

The WSDH team will assist in the sampling procedure and support the collaboration of shared de-identified data. The participants of the survey are anonymous and will not be informed of the study. School districts that participated in the HYS administration may receive information about the study and may access study results.

The WSDH and HYS will be informed that all data will be shared and stored in a locked hard drive on a computer. The hard drive will be stored in a safe, private space and not be accessed on any public device or removed from private space. The study participants will only be identified by a given number, geographic area rural or urban), and demographic (male/female, high school) information. The HYS site will protect the participant's information, with no identifiable information shared in the study results. Any paper data will be destroyed following the study, and electronic data will be destroyed after 5 years.

Summary

Chapter 3 described the methods and methodology for conducting a quantitative study on the mediating effect of hope on the relationship between ACEs and well-being. The rationale of the study design was provided, along with the measurements, participant description, and data collection procedures. Methods for data analysis were discussed, and the ethical procedures were shared to ensure the protection of participants and validity of research in this study.

Chapter 4: Results

Introduction

In this study, I focused on two research questions. With the first research question I examined the construct of hope as a mediator of the relationship between ACEs and well-being among Latine adolescent minorities in rural academic settings (see Bryce et al., 2019; Gibson & Barr, 2015; Roesch et al., 2010). In the second research question, I examined the extent to which academic risk indicators moderate the relationship between ACEs, hope, and well-being among Latine adolescent minorities in rural academic settings. Archival data were exported from the Washington state HYS (2021) using selected variables to examine the research questions.

In Chapter 4, I report the results of the data collection process, the data examination, and the variables' descriptive characteristics. Data discrepancies between hypothesized results and actual are described and explained, resulting in a final $N = 249$. Using this data set, I tested for the assumptions that needed to be met to conduct the multivariate analyses, and then I tested the hypotheses for each of the research questions. Results of the analyses are reported, and the research questions are answered.

Data Collection

Acquisition of the Data Set

As described in Chapter 3, data were retrieved from the WSDH HYS of 2021. The HYS was administered to all high school students enrolled in public schools from eighth grade, 10th grade, and 12th grade during the fall quarter of 2021. In February

2022, a proposal of the planned research and description of needed variables was written and shared with an epidemiologist at WSDH to verify alignment with research ethics and purpose as well as to check for alignment between what the HYS survey intended to assess and the variables of interest in this research study. In early March, the WSDH approved the research study and a data-sharing agreement was created outlining confidential information and limitations of the data set. Throughout the month of March, communication via email went back and forth between the Walden University IRB and WSDH to curate a data-sharing agreement. In August 2021, the data-sharing agreement detailing variables of study, limitations of data set, identifiers (geographic descriptors), confidentiality, disclosure of information, conflict of interest, and laws around use and appropriation of data was signed and approved by all stakeholders.

The entire data set for Form B, survey responses from eighth-grade, 10th grade, and 12th grade Washington state students was shared via WSDH secure file transfer to my Walden email address with instructions for opening and downloading the data set. After a .xls and .sav file were downloaded, the secure file transfer site was resecured so the data could not be accessed, and the data were stored on a private USB drive. Additionally, the WSDH epidemiologist and coordinator shared the HYS analysis manual, instructions, rules for data sharing, and an updated HYS crosswalk of data terms and survey questions. These documents provided useful information about the survey questions, responses, and variables.

Description of Data Set

The original HYS 2021 data set was administered to public schools focused specifically on Grades 6, 8, 10, and 12. Three main survey forms were created to fit each grade: Form C was administered to Grade 6 students, and Forms A and B were administered to students in Grades 8, 10, and 12. Questions for students in Grades 8, 10, and 12 were divided between Form A and Form B due to the number of questions. The allotted time given to students to answer this number of questions was not sufficient, so forms were randomized so that about half of the students took Form A and half took Form B in Grades 8, 10, and 12.

Form A and Form B contained a core set of 52 questions. Core questions included student demographics; 30-day use and/or lifetime use of alcohol, tobacco, and other drugs; violence-related questions; school climate questions (bullying, safety, school engagement); and questions regarding mental health and depression. Form A contained additional items related to monitoring the future and communities that care (Arthur et al., 1998; Johnston et al., 1994; National Institute on Drug Abuse, 2001). Form B contained items from the youth risk behavior survey and the global youth tobacco survey (Eaton et al., 2006, CDC, 2000). Questions related to sexual behavior and sexual violence were optional; schools could opt out of these questions on the survey. Form A contained 144 questions and Form B had 130 questions with six removable questions. Form A or Form B were administered randomly among students in Grades 8, 10, and 12.

Form B was chosen as the data source for this study because it contained questions with the key predictor variables: academic risk, ACEs, and the children's hope scale. Form B did not contain many items representing well-being. As of August 2022, the WSDH data set for Form B was shared with N = 31,167 for Grades 8, 10, and 12.

Selecting Cases to Formulate the Sample

Form B included a composite score and individual items for ACEs (Appendix C), a composite score for the children's hope scale (Appendix D), items I identified as indicators of well-being (three items, but no composite measure, see Appendix E), and items HYS identified as academic risk indicators (individual items but no composite; see Appendix G). Form B also included demographic variables (age, grade, sex, race, urban/rural) used to describe the characteristics of the sample prior to testing the hypotheses. These are presented in Table 3.

Table 3

Valid Cases and Percent Data Present in Form B Responses (N= 31,167)

Variable (data set name)	N	% Valid cases
ACEs (ACEs_count)	6,239	20%
Children's hope scale	27,605	89%
Well-being items		
Sad or hopeless… (H53)	20,618	66%
Suicide ideation… (H54)	20,485	66%
Enjoy school… (S04)	28,821	92%
Academic risk indicators		
Absence (G27)	28,659	92%
Substance use on campus (D107_21)	20,098	64%
Fights/violence on campus (H41)	28,264	91%
Grades (S17)	28,175	90%
Demographic variables		
Age 12–19 years (G01)	22,616	73%

Grade 8, 10, or 12 (G03)	22,741	73%
Sex (G05)	30,512	98%
Race (RaceEth)	30,149	97%
Rural/Urban (Ruca)	31,167	100%

The following process was used to select and define the sample to be examined: high school students who identified as Latino/Hispanic+ and lived in a rural setting. Students who were in Grade 8 were removed, leaving a total n = 15,050 participants for Grade 10 and Grade 12. Students in 10th and 12th grades who completed the ACEs resulted in a sample of n = 6,239. Non-Hispanic or non-Hispanic+ students were removed, reducing to n = 993 participants. Tenth and 12th grade Hispanic or Hispanic+ students who completed the ACEs and came from rural home locations (excluding urban core and suburban students) reduced the sample to n = 249. This is shown in Table 4. A post-hoc G-Power analysis was computed using *n* = 249, effect size =.15, alpha = .05 and three tested predictors assured that the sample size was sufficient (ß = .99).

Table 4

Process of Sample Size Reduction from the Original N=31,167

Reducing variable	N to n
Total sample – Form B	31,167
Grades 8, 10 & 12	22,741
Grades 10 & 12	15,050
Grades 10 & 12, Hispanic /Hispanic +	9716
Grades 10 & 12, and ACEs	6239
Grades 10 & 12, ACEs, and Hispanic /Hispanic+	993
Grades 10 & 12, Hispanic /Hispanic +, ACEs, and rural	249

Demographic Characteristics of the Sample

The final sample for the study included only 10th and 12th grade students who are Hispanic or Hispanic plus other ethnicities, who live in rural areas and were randomly assigned to complete the Form B survey (N = 249). Of this sample size, participants completed the ACEs, academic risk indicator questions, the children's hope scale, and well-being questions.

The resulting sample is comprised of participants 15 years old or older. Most participants were in 10th grade with an even distribution of male and female students. More than 80% (83.5%) of the participants identified as Latino or Hispanic, with 16.5% identifying as Latino/Hispanic and other ethnic identity. Two thirds of the sample come from small rural towns and one third come from large rural areas of Washington state.

Table 5

Descriptive Statistics for Nominal and Ordinal Variables

Item	Categories	Frequency	Percent
Age	12 or younger	1	0.4
	15	114	45.8
	16	38	15.3
	17	71	28.5
	18	22	8.8
	19 or older	3	1.2
Grade	10th	152	61.0
	12th	97	39.0
Sex	Female	132	53.0
	Male	117	47.0
Race	Hispanic or Latino/Latina	208	83.5
	More than one race/ethnicity selected	41	16.5
Urban/Rural	Large rural	83	33.3
	Small town/rural	166	66.7

Individual question items for each of the variables—ACEs, academic risk, hope, and well-being—are included in Appendices C, D, E, and F, respectively.

