AN INVESTIGATION OF ACADEMIC RESILIENCY AMONG AFRICAN-AMERICAN MALES IN SECONDARY SCHOOLS

by

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ABSTRACT

LEE VESTER CASEY JR. An Investigation of Academic Resiliency among African-American Males in Secondary Schools. (Under the direction of DR. REBECCA SHORE)

This non-experimental survey study investigated the relationship between the participants' perception of the existence of resiliency-building strategies in schools and their levels of resilience and academic achievement. The study used a correlational research methodology with a self-report survey to collect data. The sample (n = 107) consisted of African-American male students attending four high schools in a school district located in the southwest region of North Carolina. The results of Pearson's product-moment correlation showed that a correlation exists between academic resiliency and GPA. The results of the similar analysis revealed that there is a relationship between academic resiliency and the perception of resiliency-building strategies. Examination of the difference in academic resiliency among participant groups found that there were differences between students retained at least one grade-level and those not retained. Similar analysis showed differences in academic resiliency between participants in different grades. Other findings and subsequent discussion, along with the literature related to academic resiliency and resiliency-building strategies are presented. Additionally, the implications of the study for educators and recommendations for future research in the area of academic resiliency are discussed.

DEDICATION

It is a monumental undertaking to write a dissertation. It requires sacrifice, dedication, commitment, and support from people who support your dreams and aspiration. To that point, many people have supported me on this journey, and they deserve all the praise I can bestow on them. First and foremost, to my wife, Angela: you are indeed my better half, and without your unwavering support and undying affection, none of this would have been possible. The words, "thank you," do not come close to expressing the gratitude I feel for all you have done to help me reach my goals. I am forever grateful to you for allowing me the opportunity to accomplish my dreams. To my daughters, Leyana, Alisa, and Lela: I love you more than you can ever imagine! Your academic success continues to challenge me to pursue academic excellence. I see greatness in each of you, and I hope that my pursuit of a Doctoral degree has shown you that anything is possible as long as you are willing to work for it. You are my greatest inspiration. Thank you for your faith in me. To my late father and grandfather with whom I am proud to share my name, Lee: thank you for teaching me the value of hard work and commitment. You both showed me that life is full of challenges and hardships, but you do not have to allow adversity to define who you are or limit what you can accomplish. To my late mother, Diane Pate, and grandmother, Carrie Casey: thank you for the love and support you provided me throughout my life. You have been two of the driving forces in my life, and your belief in my ability to achieve dreams has been paramount in my success. Although you have passed on, I will always cherish your memory. To my sister, Danetta: thank you for always having my back. It is good to know that I have you in my corner, especially now that Momma is gone. If a person who has a loving and

supportive family is blessed, then I am blessed beyond measure. To God: I give thanks because without you none of this would have been possible. “From everyone who has been given much, much will be demanded; and from the one who has been entrusted with much, much more will be asked” (Luke 12:48). The idea of “to whom much is given, much will be required,” has been my mantra my entire life. God has given me so much over the years—a loving wife, devoted daughters, wonderful family and friends, and opportunities beyond measure— therefore, it is only fitting that I give back to others as much as I possibly can. To this end, I will continue to use the knowledge and experiences I have gained in the pursuit of my doctorate to influence the lives of the children I serve every day in school.

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This study could not have been completed without the district superintendent, principals and assistant principals of the four high schools that agreed to allow school time for their students to participate in the study. I am incredibly grateful to the students of those high schools that chose to become a part of this research. Because of their willingness to share their thoughts and experiences, I am confident educators will be able to help students achieve academic success for generations to come.

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LIST OF ABBREVIATIONS

ANOVA	analysis of variance
CHKS	California Healthy Kids Survey
CUBE	Council of Urban Boards of Education
CYRM-12	Child and Youth Resilience Measure-12
CYRM-28	Child and Youth Resilience Measure-28
EOC	end of course
F/R	free or reduced-price lunch
GED	general educational development
GPA	grade-point average
HKRA	Healthy Kids Resilience Assessment
IQ	intelligence quotient
IRB	Institutional Review Board
NCDPI	North Carolina Department of Public Instruction
NSBA	National School Boards Association
RBS	resiliency-building strategies
SPSS	IBM Statistical Package for Social Sciences, version 24

CHAPTER 1: INTRODUCTION

In almost every city in the United States, a large number of students are academically unprepared or underprepared for academic success, many of whom are African-American and underprivileged (Moore & Lewis, 2012). In many cases, disadvantaged African-American students grow up in urban communities plagued by joblessness, which leads to a host of other problems such as broken families, antisocial behavior, limited social networks, and a lack of informal social control (Borman & Overman, 2004; Downey, 2008; Toldson, Sutton, & Watkins, 2009; Woodland, 2016). Similarly, schools located in these urban communities perpetuate these problems. For example, these schools and their school districts often have limited financial resources, offer minimal academic opportunities, employ inexperienced or ineffective teachers, and are centered in low-income segregated neighborhoods (Borman & Overman, 2004). However, schools located in low-income communities are still expected to meet the educational needs of their students amidst the growing demands associated with poverty—e.g., insufficient medical care, lack of basic needs, and amplified crime rates (Moore & Lewis, 2012).

It has been apparent since the Supreme Court decision in the case of Brown v. Board of Education (1954) that disparities exist between the educational opportunities of Black and White students. The achievement gap—the significant lag in the achievement of African-American students compared to their White classmates—has been a persistent problem for more than 60 years (Fantuzzo, LeBoeuf, Rouse, & Chen, 2012; Ladson-Billings, 2006). Local, state and national assessment data show that African-American students enter kindergarten, on average, one year behind White kindergarten students,

and fall further behind as they progress through school (Moore & Lewis, 2012). The data show that African-American students consistently fail to achieve at the levels of their White counterparts (Lewis, Venzant, & Butler, 2012; West-Olatunji, Shure, Garrett, Conwill, & Rivera, 2008). The achievement gap between African-American and White students is prevalent in almost every school district, school building, and classroom across the United States. Additionally, researchers (Levin, Belfield, Muennig, & Rouse, 2007; Lewis et al., 2012; Toldson, Sutton, & Watkins, 2009) contend that African-American males experience the lowest educational outcomes—i.e., grade-point average (GPA), reading and math assessment scores, graduation rates, dropout rate and attendance in post-secondary—of any other demographic group in the United States.

The disparities in academic achievement that exist between African-American males and other groups, particularly White males, is even more significant when poverty is a factor. Low academic performance is alarmingly high among disadvantaged African-American male students, who often achieve at significantly lower rates than their White counterparts attending similar schools (Lewis et al., 2012; Moore & Lewis, 2012). As a result, African-American males are underrepresented in gifted, honors, and advanced placement classes, and overrepresented in special education classes (Lewis, Simon, Uzzell, Horwitz, & Casserly, 2010). The lack of academic success in school leads many African-American males to drop out (McFarland, Stark, & Cui, 2016; Woodland, 2016). Consequently, African-American male students are leaving school before earning a high school diploma at a rate much higher than White males (McFarland et al., 2016; Stearns, Moller, Blau, & Potochnick, 2007).

Moreover, data consistently show a higher dropout rate among African-American males than other ethnic groups (Levin et al., 2007; Lewis et al., 2012; Lewis et al., 2010; McFarland et al., 2016; Schargel & Smink, 2004). The 2007 study conducted by Levin and his colleagues shows that 22% of the African-American male student population age 20—taking into account students who graduate late—are high school dropouts. The corresponding figure for White males is 14% (Levin et al., 2007). The dropout rate has declined since 2007; however, the gap in the dropout rate between African-American and White males is still prevalent across the United States. This trend was also noted in 2016 by McFarland who found the average dropout rate among African-American males was 9.0% compared to 4.7% among White males

Despite some controversial issues regarding the accuracy of the dropout data, the growing dropout trend among African-American males poses concerns to researchers and practitioners (Wayman, 2002). There are various reasons why students drop out of high school; most notably among them is the student's lack of academic attainment. In a 2008 study, Rumberger and Lim found that lack of academic success—i.e., getting poor grades and failing school—was one of the main reasons students dropped out.

Similarly, Schargel and Smink (2004) state that "poor academic performance linked to retention in one grade is the single strongest school-related predictor of dropping out" (p. 33). Schools often retain students who perform poorly in school. However, research shows that achievement does not improve after retention (Early et al., 2003; Eide & Showalter, 2001). A study conducted by Jacob and Lefgren (2009) found that retaining low-achieving students in elementary school increases the probability that these students will drop out of high school. Additionally, low-achieving students retained

in eighth grade are 22% more likely to drop out of high school than those promoted to the ninth grade (Jacob & Lefgren, 2009). Therefore, it is highly probable that an academically challenged student, who is likely to be retained at some point in his or her academic career, will drop out of school.