ACEs Measure

The ACEs composite is composed of 11 items asking students to report on specific childhood experiences (scored yes/no). Scores were totaled with a value of 0 = *no presence of adversity* or 1 = *yes presence of adverse experiences*. Each participant received an individual score, and these scores were totaled by the WAH-ACEs (2021). A composite score was provided for my data analysis. Published studies report ACEs scores as 0, 1, 2, 3, and 4+; the underlying assumption being that the increased number of adverse experiences poses greater risks for emerging well-being, interpersonal relationships, and health (Felitti et al., 1998). The HYS (2021) uses this same frequency score in their evaluations of ACEs in student populations.

Children's Hope Scale

The children's hope scale assesses the presence of a future-oriented mindset, motivation process, and expectation toward a desirable goal (Snyder et al., 1997). The HYS (2021) used a six-point response scale as described in Chapter 3, with higher scores reflective of higher agency and pathway thinking. Scores of 4–8 indicate *no hope* to *very low hope*, 9–12 indicate *slightly hopeful*, 13–16 indicate *moderately hopeful*, and scores 17–24 are *most hopeful* (HYS Analytic Report, 2018; Snyder et al., 1997). Because the composite measure was used, internal consistency could not be assessed. The HYS

Analysis Report (2021) used sampling, selected scale items from psychometrically valid surveys, piloting of any new questions, and data cleaning to ensure validity.

Well-Being Composite

As mentioned earlier, the well-being measure described in Chapter 3 was not given as part of Form B. Instead, selected items were identified in Form B that were consistent with concepts identified in Chapter 2. The HYS studies (CDC, 2000; Eaton et al., 2006) focused on mental health, substance use, quality of school climate, and risk and protective factors in the community as useful and appropriate measures of well-being. As shown in Appendix E, three questions were selected to represent the well-being measure. The first, focused on "did you ever feel so sad or hopeless..." and was a yes/no answer response. The second was a question related to suicide ideation and was also a yes/no answer response. The third selected question asked participants about level of enjoyment when at school and ranged as (a) never, (b) seldom, (c) sometimes, (d) often, and (e) almost always. A and B responses were scored 0 and responses C, D, or E were scored 1. These three questions were recoded so that a response of yes = 0 and no = 1 so that when the three questions were added together, participants receiving a score of 0 equated to low or negative well-being compared to participants receiving a score of 1, which equated to high or positive well-being.

Table 6

Frequencies for Well-Being Composite Score

Item	Frequency	Percent
.00	18	7.2

1.00	36	14.5
2.00	63	24.3
3.00	105	42.2
Total	222	89.2
Missing	27	10.8
	249	100.0

Academic Risk Composite

As described in Chapter 3, the researcher created the Academic Risk Indicator composite using published literature to guide the selection (identified in Chapter 2) to identify three common measures from Form B (absenteeism, grades, and behaviors that lead to expulsion) (Garcia et al., 2017; NCTSN, 2021; Woodard, 2021; Schmitsek, 2022).

Based on literature, discussed in Chapter 2, students are considered at academic risk with potential underlying adverse childhood experiences when absenteeism, unwanted behaviors, and grades decline showing a deterioration in academic investment and student engagement (Garcia et al., 2017; NCTSN, 2021; Woodard, 2021; Schmitsek, 2022). Four questions in the HYS (2021) Form B were selected to represent academic risk:

- During the past 30 days, how many days have you been absent from school for any reason…?
- Did not use any substances on school property.
- During the past 12 months, how many times were you in a physical fight?
- Putting them altogether, what were your grades like last year?

For academic question related to absenteeism if students selected ‘0” days absent a value of 0 was set. If students selected “1-2 days” or “3 or more days”, a value of 1 was set. For academic question related to substance use on school property, unwanted behaviors that lead to expulsion from school, if students marked “not checked/no” a value of 0 was set. If students marked “checked/yes” a value set of 1 was set. For academic question related to number of fights at school, if students selected 0 fights, a value of 0 was set. If students selected, “1 fight” or “2-6 or more fights” as options, a value of 1 was set. For the academic question related to grades, students who selected “As-Cs” received a value set of 0. If students selected “D’s or F’s”, a value set of 1 was given. Recoded questions were then added to form a composite score, where 0 represented that a child had no academic risk and a 1 represented that a child had some to high levels of academic risk, with variance noted in the participant responses in Table 7.

Table 7

Descriptive Statistics for Academic-Risk Indicator Composite Score

Item	Frequency	Percent
.00	6	2.4
1.00	63	25.3
2.00	112	45.0
3.00	24	9.6
4.00	1	.4
TOTAL	206	82.7
Missing	43	17.3
	249	100.0

Table 8 summarizes the alignment between each construct, the items construct the variables, and citations supporting the choice of variables, as discussed in Chapter 2. A

complete list of the question items as seen in the HYS (2021) are included in see Appendices C through F.

Table 8

Face and Content Validity of Selected Items Used to Create Composite Measures

Construct	Item	Citation
ACEs (Appendix C)	Composite score from 11 questions. For each question, a student was assigned a value of 0 or 1 and these were added up to create their final score.	(Felitti, 1998; Healthy Youth Survey Analytic Report, (2021) HYS Interpretive Guide, (2021)
Children's hope scale (Appendix D)	Survey questions L14, L15, L16, L17 using a six-point response scale with "none of the time" equating to the lowest value of one, and "all of the time" equating to the highest values of six.	(Snyder 1994; 2000; Snyder et al., 1997)
Well-being (Appendix E)	A composite score created from three variables: (H53) Over the last 12 mths, did you ever feel…(sad) (H54) Over the past 12 mths, did you ever.. (suicide ideation), and (S04) Did you enjoy school?	Hsu, Chang, & Yip, 2019; Department for Education United Kingdom, 2019
Academic risk indicators (Appendix G)	A composite score created from the following variables: Attendance (G27), Behaviors (D107_21A, H41), Grades (S17)	Garcia, 2018; NCTSN, 2021; Woodard, 2021; Schmitsek, 2022

Missing Data Analysis

To determine if missing values were randomly distributed the Little's Missing MCAR test (Kang, 2013) was run in SPSS on selected variables. All variables were selected and run as quantitative variables using the expectation maximization (EM) analysis in SPSS. The EM Estimated Statistics table was reviewed and the MCAR test was non-significant, Chi-Square = 14.690, (14), p =.4; indicating that the missing data is

completely at random. The MCAR advantage is that the analysis remains unbiased. Table 9 presents the descriptive statistics for the analysis of the missing values. Missing values were then replaced with predicted values using the linear trend method (Kang, 2013).

Table 9

Univariate Statistics and Summary of Estimated Means

	N	Mean	SD	Missing		No. of Extremes[a]	
				Count	Percent	Low	High
HOPE Scale	223	2.860	1.054	26	10.4	0	0
Acad. risk	206	1.762	.710	43	17.3	0	1
Well-being	222	2.149	.970	27	10.8	18	0
ACEs	249	1.209	1.407	0	.0	0	0
Number of cases outside the range (Q1 - 1.5*IQR, Q3 + 1.5*IQR).							
Little's MCAR test: Chi-Square = 14.690, (14), p=.4							

Results

Descriptive Statistics

Descriptive statistics for the key variables, Well-being, ACES, Hope, and Academic Risk Indicator are presented in Table 10. Most of the variables were within normal ranges of skewness and kurtosis, with Hope having a slightly platykurtic distribution. Outliers (+/- 3SD beyond the mean) were not detected.

Table 10

Descriptive Statistics on Key Composite Variables (n=249)

					Skewness		Kurtosis	
	Min	Max	Mean	SD	Stat	SE	Stat	SE
Well-being	.00	3.00	2.17	.936	–.879	.154	–.241	.307
ACEs	.00	4.00	1.21	1.407	.989	.154	–.359	.307
Hope	1.0	4.0	2.88	1.007	–.407	.154	–1.007	.307

Acad. risk	.00	4.00	1.75	.655	.011	.154	.577	.307

Prior to testing the assumptions, a correlation matrix was calculated to examine bivariate relationships between the criterion and predictors and among the predictors. All predictors have significant correlations with the criterion variable, and the range of correlations among the predictors (*R* range = -.32 to .223) are not large enough to provoke concerns about multicollinearity (Hair et al., 2006).

Table 11

Correlations Among Variables for Hypothesis Testing (n=249)

	ACEs	Hope	Acad. risk
ACEs	—		
Hope	–.320**	—	
Acad. risk	.223**	–.195**	—

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

Testing Assumptions

As described above, all individual variables appear reasonably normally distributed. And, as reported earlier, the post-hoc G-power analysis verified *n* =249 as a sufficient sample size to test the hypotheses. What follows are the results of the rest of the statistics to test the model assumptions.

Multicollinearity

To investigate multicollinearity, the correlations among all the variables were examined. As shown in Table 12, correlations among the predictor variables ranged from *r* = -.32 to .223, *p* <.001. Visual inspection suggests that multicollinearity is not present,

and this was further verified in examining the VIF and tolerance values (Table 13) (Hair et al., 2006).

Table 12

Correlations Among Variables

	Well-being	ACEs	Hope	Acad. risk
Well-being	—			
ACEs	–.530**	—		
Hope	.326**	–.320**	—	
Acad. risk	–.298**	.223**	–.195**	—

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

As shown in Table 13, tolerance is below .25 indicating that multicollinearity is not present. Similarly, VIF is lower than 10 indicating the absence of multicollinearity.

Table 13

Multicollinearity Diagnostics

Model	Unstandardized soefficients		Standardized coefficients	t	Sig.	95.0% CI for B		Collinearity statistics	
	B	SE	Beta			Lower	Upper	Tolerance	VIF
(Constant)	2.548	.228		11.192	<.001	2.099	2.996		
ACE	–.295	.037	–.444	–7.951	<.001	–.369	–.222	.871	1.148
AcadRisk	–.243	.077	–.170	–3.152	.002	–.395	–.091	.933	1.071
Hope	.140	.052	.150	2.712	.007	.038	.242	.882	1.134

a. Dependent variable: wellbe-Y

Independence of Residuals

Durbin-Watson test (Table 14) was computed for evidence of correlated residuals and the result was within the normal range. The Durbin-Watson analysis falls between the values of 0 to 4. When the value is below 2 this indicates a positive autocorrelation, i.e., the degree of correlation between the variables, and this should be reported. In the

current study, Durbin-Watson value reported at 2.078 indicating there is no autocorrelation between variables, indicating that variance between variables falls within an acceptable range.

Table 14

Results of Residuals Testing

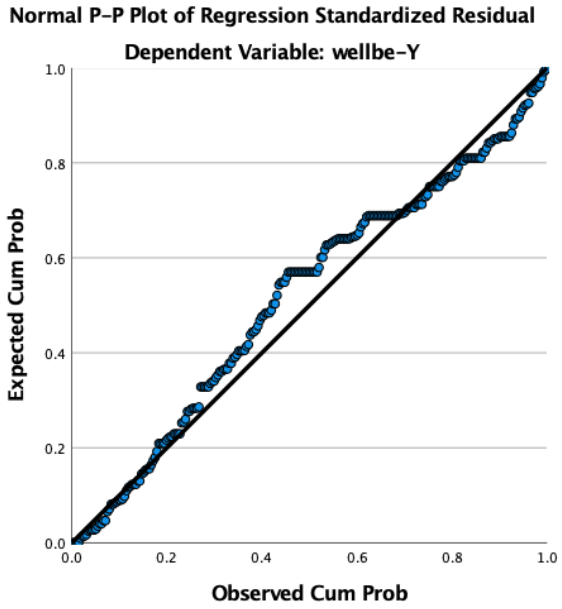
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
	.579c	.335	.327	.76835	.020	7.354	1	245	.007	2.078
c. Predictors: (Constant), ACE-X, acad-W, hope-M										
d. Dependent Variable: wellbe-Y										

Normality, Linearity and Homoscedasticity

To assess normality of the residuals, a P-P plot was calculated. As shown in Figure 3, the difference between the residuals and the predicted Y values was not sufficiently diverging from the predicted line to cause concern. Most of the variation away from normality is in the middle of the distribution, and slightly skewed to the left.

Figure 4

Normal P-P Plot of Regression Standardized Residual, Dependent Variable, Well-Being



A histogram of the regression standardized residuals shows the frequency of the well-being dependent variable, with the mean = -1.17, the standard deviation = 0.994 and the total n= 249. As shown in Figure 6, the shape of the distribution visually does not substantively vary from normal but is somewhat negatively skewed. Similarly, Figure 7 indicates that while the scatterplot is not perfectly symmetrical or rectangular, it represents a relationship between predictors and outcome that is reasonably normal.

Figure 5

Histogram for Dependent Variable, Well-Being

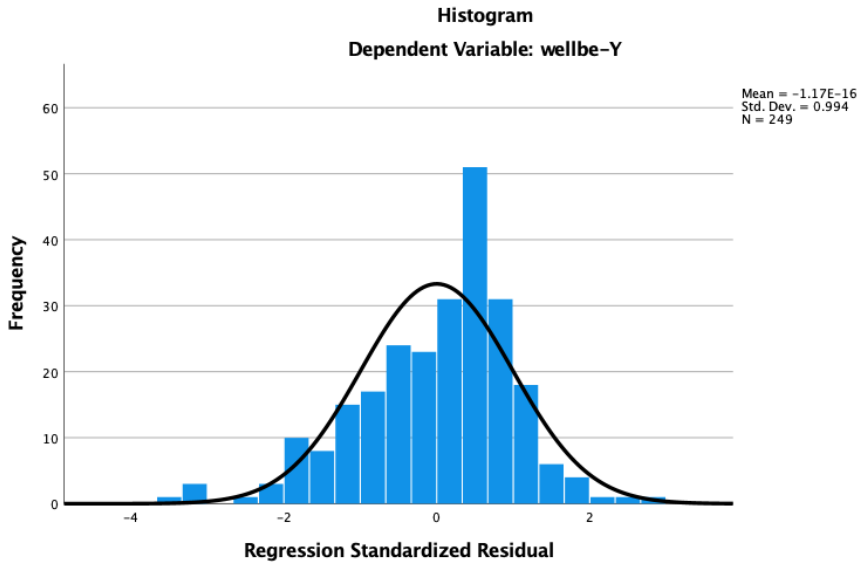
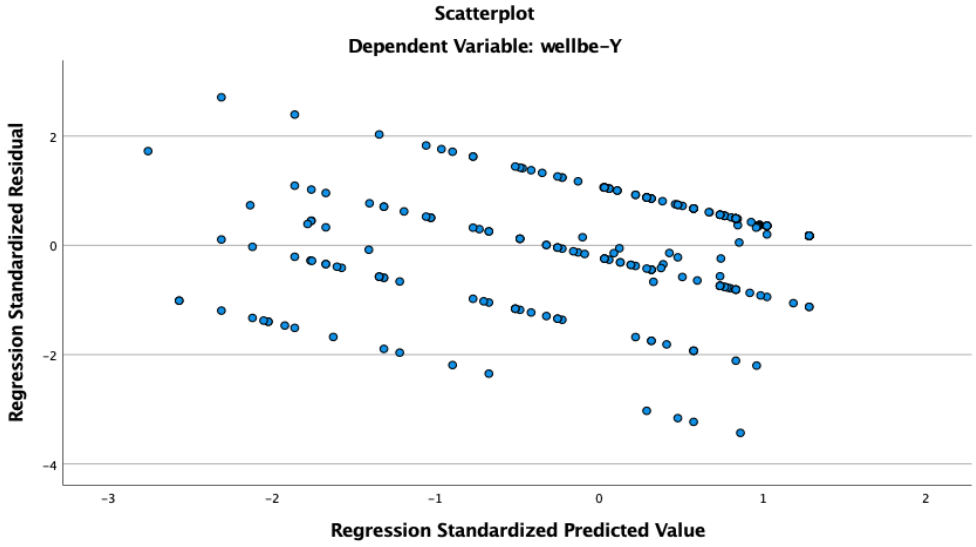


Figure 6

Scatterplots to Text Linear Relationships Between Well-Being and Other Scale Variable