Unfortunately, many students who drop out of high school face adverse outcomes for the rest of their lives. The median income of persons aged 18 through 67 who had not completed high school was roughly $26,000 in 2013; whereas, the median income of individuals in the same age groups who completed their education with at least a high school credential—i.e., a diploma or General Educational Development (GED) certificate—was approximately $46,000 (McFarland et al., 2016). It is more difficult for adults age 25 and older, who do not have high school credentials, to get a job than adults who do. Similarly, among adults in the labor force, the percentage of dropouts who are unemployed is higher than the rate of high school credential earners who are unemployed (U.S. Bureau of Labor Statistics, 2015). Also, dropouts age 25 and older reported being in worse health than adults who are not dropouts, regardless of income (Blackwell, Ward, & Clarke, 2014). Dropouts make up disproportionately higher percentages of the nation's incarcerated or institutionalized population (McFarland et al., 2016). Overall, the average high school dropout costs the economy approximately $260,000 over his or her lifetime regarding lower tax contributions, higher reliance on government programs—e.g., Medicaid, Medicare, and welfare—and higher rates of criminal activity (Levin et al., 2007; Sum, Khatiwada, McLaughlin, & Palma, 2009)

Problem Statement

Current research supports the ongoing need to explore why African-American male students are falling farther behind in their academic performance when compared to

their White counterparts. Numerous studies (Benard, 2004; Cappella & Weinstein, 2001; Coleman & Hagell, 2007; Corprew & Cunningham, 2012; Evans & Pinnock, 2007) describe the achievement gap between African-American males and their White counterparts. This problem has been and continues to be a growing concern to researchers and practitioners, who do not view this phenomenon as merely the usual achievement level for African American students (Lewis et al., 2012). Since the passage of the Elementary and Secondary Education Act (ESEA) of 1965, educators have been trying to close the achievement gap between White students and other minority groups. Even with the addition of testing in the No Child Left Behind (NCLB) Act of 2001—reauthorization of ESEA—assessment, graduation and dropout data indicate the progress schools have made over the last 17 years has been minimal (Lewis et al., 2012; Toldson & Lewis, 2012). Some of the continuing challenges, which affect African-American male students include:

1. A staggering number of African-American males are leaving school each year without a high school diploma or GED certification (McFarland et al., 2016); and
2. Dropping out or failing to graduate from high school may have potential life-long wage-earning consequences for students, especially African-American males who traditionally have higher rates of unemployment and incarceration (Department of Labor, 2017; U.S. Bureau of Labor Statistics, 2015).

Given the current state of affairs, researchers (Lewis et al., 2012) suggest that an unacceptable number of current and future African-American students will not be prepared to compete in a society that demands its citizens possess a higher level of intellectual capacities and educational training to achieve financial prosperity. If this

comes to fruition, the burdens of poverty will have an even more significant impact on future generations of African-Americans.

The challenges faced by African-American males who struggle in school often affect them negatively later in life. However, researchers (Benard, 1993; Henderson & Milstein, 2003; Werner & Smith, 2001) who have spent decades studying resiliency—i.e., the ability to bounce back from negative life experiences—offer hope to educators and practitioners who are trying to change the negative trajectory of underprivileged African-American males. Henderson and Milstein (2003) propose that schools can foster resilient reactions to adverse circumstances through educational approaches, prevention and intervention programs, and strategies to develop individual protective factors. Figure 1 displays Henderson and Milstein's (2003) resiliency wheel, which contains the six protective factors they propose can mitigate risk factors and build resiliency in the environment.

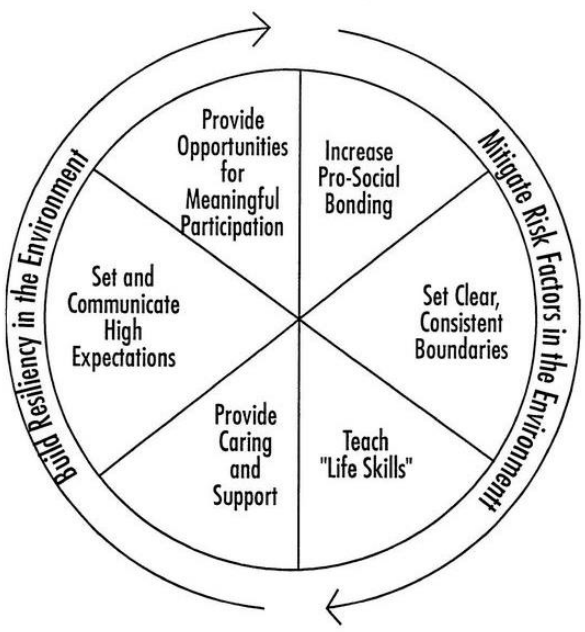

Figure 1. Resiliency Wheel (Henderson & Milstein, 2003).

The current study examines the three resilience-building strategies—i.e., provide caring and support, set and communicate high expectations, and offer opportunities for meaningful participation—that researchers (Benard, 1993, 2004; Evans & Pinnock, 2007; Henderson & Milstein, 2003; Werner & Smith, 2001) suggest have an impact academic achievement. Moreover, Henderson and her colleagues (2007) contend that the resiliency-building strategies shown can change the negative academic and life trajectory of many disadvantaged African-American males. Through quantitative analysis, this study will determine whether the perceived existence of resiliency-building strategies within the learning environment correlates with resilience and academic achievement of African-American male students.

Purpose Statement

The purpose of this study is to explore the relationship between the perception of the presence of resiliency-building strategies, academic resiliency, and academic achievement among African-American males. Since academic resiliency is the likelihood of success in school despite environmental adversities (Wang, Haertel, & Walberg, 1994), it is important to note that many African-American males live in low socioeconomic communities suffering from many of the hardships—i.e., joblessness, drug addiction, violence, and limited financial resources—that negatively impact their chances of success (Moore & Lewis, 2012). This fact is relevant to this study because the participants' socioeconomic status is one of the characteristics used to categorize them during the data analysis process with the intent of investigating academic resiliency among African-American males from different economic backgrounds.

The exploration of resiliency-building strategies includes examining the participants' perceptions as to whether teachers and school staff (a) provide caring and support, (b) set and communicate high expectations, and (c) offer opportunities for meaningful participation. The study also examines the level of academic success—i.e., weighted and unweighted GPA, and Math 1 and English 2 end-of-course (EOC) assessment scores—as it relates to students' perception of resiliency-building strategies and their level of academic resilience. The primary goal of the study is to determine whether a relationship exists between the level of academic resiliency among African-American male high school students and their perception of the existence of resiliency-building strategies within the school. More precisely, this study provides empirical evidence as to whether or not relationships exist between (a) academic performance, (b) the perception of the existence of resiliency-building strategies in school, and (c) academic resiliency.

Research Questions

To explore academic resiliency among a selected group of African-American males and the potential relationships that may exist between their levels of resilience, perceptions of strategies associated with building resiliency, and academic achievement, the researcher developed the following research questions:

1. Is there a correlation between the students' perception of the existence of resiliency-building strategies and their academic achievement?
2. To what extent does the students' perception of the existence of resiliency-building strategies correlate with their level of resilience?
3. Is there a relationship between a students' level of resilience and their academic achievement?

4. Is there a difference in the level of academic resiliency between students retained in school and those not?
5. Is there a difference in the level of academic resiliency between students who received free and reduced-price lunch and those who did not?
6. Is there a difference in the level of academic resiliency between students in different grades?
7. Is there a difference in the level of academic resiliency between students involved at different levels of participation in extracurricular activities?

Significance of the Study

Over the past three decades, researchers (Benard, 1993; Henderson, 2007; Masten, 2001; Werner & Smith, 2001) have invested time and energy in identifying the individual, familial, and environmental factors that help children overcome the harmful effects of life's adversity to succeed both in school and in life. Nonetheless, each year, more than a million children drop out of schools all across the United States (McFarland et al., 2016). Thomsen (2002) suggests students, who are academically less resilient, tend to have lower grades, poor attendance and often drop out of school. Whereas, students who are academically resilient demonstrate better academic and social adjustment, academic growth, consistent levels of attendance, and self-confidence (Thomsen, 2002; Werner, 2007). The present study builds on previous resiliency research (Henderson & Milstein, 2003; Morales & Trotman, 2004; Werner & Smith, 1992) and examines the impact of resiliency-building strategies on the academic achievement of African-American males in secondary school. This study will provide empirical evidence as to whether, and to what degree, relationships exist between resiliency-building approaches, academic resiliency, and academic performance. As a result, educational leaders, as well

as practitioners, will be able to identify the most impactful strategies for building academic resilience among students who face significant challenges in and outside of school.

Much of the resilience research focuses on identifying the characteristics or factors common among students deemed to be resilient based on their ability to bounce back from adversity and succeed despite their adverse circumstances. Drawing on the work of researchers (Connor & Davidson, 2003; Liebenberg, Ungar, & LeBlanc, 2013; Prince-Embury, 2011) who developed resilience measurement scales, this study utilizes a resilience measurement scale—i.e., a survey—aimed at determining whether or not a relationship exists between the students' resilience levels, academic achievement, and perception of the presence of resiliency-building strategies. The knowledge gained through this research study has the potential to increase academic success among African-American males and lower their dropout rate. An additional benefit of this research study is that the findings may provide insight into the most impactful resiliency-building strategies currently used in schools, where academically successful African-American male students are the norm. Furthermore, the study may help educators to better support children who are often at risk of academic failure because of adversities they face in their current circumstances.