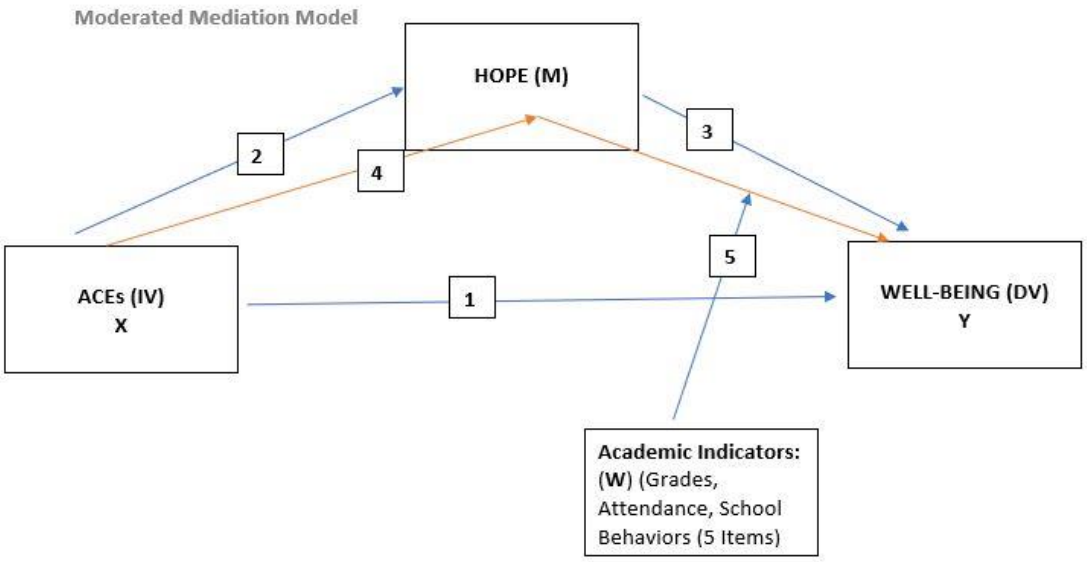
In sum, the scatter plots and results of assumptions tests do not show major violations of any multiple regression assumptions, other than a slight departure from normality in the middle of the P-P Plot. The dependent variable is normally distributed.

Testing the Hypotheses

The following sections present the original model as constructed in Chapter 3 for the data analysis hypotheses and research questions. The research questions will be reviewed with a model representative of the research question, and a table presenting coefficient measures and statistics

Figure 7

Moderated Mediation Model, Testing Hypothesis



The following hypotheses were tested using the Hayes (2017) PROCESS method for mediation and moderated mediation models:

RQ1: To what extent does hope mediate the relationship between ACEs and well-being among Latine adolescents in rural school districts?

$H_0$1: Hope does not mediate the relationship between ACEs and well-being among Latine adolescents.

$H_1$1: Hope does mediate the relationship between ACEs and well-being among Latine adolescents.

RQ2: To what extent do academic risk indicators (a composite of grades, behaviors, and attendance) moderate the mediating effect of hope on ACEs and well-being among Latine adolescents?

$H_0$2: Academic risk indicators do not moderate the mediating effect of hope on ACEs and well-being among Latine adolescents.

$H_1$2: Academic risk indicators do moderate the mediating effect of hope on ACEs and well-being among Latine adolescents.

RQ1: Hope Mediates the Relationship Between ACEs and Well-Being

To test the hypothesis for the first question, a mediation analysis was run to examine whether hope mediates the relationship between ACEs and well-being. In the first step, the results indicated that ACEs negatively predicted well-being (R^2=.102, F=28.126 (1, 247), p<.001. The null hypothesis is rejected. The coefficients are represented in Table 15 and Table 16.

Table 15

Mediation, Analysis, Step 1 Coefficients

Model							
	Coeff	Std coeff.	SE	t	p	LLCI	ULCI
Constant	3.16		.0799	39.4875	.0000	2.990	3.3139
ACE	–.2288	–.316	.0431	–5.3034	.0000	–.3137	–.1438

In the second step, the addition of Hope to mediate the relationship between ACEs and well-being increased R^2 by .206 (R^2 = .308, F = 54.712 (2, 246), p < .000 The null hypothesis is rejected. The step 2 coefficients are presented in Table 16.

Table 16

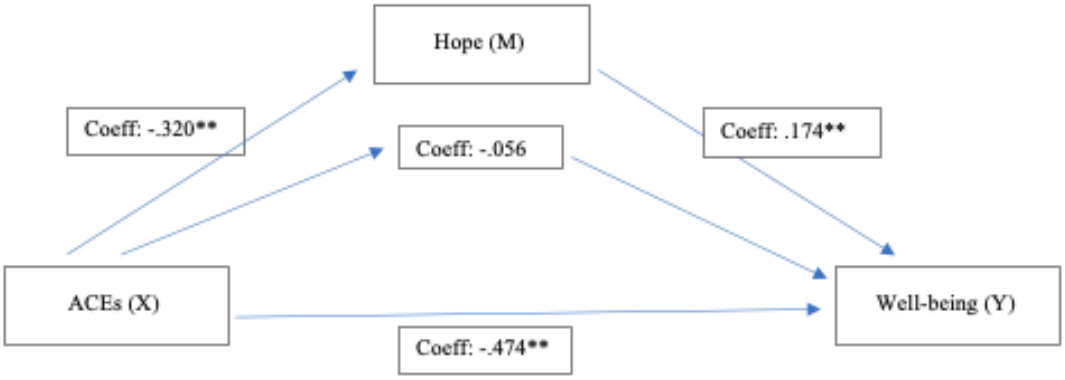
Mediation Analysis, Step 2 Coefficients

	Coef.	Std. Coef.	SE	t	p	LLCI	ULCI
Constant	2.084		.1769	11.7834	.0000	1.7356	2.4324
ACE	-.316	-.474	.0372	-8.4714	.0000	-.3889	-.2422
Hope – direct effect	.1617	.174	.0521	3.1060	.0021	.0592	.2642
Hope – indirect effect	-.037	-.0556	.021			-.1016	-.0197

The direct effect of hope on well-being is positive (ß =.174) and significant. The indirect (mediating) effect of hope on well-being is negative (ß=-.056) and is statistically significant (CI -.1016 to -.0197). This suggests that Hope has some effect on the relationship between ACEs and well-being when ACES is low but may not have sufficient effect on well-being when ACEs levels are high. This is shown Figure 9.

Figure 8

RQ 1: Mediation Model



Hope increased the predicted value of this model by twenty percent, the amount of variance explained in well-being can be accounted for among participants who experienced ACEs without hope and those participants who experienced ACEs with hope.

RQ2: Academic Risk Indicator Moderates the Mediating Effect of Hope on ACEs and Well-Being

To test the hypothesis for the second research question, a moderated mediation analysis was run to examine whether the academic risk indicator moderates the mediating effect of hope on ACEs and well-being. Academic risk indicator negatively predicts well-being (R^2=.341, F=31.536 (3, 245), p<.000. The interaction between ACEs and Academic Risk was not statistically significant, b = .113, p = .139. The Academic Risk coefficient b = -.542 demonstrates a greater direct effect on well-being than the mediating effect of Hope (-.057). The coefficients are presented in Table 17 and Figure 10 below.

Table 17

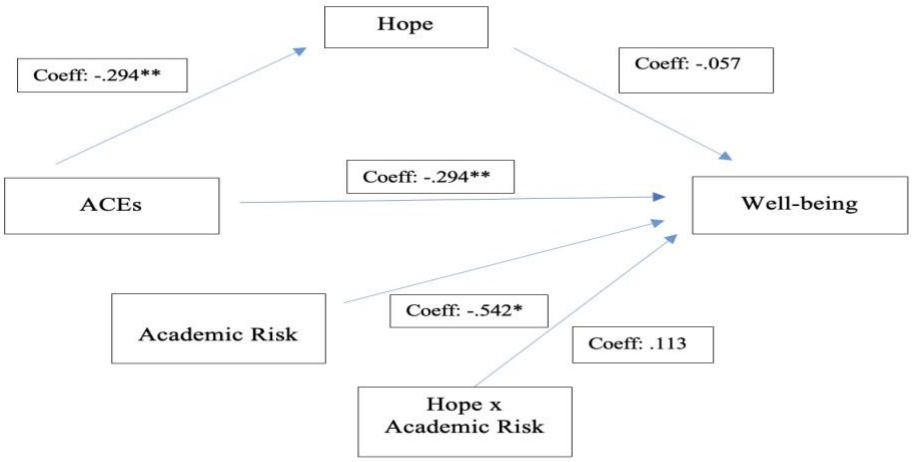
Moderated Mediation Analysis, Step 3 Coefficient

	Coef	Se	t	p	LLCI	ULCI
constant	3.080	.425	7.253	.000	2.244	3.917
ACE	-.294	.037	-7.929	.000	-.367	-.221
Hope	-.057	.142	-.402	.688	-.338	.223
AcadRisk	-.542	.216	-2.512	.013	-.967	-.117
Int_1	.113	.076	1.484	.139	-.037	.264

Interaction 1 : Hope x AcadRisk = .113

Figure 9

RQ 2: Moderated Mediation Model



Summary

The results of the testing for RQ1 indicated that hope had a small effect as a mediating influence on the relationship between adverse childhood experiences and well-being. However, ACES accounted for the majority of variance explaining well-being. For RQ2, the positive relationship between ACEs and academic risk (r = .223, p<.01) and negative associations of both variables with well-being (r= -.530 and -.298, respectively)

suggest that when ACEs is high, academic risk is also high. Academic risk had a strong direct influence on well-being and diminished the mediating effect of hope on well-being. In Chapter 5, interpretation of the results are discussed in the current chapter to summarize the findings of this study. As a part of the final discussion, limitations are presented, recommendations for future research, and the implications of the current study on social change.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

In this study, I focused on two research questions. With the first research question I examined the construct of hope as a mediator of the relationship between ACEs and well-being among Latine adolescent minorities in rural academic settings (see Bryce et al., 2019; Gibson & Barr, 2015; Roesch et al., 2010). In the second research question, I examined the extent to which academic risk indicators moderate the relationship between ACEs, hope, and well-being among Latine adolescent minorities in rural academic settings. Archival data were exported from the Washington state HYS (2021) using selected variables to examine the research questions.

The findings of the study show that ACEs has a positive, statistically significant relationship with predicting poor well-being among Latine adolescents. The relationship of hope to mediate ACEs was statistically significant and demonstrates mediating power to predict positive well-being; however, the mediating power of hope diminished as participants ACEs scores increased. The moderating variable correlated with a participant's high ACEs score. As ACEs increased, the academic risk increased with a negative predictive well-being score. The academic risk variable effectively moderated the mediating model to influence negative well-being for participants with high academic risk scores.

In Chapter 4, I reported the study results and described the data collection process. Data discrepancies between hypothesized results and actual results were

described and explained. Chapter 4 also included descriptive statistics that characterize the study, providing tables and figures to illustrate results. In Chapter 5, I provide the interpretation of the findings, limitations of the given study, future recommendations, and implications of the study for future research with a concluding summary.

Interpretation of the Findings

Findings and Previous Research

There is a profound history of research on ACEs (Felitti et al., 1998) and serious associations for health and well-being pervasive throughout an individual's lifespan. Prior studies have illuminated a scholarly and professional understanding of ACEs' effect on childhood development, academics (Woodard et al., 2021), coping strategies, health, life opportunities (Jiang et al., 2019), and overall well-being (Ports et al., 2021). The consequential reverberating effects of ACEs from one generation to the next have also been linked in previous research, showing that experiences of violence during childhood are connected to perpetrations and victimization of abuse and violence in adulthood. In a meta-analysis of 84 studies, Assink et al. (2018) reported on the transmission of abusive behaviors from parents onto their children and showed that children were three times more likely to perpetuate experiences of childhood maltreatment to their families. Although the potential risk of experiencing ACEs has implications for everyone, some children and families are more vulnerable to experiencing ACEs because of SES or race. Particularly, Black and Latine minority groups of children continue to be at risk for higher ACEs exposure (Woodard, G. et al., 2021). Continued research provides evidence

substantiating the negative associations of ACEs and the importance of understanding the risks during adolescence, particularly among minority adolescent groups.

The results of my study demonstrated consistent and clear evidence substantiating findings that a significant negative predictive relationship exists between ACEs and well-being among rural Latine adolescents. I measured a statistically significant relationship of hope as a mediator between ACEs and well-being. The indirect (mediating) effect of hope on well-being was negative and statistically significant. However, hope increased well-being only among high hope, low ACEs participants. As ACEs scores went up (four or more events), hope's effect was lost. The academic risk was a statistically negative predictor of well-being, with a nonsignificant mediating relationship between hope and well-being and a nonsignificant interaction with ACEs. In fact, the addition of academic risk reduced the effect of hope as a mediator. In sum, while the experience of hope somewhat mediated the influence of ACEs on well-being, it was not powerful enough to ameliorate the effects of ACEs and poor academic performance on the well-being among Latine adolescents in rural communities.

In a quantitative study, Jiang et al. (2019) examined how mindset toward adversity impacts participants' sense of well-being. Participants included 396 Chinese rural-to-urban migrant adolescents between 10 and 14 years old. Adolescents in this study migrated from rural settings to urban environments for school and improved opportunities. This study showed that stressful life events were positively associated with depression and negatively associated with a sense of happiness or well-being. A high

stress mindset was defined as the extent to which one could tolerate high levels of stress and still maintain a belief that the stressful scenario would be enhancing instead of debilitating. A high-stress mindset was positively associated with a positive sense of life satisfaction.

Jiang et al.'s (2019) study is relevant as a study on a minority group of adolescents in rural/urban areas and the impact of adversity on their well-being. Jiang et al. compared genders while examining stress mindset (a positive view of stressors) as a moderating variable between stressful life events and well-being. Female participants measured higher in stress mindset than male participants did. Findings suggest that, as Chinese students migrate from rural to urban academic settings, they are adversely impacted in their emotional and academic adjustment; however, their well-being is partially mitigated by a positive outlook (or stress mindset) on adverse challenges. Results also showed that the opposite occurred: When adolescents held a diminished, depressed view of life, the result was an internalization of failure and hopelessness.

I ran a post analysis t-test on my study to examine differences existing between levels of hope among male and female students in 10th grade or 12th grade. The t-test was statistically significant and demonstrated that male students were higher in hope than female students. Additionally, considering the age of participants in my study, I wanted to examine the possibility that closeness to graduation may impact the construct of hope. A 12th grader has the accessibility to college opportunities, vocational programs, the launch into life after high school, and employment, which could all serve as hope

generators to elevate levels of hope. In contrast, 10th graders may be positioned developmentally closer to the experiences of adversity, unable to perceive or predict major shifts that may be down the line postgraduation. A t-test was calculated to examine the differences between 10th and 12th graders on hope, but this was not statistically significant. There was no difference between grade groups regardless of proximity to graduation.

Although the relationship between ACEs and well-being is well studied (e.g., Jiang et al., 2019), relatively few studies have been conducted to examine the relationship between the construct of hope and well-being. Hope as a mediator of ACEs' effects on well-being among minority adolescents needs to be further examined.

Findings and Theoretical Framework

Snyder defined hope as expressed in two forms of thinking: pathways thinking and agency thinking. Pathways thinking is the willpower to generate multiple pathways toward a goal, and agentic thinking is the internally generated energy and sustaining momentum toward the goal (Snyder, 1994). In Snyder's findings, agentic thought developed second to pathways thinking and was best nurtured from primary caregivers (Snyder, 2000). If an individual's home life is dysfunctional—chaotic, abusive, less than nurturing—these learned thinking patterns, both biologically seeded and socially nurtured, could potentially impede the growth of hope when the family and social environment presents problems too immense for a child to navigate. Snyder (1994) stated that the impact of childhood stressors in the home may create a coping mechanism of

rumination that would lower the capacity to hope because of the repressed ability to focus on future goals. These finding were substantiated in my study, with increasing ACEs scores diminishing the power of hope to predict positive well-being.

Snyder also stated that hope was developed through multiple life experiences. Numerous opportunities to form a goal, generate a way forward to attain it, encounter stressors or inhibitors, and then reorient and persist toward the goal is an iterative cycle (Lopez et al., 2018; Snyder, 1994, 2000). With the presence of other positive energies (whether internal or external), an individual can develop a learning blueprint and an internal emotional template for success and goal achievement.

It is curious that in the current study, the male adolescents reflected a higher level of hope than female adolescents , implying the possibility that environmental factors encouraged that feedback, feedforward motion that Snyder described (Snyder, 1994; 2000). In the Latine community it is possible that male adolescents are encouraged at a higher rate than female adolescents toward vocational or academic pursuits which may influence levels of hope. Snyder (1994, 2000) stated that hope would function as a cognitive tool for teens to stabilize and take on optimistic views about perceived problems in their lives. My study lends some substantiating evidence to Snyder's theory that hope mitigates negative feelings caused by adversities and that hopeful visualization facilitates a coping mechanism for overcoming the setbacks experienced during life.

A recent CDC funded quantitative study by Sparks et al. (2021) examined hope as a moderator between ACEs and delinquency. The study included 1,236 students from 13

schools in a large metropolitan area and were either in sixth or ninth grade. Hope functioned as a protective factor reducing connections between ACEs, delinquency, and posttraumatic stress symptoms using the Delinquency National Youth Survey (Sparks et al., 2021). ACEs was statistically significant in its ability to predict delinquency and posttraumatic stress symptoms among adolescents. Snyder's theory was applied in interpretation of findings, and the Hopelessness Scale for Children was used to measure the scale of hopeless feelings. Respondents were measured on frequency of times engaged in delinquent behaviors over a year time frame. Post-traumatic stress (PTS) was assessed using the Child Post-Traumatic Stress Disorder Symptom Scale. The results revealed that hope predicted a reduction of delinquent behaviors and decrease in posttraumatic stress symptoms.