Research Design

The study used a non-experimental design to explore the potential relationship between resilience and academic success of African-American males and their perception of the existence of resiliency-building strategies. A correlational research methodology is appropriate for investigating resiliency-building strategies in the context of school and

identifying any relationships that may exist between resilience and academic achievement. The study uses interval data collected through a self-report survey developed from earlier resiliency measurement scales—i.e., Child and Youth Resilience Measure-12 (CYRM-12; Liebenberg, Ungar, & LeBlanc, 2013) and Healthy Kids Resilience Assessment (HKRA; Constantine, Benard, & Diaz, 1999).

Assumptions

The assumptions of the study come primarily from the chosen research methodology. The primary assumption is that the resilience measurement scale will adequately measure the levels of resilience in African-American males. Additionally, the researcher assumes the survey items will sufficiently measure the student's perception of the presence of resiliency-building strategies—i.e., providing caring and support, setting and communicating high expectations, and offering opportunities for meaningful participation. The survey should also be appropriate for assessing resilience in African-American male students because the various items explore individual factors and relationships in the context of school influences. Additional assumptions for the study include:

1. Participants can read and understand the survey questions; and
2. Participants in the study will respond to the survey questions openly and honestly.

These assumptions are the basis upon which the researcher will generalize the research findings to other groups of African-American males in different geographical locations.

Limitations and Delimitations

Limitations of any research study are defined as factors outside the control of the researcher that restrict the type of data that is available (Gay, Mills, & Airasian, 2011). Limitations of this study relate to methodology, instrumentation, and the findings. More specifically, a limitation of the study is the appropriateness and effectiveness of non-experimental quantitative research as it refers to correlation. Gay and his colleagues (2011) maintain that establishing a relationship does not demonstrate cause. However, the purpose of using this methodology is not to prove causality, but rather to show a correlation between resilience, resiliency-building strategies, and academic achievement. Other limitations of the current study include:

1. The scope of the students' responses will be limited to the available choices on the survey instrument;
2. The researcher cannot control the extent of the student's effort to read and comprehend each question; and
3. Findings of the study may have limited generalizability because of the unique characteristics of the participants, participating schools, and geographical locations of the study.

Additionally, the structure of and collection process for anonymous surveys, like the one used in this study, contains limitations such as (a) minimal personal contact, (b) low response rates, (c) open-ended questions are not feasible, and (d) the inability to judge the quality of the participant’s responses.

Delimitations are the boundaries set for the study and can limit the generalizability of the findings (Gay et al., 2011). The sole delimitation of the research

study is that the sample population was limited to students from four high schools in one school district in the southwest region of North Carolina. This delimitation could influence the generalizability of the findings to other groups of African-American male students.

Summary and Overview

This chapter introduced the problem addressed in the study. The purpose of the study was presented along with research questions used to examine the problem. The significance of the study was offered as well as the assumptions, limitations, and delimitations for the research.

Chapter 2 of the study provides an overview of the relevant literature about resilience, academic resiliency, building resiliency and student achievement among African-American males. The literature review spans more than two decades and explores research from the 1990's to 2018. The featured research studies demonstrate the need to learn more about the relationship between academic resilience, three resiliency-building strategies—i.e., caring relationships, high expectations, and opportunities for meaningful participation—and academic achievement to create better academic and life outcomes for African-American males, especially those negatively impacted by poverty.

Chapter 3 explores the methodology used in the study. It begins with a justification for the chosen research method before describing the specific design, research questions, instruments used, and independent and dependent variables. The chapter also discusses the population sample, recruitment methods, and ethical concerns.

Chapter 4 presents the collection and analysis of data obtained from sample populations in urban schools in North Carolina. Chapter 5 describes the significance of

the research findings and discusses the conclusions, implications for practice and recommendations for future research.

CHAPTER 2: LITERATURE REVIEW

The purpose of this study is to investigate the relationship between the perception of the presence of resiliency-building strategies, academic resiliency, and academic achievement among African-American males. There is growing concern over the alarming number of African-American males who are dropping out of high school each year (Lewis et al., 2010; Toldson & Lewis, 2012). Over the past three decades, research has focused on the risk factors that jeopardize the academic success of many African-American males and place them at risk of academic failures. This research has led to the discovery of academic resiliency. Research on academic resilience describes various factors—i.e., individual, familial, and environmental—and processes that contribute to the academic success of students who regularly experience adversities that have a negative influence on their lives. This chapter reviews the literature and research on resilience, academic resiliency, and resiliency-building strategies. Also, the chapter discusses academically resilient students, protective factors and variable-focused approach to examining these factors, and methods used to measure academic resilience.

In the United States, children from low socioeconomic backgrounds regularly face social and economic adversities that can have a negative impact on their lives. Lewis and his colleagues (2012) list a wide range of adversities outside of school—i.e., peer pressure, drugs, violence, mental and physical abuse, poverty, homelessness—that negatively influence the academic success of disadvantaged African-American students. This fact is too often the case among minority children living in poverty, who may encounter hardships daily (Floyd, 1996). The difficulties and challenges faced by many disadvantaged children have a negative impact on their academic performance in school

and can ultimately lead to them dropping out (Jacob & Lefgren, 2009; Schargel & Smink, 2004; Wayman, 2002).

Minority children living in impoverished communities are placed further at risk of academic failure because of the challenges they face in schools. For example, disadvantaged African-American students attending schools in poor urban communities experience inequalities within the learning environment that exacerbate the problem of low academic achievement. Ladson-Billings (2006) argues that the achievement gap—i.e., disparity in the academic performance of minority students and their White counterparts on measures of academic achievement—e.g., standardized test scores and graduation rates—exist because of disparities in school funding, composition of the school's student population, and students' sense of control in the environment. Similarly, Mickelson (2001) contends persistent inequalities such as funding differences between urban schools and their suburban counterparts, unequal educational opportunities, and less qualified and experienced teachers plague urban public schools.

It is difficult to argue the point that poor minority students face academic challenges because of the economic and educational disparities that exist in many urban schools. The problem has been further exacerbated by the resegregation of schools in many large urban cities—e.g., Charlotte, Chicago, Philadelphia, and New York City—around the country (Ladson-Billings, 2006; Mickelson, 2001). Ladson-Billings (2006) contends that public schools are more than a decade into the process of resegregation. Schools are becoming increasingly more segregated due to the economic and spatial separation of families living in urban and suburban communities. As a result, almost three-fourths of minority students attend urban schools that are predominately non-White

(Ladson-Billings, 2006). In addition to segregation caused by socioeconomic disparities, segregation exists within schools as a direct result of academic tracking—i.e., assigning students to classes based on their previous academic achievement or the lack thereof—within the school. This point is relevant because there are systemic issues within urban schools that have a direct impact on the academic success of poor minority students.

Minority students, especially African-American males, face additional issues in the classroom that affect their learning opportunities. McGee (2013) proposes that African-American male students regularly encounter racial bias, negative stereotypes, unfair disciplinary practices, and lower teacher expectations within the classroom. These issues combined with the educational inequalities that disadvantaged African-American males experience daily in inferior school settings—i.e., those lacking adequate academic resources and material, qualified teachers, and stable teacher and student populations—increase their risk of academic failure and compound the issues associated with poverty (Ladson-Billings, 2006; Mickelson, 2001). Therefore, it is critically important that educators thoroughly understand these problems, which are prevalent in many of the urban public schools attended by disadvantaged minority students.

Resilience

Students living in low-socioeconomic conditions in inner cities often face adversities in their daily lives that hinder their academic success in school and increase the possibility of failure later in life. Researchers (e.g., Rak & Patterson, 1996; Werner & Smith, 1992) commonly use the term “at risk” to describe poor minority children who face difficulties and traumatic events that can have negative effects on their academic performance and success later in life. However, many children considered “at-risk”

overcome the adverse effects of life's many challenges and go on to lead productive lives (Benard, 2004; Henderson, 2007; Thomsen, 2002).

In essence, most, if not all, children living in the worst of circumstances can develop positive coping mechanisms, overcome life challenges, and eventually make a decent life for themselves (Benard, 2004). This ability or capacity to overcome adversity and lead a healthy life is referred to as resilience (Henderson et al., 2007; Novotný, 2011). Resilience can strengthen protective skills in the face of external risk factors such as gangs, drugs, physical, verbal and sexual abuse, neglect, pregnancy, low teacher expectations and so forth (Winfield, 1994).