In Sparks et al. (2021) study, students who had higher ACEs exposures were also prone to higher delinquent acts and significant posttraumatic stress symptoms. An analysis of grade differences showed that 9th grade students reflected higher levels of hope than 6th grade students, and hope was negatively correlated with posttraumatic stress symptoms and delinquent behaviors in both grade groups. Male students had, on average, more delinquent behaviors and female students reported more posttraumatic stress symptoms. Similar to Sparks et al. (2021) results, the findings from my study supported similar outcomes, indicating hope had a small mediating impact on well-being for participants. Hope is a potential protective factor that could facilitate positive behaviors and ameliorate some of the effects of ACEs. These studies suggest implications for

examining other positive factors within a participants' social sphere that connect to hope and support well-being.

Conceptual Framework

Bronfenbrenner's Ecological Model presents a framework for conceptualizing childhood development in terms of proximal and distal social spheres, including culture, the broader society, and even the historical and chronological time that children are situationally born into. Bronfenbrenner (2005) believed that individuals cannot thrive without a community of love, safety, protection, knowledge, and resource sharing. Although the current study does not measure how participants developed personal hope or which relationships fostered hope in their lives, it is useful to draw from this paradigm when explaining what factors socially and environmentally may have contributed to the amelioration of hope in participants, or the lack thereof.

Bronfenbrenner (2005; Guy-Evans, 2020), in his analysis of how time (chronological system) and environment interact to impact development, revealed how a perspective of time can contribute to the emotional, cognitive, and social development of youth. In later studies, Bronfenbrenner stated that the proximal interaction between a child and their immediate environment (family, teacher, home, or classroom) was the most important process stimulating development, including influencing the architecture of the brain (National Scientific Council on Developing Children, 2004; Bronfenbrenner & Morris, 2007; Sroufe et al., 2005). This is consistent with the ACES model that ties later adult behavior to adverse childhood experiences. Several studies have demonstrated

that children who are able to overcome adversity are more likely to have had a balanced and positive support system for regulating adult relationships (Hamre & Pianta, 2005: Keane & Evans, 2022; Sroufe et al., 2005). These primary relationships impact the emotional, cognitive, and social frameworks that contribute to shaping the child's future. As such, adverse experiences during childhood can have an increased deleterious effect when the existing relationships in the microsystem (between child and parent) negatively affect the teacher-child interaction in the mesosystem.

Many rural Latine families have migrated to the area for agricultural labor (Carlos Chavez et al., 2022). The environmental and social acculturation necessary for the family to thrive is stressful even aside from any additionally limiting academic or social resources that could negatively impact the family's adjustment (Paat, 2013). The interaction between the host society and the expectations of the home culture could lead to more obstacles that the child has to overcome and contend with in their effort to realize future goals (Paat, 2013). Bronfenbrenner's ecological framework insists that a consideration of group values and ways of thinking, such as hope, are nurtured in the complex layers of their subsystems (Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 2007).

Limitations of the Study

External Validity

The study has several limitations. The discrepancy between completion of Form A and Form B was revealed only after the data were securely exported for analysis. Both

forms were administered to grades 8-12, but only one contained the WAH-ACEs questionnaire, which meant that only half of the students in grades 8-12 received these questions. Moreover, one of the WAH-ACEs questions is a removable question; schools could opt not to ask them. In 2021, only 50% of students in grades 8-12 received the WAH-ACEs questions. Of these, about 60% received the removable question. This resulted in a lower number of valid survey participants, about 6,239 students who got a WAH-ACEs score, compared to the original student survey sample of 31,167: and restrictions in meaningfully discussing the generalizability of the results.

Another limitation potentially impacting the number of valid or complete surveys includes the limited or restricted internet access common in rural academic areas. This therefore could have reduced the number of participants who were able to access the survey administered electronically, particularly if the internet connection was unstable. It is also possible that access to internet was further limited by pandemic related conditions (HYS, 2021).

Another challenge to accurate representation of the results for this target group is the increased rate of school dropout after age 16 (HYS, 2021). Thus, results from Grade 12 may be an underestimate of ACEs and academic risk because those students involved in risky behavior have already dropped out (Johnston, O'Malley, & Bachman, 1994: HYS 2021). Additionally, significant developmental changes occur between Grades 10 and Grade 12 and should be taken into consideration when considering what students'

perceptions, ability to recall, accuracy in interpreting questions, or ideas about different topics may be (HYS, 2021).

Construct Validity and Internal Validity

Another limitation of the study was that the HYS summarized well-being using two categories, quality of life and mental health. Quality of life included questions pertaining to experiences of abuse (sexual, physical, emotional) and did not align to the literature's operational definition of well-being as a self-reported measure and did not include questions of positivity, optimism, or wellness. A majority of the questions measuring mental health and quality of life were also removed from the 2021 HYS Form B, leaving a limited number of questions that aligned with the literature. HYS justified these indicators as contributing behaviors and emotions that point to poor levels of well-being (e.g., sadness, hopelessness, substance use, anxiety levels, and suicidal ideation) (HYS Analytic Report, 2018; SAMHSA, 2017). While the absence of these feelings or behaviors might suggest some aspect of mental health, these measures are at best, indirect measures of well-being.

The impact of COVID on the participants cannot be underestimated as a social factor affecting their experiences, contributing to more negatively toned responses. In addition, the stay-at-home mandate during the pandemic could have substantially added stress to participants with ongoing, current adverse experiences in the home. The encompassing effect of social, home, and academic life stressors also could have impacted participant's thinking, leading to more negative attitudes on outlook or

perceptions of the questions themselves. This history effect is identified as limitation of the internal validity of the study.

The study variables were beset by several measurement issues that are also likely to weaken internal validity. These included the construction of the well-being composite score, and use of a simple "count" to create the ACEs score. To date, a participant's ACEs score is measured by a count of adverse experiences on a scale from 1-10 exposures. Each adverse experience is selected from ten categories as explained in Chapter 2 and Chapter 3, from abuse -physical, emotional, sexual, to neglect, and household dysfunction -mental illness, incarcerated relative, violent treatment, divorce, or substance use in home (Anda et al., 2006; Felitti et al., 1998). Participants responses to each question received a value of 1= "adversity present" or 0= "absence of adversity", and these responses were recoded and scored as a cumulative total (Felitti et al., 1998). Each experience from one of these categories during childhood equates to a number correlating to an ACEs score. A measurement limitation is that each "adversity present" value is not weighted and the subjective impact of one ACE in a participant's life could have equal to or more negatively affected well-being compared to a participant with four exposures.

Recommendations

In the following section, I present recommendations for future research based on the findings of the current study. My recommendations include a prospective study, a

consideration of alternative measures, and an examination of variables potentially missing in the current study.

As described in the limitations, young people “age-in” and “age-out” of beliefs, attitudes, and behaviors that influence their performance in school and how they integrate their childhood experiences. A prospective study following Latine youth from middle school to graduation would account for developmental changes suggested by the current study that Bronfenbrenner and ACEs research emphasize as important. It would improve the breadth of understanding to observe the long-term trajectory of high-hope and low-hope adolescents, watching trends post-high school graduation, how hope is sustained (or not) in the face of stressors, and what expands hopeful thinking as it relates to obtaining or not procuring future ambitions and goals over time.

Secondly, future research points to the need to improve an ACE and well-being measure that is more robust. The current study used a self-reporting measure for ACEs with an aggregate score of adverse exposures but does not measure cumulative or complex impact from ACEs. Additionally, research trends define well-being as a self-reported measure of happiness, quality of life factors, or prosocial behaviors (Liming & Grube, 2018; Lopez et al., 2018) or the cumulative presence of negative factors impacting a sense of well-being (drug use, poverty, abuse, etc.) to predict positive outcomes (HYS, 2021; Liu et al., 2020). A second recommendation of this study is to create a more wholistic and robust measure of well-being that balances the presence of both positive and negative factors predicting psychological wellness. Future studies should analyze and

create an improved measurement tool for ACEs and well-being specifically for the adolescent developmental stage.

Finally, future studies should also explore the strength of specific co-occurring protective factors to mitigate ACEs and predict higher levels of well-being as participants move through high school, from 9th grade to 12th grade. Additional protective factors cojoining with hope that should be measured are resilience, optimism, social-emotional maturity, positive coping, flourishing peer relationships, positive mentors, compassion, and empathy (Lopez et al., 2018). As continued studies investigate the effects of ACEs on cognitive, emotional, and psychosocial development from infancy through adult years, researchers should explore co-existing protective factors that stimulate posttraumatic growth and reduce negative effects of ACEs. Further understanding specific protective factors that nurture, sustain, and illuminate practices of hope for an adolescent throughout their high school career. With amplified analysis of and attention to additional protective factors researchers could identify which most effectively reduce the negative effects of childhood trauma and ameliorate well-being (Munoz & Hanks, 2021).