Early research studies on resiliency, which originated from research on risk factors, found that some students facing extreme adversity in their lives were thriving despite their circumstances (Benard, 2004; Bosworth & Earthman, 2002; Dass-Brailsford, 2005; Richardson, Neiger, Jensen, & Kumpfer, 1990). In the early 1990's there was an emergence of resilience research (Benard, 1993; Ford, 1994; Masten, 1994; Wang et al., 1994; Werner & Smith, 1992; Wolin & Wolin, 1992). This research examined how students dealing with issues of abuse, neglect, homelessness, and other traumas associated with poverty were able to overcome their circumstances and succeed in school and life. Researchers (Thomsen, 2002; Werner & Smith, 2001; Wolin & Wolin, 1992) refer to these students as resilient because they can thrive under conditions such as poverty, racism, lack of family support, family psychiatric illness, alcoholism, or abuse. Resilient children thrive in the face of adversity due to "protective" buffers or factors—personal, environmental, and familial factors that mitigate the harmful effects of risk factors (Werner & Smith, 2001).

Martin and Marsh (2009) propose that most everyone, especially children, can develop characteristics that help them navigate hardships—e.g., poverty, abuse and neglect, homelessness, and limited educational opportunities—commonly linked to a lack of success in life. These characteristics—e.g., self-confidence, perseverance, friendliness, and internal locus of control—contribute to an individual's inherent ability for self-righting, transformation, and change (Henderson, 2007; Werner & Smith, 1992). The idea of resilience explains why some children overcome life's cruelest circumstances and succeed regardless of the obstacles they face.

Protective Factors

Werner (2007) found that protective factors had a more profound impact on the life course of individuals who grow up and overcome adversity than the risk factors they faced. Likewise, researchers (Benard, 1993; Masten, 1994; Morales & Trotman, 2004; Werner & Smith, 1992; Wolin & Wolin, 1992) learned protective factors help children develop resiliency and improve their chances of experiencing positive outcomes in life despite living in conditions that placed them at risk for failure. Furthermore, Werner (2007) suggests that the most impactful protective factors tend to transcend ethnicity, social class, and geographical boundaries.

The focus on protective factors as a means of developing academic resilience illustrates the paradigm shift away from models of inquiry that initially focused on risk factors (Jessor, 1993). Protective factors are related to the circumstances that moderate the effects of risks and enhance adaptation (Masten, 1994). Research has shown that protective factors—both internal and external—can buffer, interrupt, or even prevent risk (Werner & Smith, 1992). Additionally, Howard, Dryden, and Johnson (1999) suggest that

“the more protective factors that are present in a child’s life, the more likely [he or she is] to display resilience” (p. 310).

The idea of "protective factors," originated from conceptual models emphasizing resilience rather than risk (Rink & Tricker, 2005). Garmezy (1983) organized protective factors into three categories consisting of: (a) individual differences, (b) family attributes, and (c) familial situations. Later, Hawkins, Catalano, and Miller (1992) offered four domains of protective factors, which included (a) community and school, (b) family, (c) peer, and (d) individual domains. In the early 2000’s, researchers (Morales & Trotman, 2004; Werner, 2007) re-organized the protective factors into three categories: (a) individual, (b) familial, and (c) environmental.

In a 2010 study, Morales grouped the protective factors into two distinct clusters of factors that are interrelated and supplemental. The first cluster of protective factors is: (a) willingness/desire to move up in social class, (b) caring school personnel, (c) sense of obligation to one’s race/ethnicity, and (d) strong future orientation. The second cluster of protective factors is: (a) strong work ethic, (b) persistence, (c) high self-esteem, (c) internal locus of control, (e) attendance at out of zone school, (f) high parental expectations supported by words and action, and (g) mother modeling strong work ethic. Within each cluster, the protective factors work in concert to mitigate adverse effects of adversity and propel the students toward academic success (Morales, 2010).

Resiliency research has steadily moved beyond identifying and categorizing the individual, familial, and environmental factors of resiliency into the examination of resiliency as a dynamic developmental process (Constantine et al., 1999). As a result, researchers (Benard, 1993; Hawkins et al., 1992) focus on developing resiliency in at-risk

children suggest schools can provide both environmental protective factors and suitable conditions for fostering individual resiliency traits. In essence, educators are in the ideal environment for cultivating resilience in adolescents (Benard, 2004; Henderson et al., 2007; Henderson & Milstein, 2003). Henderson and Milstein (2003) used the findings on protective factors to identify specific instructional strategies and practices—i.e., providing caring and support, setting and communicating high expectations, and offering opportunities for meaningful participation—which educators can use to build academic resiliency in students within the learning environment. Based on the premise that the environmental protective factors commonly found in schools can foster academic resiliency, the current study examines whether there is a relationship between the perception of resiliency-building strategies used in school, academic resiliency, and academic achievement.

Academic Resilience

Much of the earlier resiliency research focused on broader life events and experiences such as growing up in a disadvantaged family, enduring sustained abuse or neglect or lacking adequate shelter and medical care. However, later resiliency research examined resilience and academic achievement in an educational environment. This research led to the concept of academic resilience and the idea that it develops through the interaction between the characteristics of the student, the classroom, and school environment (Winfield, 1994). Moreover, Winfield (1994) proposes school leaders have considerable control over many of the protective procedures and practices that directly link to resilience. Similarly, Henderson and Milstein (2003) contend that educators ideally can implement proactive processes that can foster academic resilience in students.

For more than 30 years, educational researchers have focused on academic resilience to expose the issues that place some students at risk of academic failure and find the reasons others succeed (Floyd, 1996; Morales, 2010; Winfield, 1994). Through studies focused on the academic achievement of disadvantaged minority students, researchers (Floyd, 1996; Ford, 1994; Gayles, 2005) coined the term "academic resilience." The most straightforward definition of academic resilience is "academic achievement when such achievement is rare for those facing similar circumstances…" (Gayles, 2005, p. 250). Wang, Haertel, and Walberg (1994) defined academic resilience as "the heightened likelihood of success in school, and other life accomplishments despite environmental adversities brought about by early [adolescent] traits, conditions, and experiences" (p. 46). Whereas, Morales and Trotman (2004) define it as "the process and results that are part of the life story of an individual who has been academically successful, despite obstacles that prevent the majority of others with the same background from succeeding" (p. 8). Based on these definitions, it is essential to understand both the negative factors that make academic failure probable as well as the factors that mitigate them and lead to academic success.

Researchers (Benard, 2004; Henderson & Milstein, 2003; Morales & Trotman, 2004; Werner & Smith, 2001) have examined how students facing varying levels of adversity can navigate these obstacles successfully and achieve academic success. Similarly, other studies (Ford, 1994; Gayles, 2005) revealed that developing academic resilience helps students overcome social and economic adversity and reach their academic potential ultimately leading to success in school. The findings in these studies serve as evidence that there is a connection between academic resilience and academic

success. For example, the study conducted by Waxman and Huang (1996) found a correlation between the mathematics scores on a standardized test and levels of resilience among inner-city students. The study shows students in the 90th percentile in mathematics had a significantly higher level of resilience traits—task orientation and satisfaction, social self-concept, achievement motivation, and academic self-concept—than students who were in the 10th percentile (Waxman & Huang, 1996). Likewise, empirical research conducted by Jennings (2003) on environment protective factors—i.e., meaningful participation in school and caring relationships—associated with academic resilience and academic achievement found that the presence of these protective factors is a predictor of academic success.

Martin and Marsh (2009) claim that taking a proactive approach to academic development by integrating protective factors will explicitly stimulate appropriate responses to academic adversity. Likewise, Coleman and Hagell (2007) contend that examining protective and enabling factors in concert could help educators build academic resilience within the school environment. The consensus among researchers (Coleman & Hagell, 2007; Martin & Marsh, 2009) is that exposing individuals to a combination of protective and enabling factors may be an effective means of developing their academic resilience.

Researchers use predominately two approaches—i.e., variable-focused and person-focused—to examine how protective factors influence academic resilience. The variable-focused approach explores external factors linked to academic outcomes; whereas, the person-focused approach examines the differences between resilient and non-resilient individuals (Martin & Marsh, 2009). In the case of the current study, the

variable-focused approach has the advantage of statistical analysis and is suited for searching for links between predictors and outcomes that can have implications for intervention (Masten, 2001). The most significant feature of the variable-focused approaches is its direct and operationally straightforward way of assessing academic resilience using global measures, such as questions related to how students deal with chronic academic adversities (Martin & Marsh, 2009). For example, Norm Constantine and his colleagues (1999) used qualitative and quantitative research to develop an academic resilience measurement instrument—i.e., Healthy Kids Resilience Assessment—that assesses a variety of external and internal resilience constructs associated with positive youth development. As a result, resilience is being examined more often as a dynamic process reflecting the interaction between the individual and the educational environment (Evans & Pinnock, 2007).

The variable-focused approach to studying academic resilience has allowed researchers (Finn & Rock, 1997; Morales & Trotman, 2004; Wayman, 2002) to identify and categorize protective factors that contribute to the development of academic resilience. Martin and Marsh (2009) categorized these protective factors as (a) psychological factors, (b) school and engagement factors, and (c) family and peer factors. Psychological factors include self-efficacy, the locus of control, a sense of purpose and motivation (Finn & Rock, 1997). School and engagement factors include class participation, educational aspirations, enjoyment of school relationships with teachers, attendance, involvement in extracurricular activities, and challenging curriculum (Waxman & Huang, 1996). Family and peer factors include family support, positive bonds with pro-social adults, an informal network of friends, peer commitment to

education, and caring parenting (Benard, 1991; Shin, Daly, & Vera, 2007; Williams & Bryan, 2013). Morales and Trotman (2004) also provide a similar categorization of protective factors, which include personal, environmental, and familial factors. By identifying specific protective factors, which are shared by academically successful students, researchers (Thomsen, 2002; Werner, 2007; Wolin & Wolin, 1992) identify and describe the academically resilient student.

Academically Resilient Students

Academically resilient students sustain high levels of academic achievement despite the presence of stressful events and conditions that place them at risk of doing poorly in school and potentially dropping out (Martin & Marsh, 2006; Waxman, Gray, & Padron, 2003). There are some distinct differences between resilient and non-resilient students. Garmezy (1983) found that resilient students in high poverty areas often have a wide range of social skills, a high degree of social responsiveness and sensitivity, intelligence as measured by IQ, empathy, a sense of humor, and critical problem-solving skills. Other characteristics identified by Garmezy (1983) include:

1. Positive peer and adult interactions;
2. Low degrees of defensiveness and aggressiveness;
3. High degrees of cooperation, participation, and emotional stability;
4. A positive sense of self;
5. A sense of personal power rather than powerlessness; and
6. An internal locus of control—a belief that one is capable of exercising a degree of control over his or her environment.

Another essential characteristic of resilient children is that they have at least one significant adult—parent, educator, counselor, mentor, or minister—in their lives (Morales & Trotman, 2004).

Benard (1993) proposes that resilient children possess four distinct characteristics—i.e., social competence, problem-solving skills, autonomy, and a sense of purpose and future. Through sufficiently developed social competencies—i.e., responsiveness, flexibility, empathy, caring, communication skills, and a sense of humor—resilient children establish positive relationships with adults and peers that help them build bonds within their families, schools, and communities (Benard, 1993). Additionally, resilient children have developed problem-solving skills and tended to demonstrate the ability to plan. This capability allows the child to see him- or herself as being in control as well as being resourcefulness in getting help from others (Benard, 1993). The ability to problem-solve is particularly useful for students who are living in urban neighborhoods where daily life can be a constant challenge.

Measuring Academic Resiliency

Academic resilience is a complicated construct to measure because it requires the existence of risk factors that could impede academic progress as well as specified standards for adequate academic achievement. Academic resiliency, like resilience, is multidimensional and varies with context, time, age, gender, and cultural origin as well as different life circumstances (Connor & Davidson, 2003; Garmezy, 1983; Garmezy & Rutter, 1983; Werner & Smith, 1992). Constantine and Benard (2001) recommend that any instrument used to measure resilience should assess a variety of external and internal constructs associated with positive youth development. Similarly, a well-validated

resilience scale will be able to measure the internal and external factors common among resilient students (Connor & Davidson, 2003). Based on this premise, researchers (Constantine et al., 1999; Ungar & Liebenberg, 2011) developed self-rated assessments of resilience—i.e., California Healthy Kids Survey (CHKS; Constantine et al., 1999) and Child and Youth Resilience Measure-28 (CYRM-28; Ungar & Liebenberg, 2011)—that have proven to be reliable and valid methods of quantifying resilience across different contexts.

The CYRM-28 was developed through collaborative cross-cultural consultation of researchers in 11 countries and tested in 11 culturally diverse regions—e.g., Africa, Canada, China, New Zealand, and the United States—at 14 community sites (Ungar and Liebenberg, 2011). The CYRM-28 was created using a compilation of quantitative and qualitative data, which extracted central recurring resilience themes across all participating cultural groups (Ungar & Liebenberg, 2011). As a result, the CYRM-28 has a multicultural framework, which makes applicable to a variety of cultural groups (Ungar & Liebenberg, 2011). Later, Leibenburg, Ungar, and LeBlanc (2013) decided to make the CYRM suitable for use in a compilation survey. Consequently, the CYRM-12, a 12-item version of CYRM-28, was developed (Leibenburg et al., 2013). While the full CYRM-28 provides a more comprehensive understanding of the multiple dimensions of resilience, the 12-item version is better for inclusion in smaller studies where resources are limited, but adequate assessment of resilience in an environmental context is desired (Leibenburg et al., 2013).

WestEd Health and Human Development Program in conjunction with Derr Evaluation Resources developed the CHKS to be a comprehensive self-report tool used to

monitor the school environment and student health risk (Constantine et al., 1999; Hanson & Kim, 2007). In 1998, the Resilience Assessment Research Panel—committee convened by the developers of the CHKS—used the survey to create the Healthy Kids Resilience Assessment (HKRA; Constantine et al., 1999). The HKRA gathers specific data related to protective factors, resilience traits, and health-promoting behaviors (Constantine et al., 1999). The HKRA is unique in its ability to assess various external resilience constructs or protective factors—i.e., caring relationships, meaningful participation, and high expectations—associated with positive youth development (Constantine & Benard, 2001; Constantine et al., 1999; Furlong, Ritchey, & O'Brennan, 2009). The HKRA offers a resilience measurement scale designed explicitly to measure academic resilience in students in secondary school, and differentiate between the external protective factors and the resilience traits of the individual (Constantine et al., 1999).

The ability to measure protective factors and other external resources that foster resilience is a critical component of most resiliency measurement scales (Connor & Davidson, 2003; Constantine et al., 1999). With this in mind, the HKRA is an adequate scale for measuring students' perceptions of external resources in the school context, can be vital to quantifying the perceived existence of resiliency-building strategies—i.e., caring relationships, high expectations and opportunities for meaningful participation—in other research studies (Furlong et al., 2009). The CYRM-12, on the other hand, provides a valid measure of resilience characteristics among youth and can be used as a screener in future research (Liebenberg et al., 2013). The CYRM-12 and HKRA demonstrate moderate to high levels of validity and reliability in independent quality assessments of

their psychometric properties (Furlong et al., 2009; Hanson & Kim, 2007; Liebenberg et al., 2013; Windle, Bennett, & Noyes, 2011). As a result, researchers (Furlong et al., 2009; Liebenberg et al., 2013) suggest that the CYRM-12 and the HKRA can be used in concert with other resiliency measurement tools in non-clinical studies to examine resilience in the school environment.

Resiliency-Building Strategies

Researchers have used various approaches to examine academic resilience as it relates to students' response to academic adversity. Research which originally focused on 'risk' and 'protective' factors has begun to encompass resiliency-building strategies, which allow students to develop positive cognitive, emotional, and behavioral orientations to school and academic life (Martin & Marsh, 2009). Academic resilience is being viewed more often as protective mechanisms that modify the individual's response to risk factors (Winfield, 1994). Based on this premise, resiliency develops in children and adolescents because of the relative strength of individual characteristics and external protective processes and factors—e.g., the support provided by families, school staff, and communities (Winfield, 1994). This perspective on academic resilience is the foundation upon which Martin and Marsh (2009) recommend that educators should attempt to develop interventions to break the vicious cycle of failure experienced by many students who are not able to cope constructively with stressful circumstances.

Building academic resiliency in students requires more than short-term strategies. For example, educators can foster academic resilience through positive social interactions aimed at helping the child build social competence, develop problem-solving skills, understand him- or herself, and find a sense of purpose (Benard, 1993; Winfield, 1994).

Adults can help children develop resilience throughout the developmental stages of their lives by strengthening protective processes (Winfield, 1994). These protective processes must: (a) be long-term and developmental, (b) view children with strengths rather than with deficits, and (c) change systems, structures, and beliefs within the schools so that children can succeed (Winfield, 1994). Researchers (Henderson et al., 2007; Masten, 1994; Werner & Smith, 1992) conclude that school can serve as a haven for students facing hardships and challenges in their daily lives because they contain many of the conditions needed to promote resilience.

Furthermore, schools that possess environmental protective factors can foster academic resiliency among students who are at risk of academic failure. Three of the most noted ecological characteristics that promote the development of resilience are: (a) being caring and supportive, (b) setting positive expectations, and (c) providing meaningful opportunities for participation (Benard, 1993). Successful inner-city schools, where disadvantaged minority students are demonstrating high levels of achievement have structural supports such as those that promote resilience (Wang et al., 1994; Waxman & Huang, 1996). By maintaining realistically high academic standards, providing useful feedback with plenty of praise and opportunities for the students to share responsibility for their learning, these schools are developing academically resilient students (Werner, 2007). Once educators identify environmental protective factors within the school, they can strengthen these factors, and ultimately mitigate the effects of risk and propel the students to academic and life success (Wright, Masten, & Narayan, 2013).

Being Caring and Supportive

Schools often serve as protective shields to help children withstand the challenges they face in a stressful world. Garmezy (1983) characterizes school as a vital refuge for children growing up in stressful situations. For example, children who participate in school activities such as sports, clubs and performing arts can use their experiences in these activities as developmental building blocks for healthy adjustment and achievement. The school environment can provide the opportunity for students to develop positive relationships with other students. Werner and Smith (1992) found caring friends were a significant factor in the development of resiliency among the disadvantaged students. In essence, resilient students seek to fulfill the basic human needs for social support, caring and love in the school environment (Benard, 1993).