Implications

The present study aimed to test a moderated mediation model that investigated the negative associations of ACEs on Latine students well-being and the mediating role of hope. The results contributed to insights into the direct effect of ACEs to diminish the capacity for hope and the indirect influence of Academic Risk to predict poor well-being during vulnerable stages of adolescent development. In addition, this study highlighted

the importance of identifying co-occurring protective factors from home and academic environments, that cooperating with hope may buffer childhood adversities. Implications from this study focus on practical methods for integrating hope practices in academic settings and community-based organizations.

The Every Student Succeeds ACT (ESSA) specifically defines a clear relationship between a positive school climate and student achievement (NASP, 2019; Rossen et al., 2016). High hope students navigate school with higher grades, better test scores, and lower drop-out rates (Harding et al., 2019; Lopez et al., 2018; Snyder et al., 2008). Students who can think about their future with ease and excitement and who have confidence that they can achieve things become individuals who engage the workforce with increased creativity, kindness, and hope (Snyder, 2000; Dumont et al., 2022). This study recognizes the importance of including hope as an integral objective in school policies and programs. Reflecting on this study, I plan to be involved in efforts to promote protective factors to be included in school policies, services, and curriculum. A hopeful school climate promotes beliefs to students that the future can be positive, bright, and accessible (Dumont et al., 2022). High hope school systems where administrators promote goal setting (NASP, 2019; NSCDC, 2004), operationalize strategies (pathways) for reaching goals, and implement the necessary motivation (agency) towards goals improve teacher motivation and enthusiasm for teaching (Snyder et al., 2008; Harding et al., 2019). Hopeful schools also inspire more tenacious students, who take on challenges and trust that they are capable of overcoming the obstacles that obscure their paths.

Additionally, a hopeful school climate communicates to a child who has suffered from high levels of ACEs that they can look forward to the future and creating positive things for themselves, instead of being dominated by the dysfunctions and hardships that have permeated their life experience. Schools that promote healthy human development will integrate policies and programs that are designed to better support human well-being and growth (Bronfenbrenner, 2005; Dumont et al., 2022: Liu et al., 2021).

The current study also has direct implications for enhancing hope in communities. Young people and communities need hope to thrive, and this is of particular importance for minorities, who face a diverse set of social challenges (Hill & Torres, 2010; Hipsman & Meissner, 2013). I have worked in rural and urban areas of poverty and have seen first-hand how the community's young people are the most desperate for hope, with a specific need to see beyond geographic location and chronic stressors to envision a future with different opportunities and options (NASP, 2019). This study highlights the importance of bringing hope into community-based organizations where minority adolescents can practice the hope skills that connect to their future and a societal purpose outside of their own communities (Edwards et al., 2007). For Latine families who reside in rural agricultural areas of Washington, hope has always been an integral part of their journey, as they envisioned a hopeful life for their families where they could thrive economically and socially (Dumont et al.,2022; Paat, 2013; Zeinalipour, 2021). This study looks into those rural, perhaps hidden, areas of Washington State that need to be elevated into the

social and global view so that communities can receive the direct services, support, and care that are imperative to their growth and well-being.

The implications of this study also point to schools finding specific pathways into nourishing hopeful adolescents who are energized to participate in building families, communities, and social groups because they are more connected to future ways of envisioning life and society. Interventions in academic and community-based settings that intentionally integrate hope-practices could serve to prevent and buffer the deleterious effects of ACEs on rural Latine adolescents.

Conclusion

In conclusion, previous research confers that adverse childhood experiences co-occur at an approximate rate of every 1 in 5 adolescents in the United States with a severe proliferation among minority adolescents born into economically disadvantaged communities (Hammond, 2020). The cumulative exposure of ACEs, positions adolescents at risk for elevated poor outcomes. When crisis and stress is chronic for developing adolescents there must be an urgency in academic settings and community service organizations to identify and operationalize positive protective factors – such as hope in combination with optimism, prosocial behaviors, or an invested adult - that can ameliorate quality of life for minority adolescents and families.

Drawing from previous researchers, hope has the power to impact well-being and inspire young people through adversity. The researcher Mowrer (1960) theorized that hope is an emotion that dissolves fear. Erikson (1964) theorized that hope was a virtue

with tendrils rooted in a person's spiritual and emotional life, and Snyder (1994) concluded that hope has such emotional stabilizing power as to directly improve mental health over the life span. Marcel (1967) measured hope as a construct that had such potent repercussions when operationalized as a coping mechanism that prisoners of war were able to find freedom and center in hope to thrive in impossible circumstances. Adolescence is a time of great challenge and turmoil, and for young Latine students who grow up in impoverished circumstances with prevalent stressors and adversities, their risk for losing hope is great. This study provided evidence that when ACEs are prolific in a young person's life, it harms the formation of hope. To my knowledge this is the first study analyzing hope acting as a mediator between adverse childhood experiences and well-being among Latine adolescents. As ACEs sets the stage for adulthood outcomes among Latine youth, this study invites an urgency to critically analyze pathways to integrate the practice and instruction of hope during the critical developmental period of adolescence.

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Appendix A: Healthy Youth Survey Consent Form

WASHINGTON STATE healthy youth SURVEY

Healthy Youth Survey
Form B
Grades 8, 10 and 12

We are asking you to take part in this survey about issues facing students in communities in Washington. The questions in this survey ask for your opinions about yourself, your friends, your school, and your neighborhood or community. School, community, county, and state officials will use the information from this survey in planning future programs to help youth.

Your answers to these questions are anonymous. This means that no one will know how you answered. There are no codes or information to match a survey to a student. If you do not want to take this survey, tell your teacher now and you will be given another activity.

Some of the questions are personal, such as asking about your relationships and whether you get in fights or use drugs. Some students may find some of the questions uncomfortable or upsetting. You will be given a list of numbers to call if you want to talk to someone about the survey or feelings it brings up.

The survey is completely voluntary. You don't have to do this survey. You may skip any question you do not wish to answer or stop at any time. It will not affect your grades. Other students have said this survey is interesting and they enjoyed filling it out. We hope you will too. If you have any questions about this survey you may ask your teacher before beginning.

Please take a minute to read the instructions below before starting the survey.

INSTRUCTIONS
1. This is not a test, so there are no right or wrong answers.

2. The questions should be answered by clicking the bubble next to your answer.

3. If you don't find an answer that fits exactly, use one that comes closest. If any question does not apply to you, or you are not sure of what it means, just leave it blank.

4. Some of the questions have the following format. Select the word that best describes how you feel about that sentence.

EXAMPLE: Pepperoni pizza is one of my favorite foods.
In this example, the student clicked "yes" because he or she thinks the statement is mostly true.

- ○ NO! – means definitely not true for you
- ○ no – means mostly not true for you
- ● yes – means mostly true for you
- ○ YES! – means definitely true for you

Appendix B: Demographic and Geographic Variables

The descriptive variables and geographic variable as identified in the HYA 2021 Survey are listed by number where the question is found in the Form B survey along with the detailed description of the question to participants. The geographic indicator of rural or urban is not in the survey Form B but is organized by the WSDH who will collect the HYA (2021) dataset by regions of Washington State and organize by school county and district. The indicated rural/urban region is shown as it is displayed in the dataset, Form B.

Age: Question #4: How old are you?

a. 12 or younger
b. 13
c. 14
d. 15
e. 16
f. 17
g. 18
h. 19 or older

Grade level: Question #5: What grade are you in?

a. 7th
b. 8th
c. 9th
d. 10th
e. 11th
f. 12th
g. Ungraded or other

Ethnicity: Question #6: How do you describe yourself?
Choose all that apply.

a. American Indian or Alaskan Native
b. Asian or Asian American

c. Black or African American
d. Hispanic or Latino/Latina
e. Native Hawaiian or other Pacific Islander
f. White or Caucasian
g. Other

Sex/gender assigned at birth: Question #9: What sex/gender were you at birth, even if you are not that gender today?

a) female
b) male

Rural/Urban Context: Value Labels from Dataset

1. urban core
2. Suburban
3. Large Rural
4. Small town/rural

Appendix C: Original ACE Survey Questions

The following questions are from the original ACE survey (Felitti et al., 1998) administered to participants in the CDC and Kaiser Permanente survey for the Felitti and Anda Adverse Childhood Experience survey in 1995.