A nurturing school environment contributes significantly to academic success, especially for struggling students in urban schools. In a comprehensive study on the importance of school climate, Perkins (2006) found that improvements in the fundamental elements of school climate led to higher student achievement, higher morale among students and teachers, more reflective practices among teachers, fewer dropouts, reduced violence, better community relations, and increased institutional pride. The Council of Urban Boards of Education (CUBE) and the National School Boards Association (NSBA) list the critical elements of a positive school climate as:

1. feelings of safety among staff and students;
2. supportive relationships within the school;
3. engagement and empowerment of students as valued members and resources in the school community;

4. clear rules and boundaries that are understood by all students and staff;
5. high expectations for academic achievement and appropriate behavior; and
6. trust, respect, and an ethos of caring (Perkins, 2006).

These components of positive school climate align well with environmental protective factors common to most programs and strategies designed to assist struggling students (Henderson, 2013; Henderson et al., 2007; Henderson & Milstein, 2003).

In the Kauai Longitudinal study, Werner and Smith (2001) found that students, who overcome multiple adversities associated with poverty, perinatal stress, and family dysfunctions, credited teachers and school as their chief protective factors. Teachers who establish positive and nurturing learning environments and offer unique learning opportunities have an impact on academic achievement (Henderson, 2013). Furthermore, Floyd (1996) suggests that teachers are important protective factors for economically disadvantaged students primarily because teachers can serve as intermediaries between home and school and build positive relationships with parents, who in turn can better support their children's academic needs (Floyd, 1996). Additionally, teachers who are sensitive and knowledgeable about their students' culture and community can promote academic resilience by maximizing learning time and creating engaging educational experiences (Floyd, 1996). In essence, teachers can have a motivational influence on the lives of students who seek academic excellence (Floyd, 1996; Morales & Trotman, 2004).

It is evident that supportive school personnel are critical protective factors in the development of academic resilience. For example, school personnel provide caring, positive relationships, and serve as role models and mentors (Theron & Engelbrecht,

2012; Thomsen, 2002). Furthermore, school administrators, teachers and support staff set clear and fair boundaries and structure, and give basic human respect and dignity that many children from impoverished communities do not see in their troubled homes (Benard, 2004; Theron & Engelbrecht, 2012; Thomsen, 2002). In their role as educators and mentors, school staff provides the support needed for students to move beyond their current circumstances (Morales & Trotman, 2004). Teachers and staff—i.e., guidance counselors, dropout prevention coordinators, advisors, and coaches—can also help the student understand that academic advancement does not mean leaving his or her old life behind (Morales, 2010). To the contrary, academic achievement is a way to do more for the community. By getting ahead in life, the student has far more opportunities to give back than if he or she remains in their current situation (Morales, 2010). Therefore, teachers who assume the role of mentors and take ownership of their students' academic success can counteract self-sabotaging behavior, which often hinders the students' success (Gayles, 2005).

For the most part, educators—i.e., teachers, counselors, and administrators, and school personnel—have limited control over a students' home life or living conditions. However, a greater understanding of the resilience process will allow educators to effectively promote academic resilience and change the academic trajectory of students who are at risk of school failure. In the Kauai Longitudinal Study, Werner and Smith (1992) illustrate this point in their findings that show children exposed to multiple risk factors could grow up to become confident, competent adults whose educational success was equal to or exceeded those of the low-risk children. The researchers concluded that the children's ability to overcome stressful life events success was a result of caring

teachers, who in many cases serve as the most potent protective factor (Werner & Smith, 1992).

Teachers who effectively build resilience do so by looking for the child's strengths and reflecting it back on him or her positively (Henderson, 2013). Children who regularly experience abuse, neglect, and other childhood traumas often do not develop positive self-concepts and often feel unwanted and unloved (Wolin & Wolin, 1992). Therefore, the single most significant environmental protective factor can be one or more caring individuals—teacher, counselor, nurse, bus driver, school secretary, or volunteer—who supports the student's developmental needs through kind, caring affirmation that he or she is valued (Wolin & Wolin, 1992).

In summary, caring adults in school serve as an influential protective factor. These individuals often notice and reinforce students' internal protective factors—such as calm temperament, sound reasoning skills, self-esteem, and internal locus of control (Benard, 2007). Through regular interactions and conversations, school staff can help students recognize and develop these personal traits. School staff can also create classroom and school cultures that contain environmental protective factors such as regular structure, routines, civility, and caring (Henderson, 2013). Although teachers may not be able to eliminate poverty, stress, risk, and trauma their students face daily, they can foster resilience and create school communities that build resilience.

Setting Positive Expectations

Successful schools in high poverty areas typically have common characteristics. Among those characteristics are: (a) an academic emphasis, (b) teachers' clear expectations and regulations, and (c) a high level of student participation (Garmezy &

Rutter, 1983). Henderson & Milstein (2003) suggest teachers can promote academic resilience by setting clear and realistic expectations for their students. Similarly, Weinstein (2002) proposes teachers can communicate high expectations and encourage academic resilience through the following steps:

1. Teacher behavior and attitudes should convey the message that (a) the work is essential, (b) the student can do the work, and (c) the teacher will not give up on the student;
2. The curriculum should be rich, varied, and provide opportunities to be successful not just in academic but also in the arts, in sports, in community service, in work apprenticeship and helping peers; and
3. The teacher should use heterogeneous cooperative-learning groups to ensure the positive social and academic outcomes.

By establishing high expectations for students, teachers can increase the students' chances of academic success (Weinstein, 2002). Similarly, Benard (1993) found that 50 to 80% of students with multiple risk factors in their lives are academically successful, especially if they experience a caring school environment that conveys high expectations.

Providing Meaningful Opportunities for Participation

Meaningful participation is a fundamental human need (Benard, 1993). Therefore, students desire the opportunity to engage meaningfully in school (Henderson et al., 2007). With this idea in mind, teachers can provide students with various opportunities to participate meaningfully in the classroom. For example, Henderson and her colleagues (2007) suggest educators can:

1. Give the students more opportunities to answer questions and verbally participate in class;
2. Ask the students' opinion on current events and issues;
3. Ask higher level questions that encourage critical thinking and reflection;
4. Make learning more hands-on by involving students in the curriculum planning; and
5. Utilize cooperative learning, cross-age mentoring, peer tutoring, and community service.

These examples represent a few of the instructional strategies that help foster academic resilience in students.

Summary

Researchers have made a great deal of progress in their efforts to understand protective factors and resilience as it relates to academic achievement. However, educational disparities still exist between African-American students and their White counterparts. Therefore, there is still more work left to do in the area of academic resilience. Researchers (Evans & Pinnock, 2007; Henderson & Milstein, 2003; Morales & Trotman, 2004) have developed strategies and designed academic programs to increase academic resilience in students at various stages of development. Other researchers (Connor & Davidson, 2003; Liebenberg et al., 2013; Prince-Embury, 2011; Ungar & Liebenberg, 2011) have developed, tested, and validated resiliency measurement scales for children and adolescents. Based on past research, it is evident that there is a link between academic resilience and student achievement. Therefore, further research can solidify the connection between the two concepts.

CHAPTER 3: METHODOLOGY

The previous chapter defined resilience, identified the protective factors that mitigate the impact of risk factors and described the resiliency-building strategies educators can implement in the school to promote resilience in students considered at risk of academic failure. The school environment provides many of the necessary structures—i.e., opportunities for academic engagement and social interaction, and pre-established academic and behavioral expectations—needed to build resilience in students. Researchers (Henderson, 2007, 2013; Henderson et al., 2007; Henderson & Milstein, 2003; Morales & Trotman, 2004) propose that implementing resiliency-building strategies—e.g., establishing caring relationships, setting high expectations, and providing meaningful opportunities for participation—will provide underprivileged students with academic experiences needed to help them overcome adversities in school and life.

This chapter describes the research methodology used to investigate the relationship between resilience, resiliency-building strategies, and academic achievement among African-American male students attending public high schools in urban communities. The researcher clarifies the research questions and describes the research design. Additionally, a description of the data collection procedures and instrument used along with the instrument's psychometric properties are provided. The researcher also describes the setting for the study and the sample population. The chapter closes with an explanation of the data analysis and ethical considerations.

Research Design

This quantitative research study used a correlational research methodology. The researcher chose this research methodology because it was the most appropriate for determining whether, and to what extent, a relationship exists between multiple quantifiable variables (Gay et al., 2011). In the study, the researcher used an online self-report survey to collect data from the participants. The survey contained questions designed to gather demographic information from the participants, measure their levels of resilience, and quantify their perceptions of the existence of resiliency-building strategies in the school. Using a correlational research method in conjunction with multiple linear regression data analysis, the researcher examined whether relationships exist between the independent variables—i.e., measures of academic achievement—and dependent variables—i.e., measures of resilience and the participant's perceptions of resiliency-building strategies.

Sample/Participants

African-American male high school students were the target population for the research study. The participants were selected using criterion sampling of public high school students from a school district located in the southwest region of North Carolina. The researcher selected the participants based on the following criteria:

1. The student must self-identify as an American-African male.
2. The student must be in grades 10-12.

The participants' socioeconomic status was not a criterion for participating in the study; however, it is one of the factors—along with participation in extracurricular activities, grade level, and retention rate—used by the researcher to categorize the participants

during data analysis. The researcher gauged the participants' socioeconomic status based on their eligibility to receive free or reduced-price lunch under the National School Lunch Program (North Carolina Department of Public Instruction (NCDPI), 2018b). The participants reported their free or reduced-price lunch eligibility status along with other background information—e.g., age, living accommodations and parent's level of education—when completing the survey.

The researcher recruited participants for the study from four traditional public high schools—i.e., schools divided into grades 9-12 and governed by school districts—in a school district located in the southwest region of North Carolina. The school district, which has approximately 42,000 students, is one of the largest in North Carolina (NCDPI, 2018a). During the 2017-18 school year, the student population of the district was 63.2% White, 17.1% Hispanic, 12.8% African-American and 6.9% Other (NCDPI, 2018c). The combined student population of the four high schools was 48.9% White, 25% Hispanic, 21.7% African-American and 4.4% Other (NCDPI, 2018a, 2018c). Approximately 31.7% of the students in the overall school district were eligible for free or reduced-price lunch (NCDPI, 2018a). However, approximately 54.5% of the students attending the four high schools used as research sites received free or reduced-price lunch (NCDPI, 2018a).

All the high schools used as sites for the current study had an African-American male population of at least 7% (NCDPI, 2018c), which was higher than the district's African-American male high school population of 6.7% (NCDPI, 2018a, 2018c). Furthermore, the four schools used in the study have approximately 68% of the district's entire African-American male high school population (NCDPI, 2018a, 2018c). Therefore,

the researcher expected to get a sample that was representative of the target population. Additionally, the researcher concluded that the method used to select the sample population would increase the generalizability of the findings.

Research Questions and Hypotheses

The study examined the relationship between resiliency-building strategies, resilience, and academic achievement by focusing on the following research questions:

1. Is there a correlation between the students' perception of the existence of resiliency-building strategies and their academic achievement?

   Null Hypothesis: There is no relationship between the students' perception of the existence of resiliency-building strategies and their academic achievement.

   Alternative Hypothesis: There is a relationship between the students' perception of the existence of resiliency-building strategies and their academic achievement.

2. To what extent does the students' perception of the existence of resiliency-building strategies correlate with their level of academic resiliency?

   Null Hypothesis: There is no correlation between the students' perception of the existence of resiliency-building strategies and their level of academic resiliency.

   Alternative Hypothesis: There is a correlation between the students' perception of the existence of resiliency-building strategies and their level of academic resiliency.

3. Is there a relationship between the students' level of academic resiliency and their level of academic achievement?

Null Hypothesis: There is no relationship between the students' level of academic resiliency and their level of academic achievement.

Alternative Hypothesis: There is no relationship between the students' level of academic resiliency and their level of academic achievement

4. Is there a difference in the level of academic resiliency between students retained in school and those not?

   Null Hypothesis: There is no difference in the level of academic resiliency of students retained in school and those not.

   Alternative Hypothesis: There is a difference in the level of academic resiliency of students retained in school and those had not.

5. Is there a difference in the level of academic resiliency between students who received free and reduced-price lunch and those who did not?

   Null Hypothesis: There is no difference in the level of academic resiliency between students who received free and reduced-price lunch and those who did not.

   Alternative Hypothesis: There is a difference in the level of academic resiliency between students who received free and reduced-price lunch and those who did not.

6. Is there a difference in the level of academic resiliency between students in different grades?

   Null Hypothesis: There is no difference in the level of academic resiliency between students in different grades.

Alternative Hypothesis: There is a difference in the level of academic resiliency between students in different grades.

7. Is there a difference in the level of academic resiliency between students involved at different levels of participation in extracurricular activities?

   Null Hypothesis: There is no difference in the level of academic resiliency of students involved at different levels of participation in extracurricular activities?

   Alternative Hypothesis: There is a difference in the level of academic resiliency of students involved at different levels of participation in extracurricular activities?

Constructs

In the study, the researcher analyzed the participants' perceptions regarding the extent to which resiliency-building strategies existed in their respective schools, and their levels of academic achievement and academic resiliency. The independent variable was the participants' perceptions of the existence of three resiliency-building strategies—i.e., caring and supportive school staff, opportunities to engage in meaningful participation, and high expectations—in the school. Using survey questions taken from the Healthy Kids Resilience Assessment (HKRA; Constantine et al., 1999), the researcher measured the participant's perception as it related to the existence of resiliency-building strategies in the school.

Academic Achievement

The dependent variables examined in the study were the participants' academic achievement. Researchers (York, Gibson, & Rankin, 2015) contend GPA is the most

commonly used measure of achievement and often serves as an indicator of a student's future academic success. With this in mind, the researcher determined the participants' GPA would be an appropriate measure of the academic performance for the study. However, to create a more comprehensive study, the researcher included three other measures of academic achievement—i.e., weighted GPA, Math 1 EOC assessment scores, and English 2 EOC assessment scores—as part of the statistical analysis. Also, conducting data analysis using all the available achievement data made the study more robust, provided additional results, and helped better answer the research questions.

Academic Resiliency

The researcher measured the participants' level of academic resiliency using only one instrument—the Child and Youth Resilience Measure-12 (CYRM-12; Liebenberg et al., 2013). Academic resiliency was measured using a 12-question resilience scale score. Using the CYRM-12, the researcher assessed the existence of factors that are common among students who overcome adversity and achieve academic success. In each of the items—i.e., questions 1-12 of the survey (see Appendix A)—the participants had the following choices in indicating how well each statement described them:

1: Not at all

2: A little

3: Somewhat

4: Quite a bit

5: A lot

The values—i.e., 1, 2, 3, 4 or 5—attached to each response option were averaged across all participants for all 12 items in the academic resiliency scale. Appendix B has a copy of the survey containing the items used to measure academic resiliency.

Perception of Resiliency-Building Strategies

The researcher used nine items selected from the HKRA (see Appendix A) to measure resiliency-building strategies. These questions asked the participants about their perceptions about three resiliency-building strategies—i.e., caring relationships, high expectations, and opportunities for meaningful participation—commonly associated with the school environment (Constantine & Benard, 2001; Constantine et al., 1999; Hanson & Kim, 2007). The researcher created a scale score for resiliency-building strategies by averaging the Likert scores for all nine items. Additionally, the researcher created subscales for participants' perception of (a) caring relationships, (b) high expectations, and (c) meaningful participation. The scale and subscales for the participants' perception of resiliency-building strategies are as listed:

1. Perception of resiliency-building strategies was measured with a 9-question scale score;
2. Perception of caring relationships was measured using a 2-question subscale score;
3. Perception of high expectations was measured using a 3-question subscale score; and
4. Perception of meaningful participation was measured using a 3-question subscale score.

For all the items in these scales, students had the following choices in indicating how true each statement about their school was for them:

1: Not at all true

2: A little true

3: Pretty much true

4: Very much true

The values—i.e., 1, 2, 3 and 4—attached to each response option were averaged across all participants for all the items in each scale. The scale for resiliency-building strategies consisted of all nine items—i.e., questions 13-21—whereas, the scale for caring relationships was measured by items 13-15, high expectations were measured by items 16-18, and items 19-21 measured meaningful participation. Appendix B contains a copy of the survey and Appendix A shows the items used to calculate the resiliency-building strategies scale and subscale scores.

Recoding Data

In order to analyze the differences between the participants, the researcher re-coded some of the initial data collected from the participants. The researcher created four groups based on the participants' response to the question about their involvement in extracurricular activities:

1. None means the participant participated in no extra-curricular activities at school;
2. Athletic means the participant only participated in sports at school;
3. Non-athletic organizations mean the participant only participated in school-sponsored student clubs and organizations; and

4. Multiple extracurricular activities represent the participants who were involved in both athletic and non-athletic activities, clubs, and organizations.

Similarly, the researcher re-coded the participants' responses to the question about the number of times they had been retained into a dichotomous response where 'yes' means the participant had been retained at least once and 'no' means the participant had not been retained. Recoding the data allowed the researcher to efficiently examine whether factors such as grade-level retention and involvement in extracurricular activities influence the participants' level of academic resiliency.

Data Collection

Instruments

For this study, the researcher used a self-report survey (see Appendix B) to collect data from the participants. The survey is a compilation of questions taken from the CYRM-12 and the HKRA designed to (a) collect background information about the participants, (b) measure their level of academic resiliency, and (c) gauge their perceptions of the existence of resiliency-building strategies. The survey also contains three questions that served as reliability self-reported check of the participants' answers to the questions in Section 1-3 of the survey (Constantine et al., 1999).