1. Did a parent or other adult in the household often or very often….
    a. Swear at you, insult you, put you down, or humiliate you? Or did they act in a way that made you afraid that you might be physically harmed?
    No_____ or Yes _____
2. Did a parent or other adult in the household often or very often….
    a. Push, grab, slap, or throw something at you? Or ever hit you so hard that you had marks or were injured?
    No_____ or Yes _____
3. Did a parent or other adult in the household atleast 5 years older than you ever….
    a. Touch or fondle you or have you touch their body in a sexual way? Or attempt to have sexual intercourse with you?
    No _____ or Yes _____
4. Did you often or very often feel that….
    a. No one in your family loved you or thought you were important or special? Or your family didn't look out for each other, feel close to each other, or support each other?
    No _____ or Yes _____
5. Did you often or very often feel that….
    a. You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? Or your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
    No _____ or Yes_____
6. Were your parents ever separated or divorced?

    No _____ or Yes _____
7. Was someone in your family….
    a. Often or very often, pushed, grabbed, slapped, or had something thrown at her? Or sometimes, often or very often kicked, bitten, or hit? Or ever repeatedly hit over at least a few minutes or threatened with a gun or knife?
    No _____ or Yes _____
8. Did you live with anyone who was a problem drinker or alcoholic, or who used street drugs?
    No _____ or Yes _____

9. Was a household member depressed or mentally ill, or did a household member attempt suicide?
   No_____ or Yes _____
10. Did a household member go to prison?
   No _____ or Yes _____

Add up your "yes" responses here: _____ This is your ACE score. The most important thing to remember is that ACE score is intended to help you become more aware!

Appendix D: HYS Adverse Childhood Experience Survey Questions

The following questions are a unique application of the original ACE survey (Felitti et al., 1998) and were inserted for the first time in the 2021 Healthy Youth Survey, Form B.

11 Questions Measuring ACE from the HYS (2021)

1. I feel safe during school (yes/no).
2. During the past 30 days, on how many days did you not go to school because you felt you would be unsafe on your way to and from school?* (Any days)
3. Bullying is when one or more students threaten, spread rumors about, hit, shove, or otherwise hurt another student over and over again. It is not bullying when two students of about the same strength or power argue or fight or tease each other in a friendly way. In the last 30 days, how often have you been bullied?* (Any days)
4. During the past 12 months, did someone you were dating or going out with ever limit your activities, threaten you, or make you feel unsafe in any other way?** (Yes)
5. In 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.)** (Any times)
6. Have you ever been in a situation where someone made you engage in kissing, sexual touch or intercourse when you did not want to? (Yes)

7. Not counting TV, movies, video games, and sporting events, have you seen an adult hit, slap, punch, shove, kick, or otherwise physically hurt another adult more than one time? (Yes)
8. Has an adult ever physically hurt you on purpose (like pushed, slapped, hit, kicked or punched you), leaving a mark, bruise or injury? (Yes/No)
9. How often does a parent or adult in your home swear at you, insult you, put you down or humiliate you? (Sometimes, Often, Very often)
10. Are your current living arrangements the result of losing your home because your family cannot afford housing? (Yes)
11. How often in the past 12 months did you or your family have to cut meal size or skip meals because there wasn't enough money for food? (Any times)

Appendix E: Children's Hope Scale

The following Children's Hope Scale as modified and applied into the HYS (2021) reflects those questions created by Snyder (1994; 2000) and strive to capture student's sense of hopefulness through agentic or pathways thinking.

77. I can think of many ways to get the things in life that are most important to me.
    a.None of the time
    b.A little of the time
    c.Some of the time
    d.A lot of the time
    e.Most of the time
    f.All of the time

78. I am doing just as well as other kids my age.
    a.None of the time
    b.A little of the time
    c.Some of the time
    d.A lot of the time
    e.Most of the time
    f. All of the time

79. When I have a problem, I can come up withlots of ways to solve it.
    a.None of the time
    b.A little of the time
    c.Some of the time
    d.A lot of the time
    e.Most of the time
    f.All of the time

80. I think the things I have done in the past will help me in the future.
    a. None of the time
    b. A little of the time
    c. Some of the time
    d. A lot of the time
    e. Most of the time
    f. All of the time

Appendix F: Well-being Questions from the HYS

Well-being is measured by the following questions selected from the Department of Health for the Healthy Youth Survey. The following three selected questions were used as measures of well-being. Question 21 is related to quality of life, question 22 is related to suicide ideation and mental health, and question 70, is related to self-reported feelings of enjoyment at school. Hsu, Chang, & Yip (2019) and the Department for Education United Kingdom (2019) identified supporting justification for using these items as measures of well-being.

21. 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

22. During the past 12 months, did you ever seriously consider attempting suicide?

a. yes
b. no

70. Think back over the past year in school. How often did you enjoy school?

a. Never
b. Seldom
c. Sometimes
d. Often
e. Almost always

Appendix G: Academic At-Risk Indicators

Academic risk is an academic category for students who are demonstrating a combination of risk factors that could lead to frequent and prolonged expulsion or high school dropout. Research shows (Garcia et al., 2017; NCTSN, 2021; Woodard et al., 2021; Schmitsek, 2022) that students are considered at academic risk with potential underlying adverse childhood experiences when absenteeism, unwanted behaviors, and grades cumulatively decline showing a deterioration in academic investment and student engagement. Three questions in the HYS (2021) Form B were selected to represent academic risk:

- (Q66) During the past 30 days, how many days have you been absent from school for any reason…?
    a. 0 days
    b. 1-2 days
    c. 3 or more days
- (Q32) Did not use any substances on school property.
    a. I have not been on school property in the past 30 days
    b. I didn't use any of these on school property.
    c. Tobacco (cigarettes, also called e-cigs, JUUL, or vape pens)
    d. Marijuana
    e. Alcohol (or atleast one drink)
- (Q19) During the past 12 months, how many times were you in a physical fight?

a. 0 times

b. 1 time

c. 2-3 times

d. 4-5 times

e. 6 or more times

- (Q69) Putting them altogether, what were your grades like last year?

a. Mostly As

b. Mostly Bs

c. Mostly Cs

d. Mostly Ds

e. Mostly Fs

Appendix H: Email Petition for HYS Archival Data Share

External Email

My name is Danielle Gettings from Grandview School District in Washington State. I am seeking to do more sophisticated research on the psychological wellbeing of students in the Grandview School District. In alignment with my Ph.D. focus, I am interested in examining how adversity is mediated by hope to predict psychological wellbeing levels.

I am requesting access to the raw individual student data from the Healthy Youth Survey for 10th and 12th-grade high school students in Grandview School District from 2019, or most current.
Request Date: 9/7/2021
Desired Receipt Date: 4/2022

Please approve this request, or contact me with any additional questions you might have at 509-205-7160. I can also support a conversation, including myself and my Walden University Professor, Dr. Susan Marcus.

Thank you,
Danielle M. Gettings

Hi Danielle,

Thank you for your interest in the Healthy Youth Survey. I will need to learn a bit more about your anticipated needs to determine the best way to assist.

I have a few initial questions for you and if we need to chat by phone we can find a time to do that too:

1) You are affiliated with Grandville School District – Are you staff, a contractor, administrator?
2) You mention you are enrolled as a student at a university. Can you provide some more background on this? What kind of program are you in?
3) Can you provide a bit more context for this request? Is it for research purposes, for a dissertation, to support a grant, evaluate a program, or something else?

Thank you so much! I have moved Anar and Cathy to the BCC line since I will be your main point of contact on this going forward.

Cheers,
Maayan

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Appendix I: Figure Permission Request/Approval

The following note was taken from the SAGE publishing site after correspondence with the author (Pedrotti, J., 2019) and Associate Director for SAGE College Editorial. Permission to use no more than three figures is allowed without formal request.

Pre-Approved Permission Requests

SAGE provides gratis non-exclusive permission for limited re-uses of its content without the need for a formal request, as indicated below. This approval excludes any third-party content which requires permission from a separate copyright holder.

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You may use up to three (3) figures/tables or a total of up to 400 words from a SAGE book in your dissertation/thesis, provided the work w not be hosted on a commercial platform (such as ProQuest).

If your re-use exceeds this allowance, or if you will be posting your work on a commercial platform, you will need to request permission fo the reuse.

Short Excerpts

You may republish no more than a total of 200 words of text from a single SAGE book within your new publication.

On, January 19th, communication with the Editorial Associate Director revealed that a permission form for formal use would have to be completed prior to posting the paper on a public/commercial platform (such as ProQuest). This was completed by student and researcher.