Demographic information. The first section of the survey collected demographic information such as age, grade-level, socioeconomic status, living situation, highest education level of the parent(s), number of times the student has been retained, and number of days absent from school. Researchers (Benard, 2004; Masten, 2001; Morales, 2010; Morales & Trotman, 2004; Winfield, 1994) suggest various factors—e.g., poverty, past academic success or failure, absenteeism, parents' level of education, and

involvement in extracurricular activities—influence students' level of academic resiliency. To explore this theory, the researcher used the participants' demographic information—e.g., age, grade level, and socioeconomic status—to organize them in different groups and examine differences in their levels of academic resiliency.

Child and Youth Resilience Measure-12. The second section of the survey contains 12 questions adapted from the CYRM-12, which is a modified version of the CYRM-28 and explicitly designed to measure the academic resiliency of adolescents who face diverse forms of adversity (Liebenberg et al., 2013). The questions on the CYRM-12 are measured using a *Likert scale*—i.e., most widely used approach to scaling responses in survey research (Gay et al., 2011)—to measure the participant's level of resilience.

In previous studies (Govender, Cowden, Oppong Asante, George, & Reardon, 2017; Liebenberg et al., 2013; Ungar & Liebenberg, 2011), the CYRM-12 demonstrated sufficient validity in measuring essential resilience characteristics among adolescents of different ages and cultural backgrounds. Furthermore, it has shown moderate to high levels of reliability and validity in assessments of its psychometric properties. The CYRM-12 has also proven to be an adequate measure of academic resiliency in diverse social contexts across numerous cultures with youth ages 9 to 23 (Liebenberg et al., 2013). Therefore, the researcher concluded it would serve as an acceptable measure of academic resiliency among African-American males, who ranged in ages from 15 to 19 years old.

Healthy Kids Resilience Assessment. The third section of the survey consists of nine items taken from the HKRA. These items were specifically designed to measure the participants' perceptions of the existence of resiliency-building strategies in the school

(Constantine & Benard, 2001; Constantine et al., 1999). The survey items selected from HKRA use a 4-point Likert scale to calculate the participants' perceptions and have demonstrated sufficient reliability, validity, and cultural and developmental appropriateness when administered to students in a school setting (Hanson & Kim, 2007).

In the present study, the nine items form the HKRA measures the participant's perceptions of three resiliency-building strategies—i.e., caring relationships, high expectations, and opportunities for meaningful participation. The researcher used the responses of the individual items to calculate scale and subscale scores designed to represent the participants' perception of resiliency-building strategies. This decision was based on the fact that other researchers in the field (Constantine & Benard, 2001; Constantine et al., 1999; Liebenberg et al., 2013) found the results from scales are more reliable than results from individual items.

Summary. The researcher used questions selected from the CYRM-12 and the HKRA to measure the participants' level of academic resiliency and their perceptions of the presence of resiliency-building strategies within the school. These two instruments were selected based on the fact both have demonstrated sufficient reliability and validity across multiple sample populations (Furlong et al., 2009; Hanson & Kim, 2007; Liebenberg et al., 2013; Ungar & Liebenberg, 2011; Windle et al., 2011). Also, the Likert scales used in the CYRM-12 and the HKRA are adequate for scaling the participants' academic resilience scores and their levels of perception.

Using items from the CYRM-12 and HKRA provided the necessary data to determine whether the perceived existence of resiliency-building strategies correlates to academic resiliency and academic achievement in African-American male high school

students. Similar to most self-report surveys, the one used in this study provided scale scores that were appropriate for the Pearson Correlation analysis (Gay et al., 2011). This point further justifies using a quantitative research methodology to determine whether relationships exist between academic achievement, the perception of resiliency-building strategies, and academic resiliency.

Procedures

The study began after the researcher obtained approval from the Institutional Review Board (IRB) at the University of North Carolina at Charlotte as well as approval from the school district from where the researcher selected the participants. After obtaining approval for the study, the researcher contacted the principal at each of the four schools selected as research sites for the study. The email described the purpose and importance of the study and solicited the use of an assistant principal as the contact person at the school. The email also included a copy of the approval letter from the district superintendent. Once the researcher obtained permission from each principal, the potential participants—i.e., African-American male students in grades 10-12—received invitations to attend an information session held at their school. From a pool of 439 potential participants, 267 students chose to attend the information sessions. During the session, the researcher showed a PowerPoint presentation that explained the nature and purpose of the research study. The presentation also included a brief overview of the research project and an explanation of the requirements for participation.

All of the students, who attended the information session and were interested in participating in the study, received parental permission and consent forms. In addition to the parental permission and consent forms, the students received the *assent for minors*

form—provided to students under 18 years old—and consent form—provided to students 18 years old or older. The students interested in participating in the study completed the assent for minor or consent form before leaving the information session. After collecting the students' forms, the researcher instructed the potential participants to take parental permission and consent forms home and give them to their parent(s) or guardian(s). The students had a week to return the forms to the assistant principal. Of the 267 students who attend the information session, 111 returned the required parental permission and consent forms. As a reward for returning the consent form promptly, the students received a cookie coupon, which they could redeem in their school's cafeteria. In the meantime, the researcher used the participants' consent and assent for minors forms to compile a list of potential participants for the study.

The participants' returned the permission forms to the assistant principal at their perspective schools, who collected and stored the documents until the researcher returned to pick them up. After collecting the parental permission and consent forms, the researcher assigned each student a participant identification number, which was used to identify the participant throughout the remainder of the study. The researcher and assistant principal scheduled a suitable time to administer the online survey. The researcher returned the following week and time and administered the survey. All participants who attended school the day the researcher administered the survey completed an online version. After the participants completed the survey, they received a copy of their signed permission slips and the researcher again informed them that their participation was voluntary and they could request to be removed from the study at any time by merely informing the researcher or their assistant principal that they no longer

wanted to participate in the study. The researcher entered the participants' names into a drawing to win one of five $20 Wal-Mart gift cards.

Throughout the study, the researcher maintained a high level of confidentiality. The researcher was the only person with access to the list of participants and their assigned identification numbers. However, the researcher worked closely with the assistant principal at each school to gather the academic achievement data—i.e., GPA, weighted GPA, and Math 1 and English 2 EOC assessment scores—from the students' transcripts. The researcher collected the students' academic performance data after they had completed the survey. To ensure the process went smoothly, the researcher worked with the schools' administrator to schedule appropriate times to meet with the participants. Also, the researcher requested that each participant have access to a computer or laptop. However, the researcher had a paper version of the survey available as a precaution. Once the participants completed the surveys, the researcher coded the data and prepared it for the data analysis process.

Data Analysis

The participants' data were collected from the survey and scored. Scores were recorded for each item as well as scale scores for each construct—i.e., academic resiliency, resiliency-building strategies, caring relationships, meaningful participation, and high expectations. The researcher coded the participants' data before conducting the statistical analysis and created a "codebook" containing a description of the variables, scoring rubric for each item, and instructions for converting the information obtained from each participant into a numerical format suitable for statistic software.

The researcher conducted descriptive and inferential statistical data analysis using the IBM Statistical Package for the Social Sciences (SPSS). The descriptive statistics focused on the frequency and measures of central tendency—e.g., mean, mode, and median—within the data. Additionally, the descriptive statistical analysis provided information about the data and summarized the sample and the measures in the study (Coladarci, Cobb, Minium, & Clarke, 2010).

In contrast, the inferential statistics conducted in the study helped identify relationships between the independent and dependent variables. Using inferential statistics, more specifically, multiple linear regression analysis, the researcher investigated the level of variance in the data (Coladarci et al., 2010). This form of analysis allowed the researcher to determine if, and to what the degree, a relationship between the independent variables—i.e., the perception of the existence of resiliency-building strategies—and the dependent variables—i.e., academic resiliency and academic achievement—exist. The descriptive and inferential statistical analysis provided the data needed to answer the research questions asked in the study. More specifically, the inferential statistics established whether there were significant correlations between the academic achievement, academic resiliency, and perception of resiliency-building strategies among African-American male high school students. Alternatively, the analysis of the mean differences in the level of academic resiliency between different participant groups allowed the researcher to make specific determinations about the influence grade-level, grade-level retention, involvement in extracurricular activities, and socioeconomic status.

Ethical Considerations

The researcher used data collected from the students' academic records and their responses to a self-report survey. Therefore, maintaining a high level of confidentiality was a major priority for the researcher. To ensure the participants' privacy, the researcher personally administered the online survey, managed all data collection processes, and kept the participants' data secured on a password-protected drive. The researcher followed protocols and procedures established by the International Review Board to safeguard the data collection process. Also, each student in the study was assigned a participant identification number. By using the participant identification numbers, the researcher maintained a high level of confidentiality in the study. The researcher protected the participants' personal information—i.e., historical academic records and transcripts—throughout the study. At the conclusion of the study, the researcher destroyed all personal information about the participants. Throughout the study, the researcher followed all ethical guidelines and protocols outlined by the Institutional Review Board at the University of North Carolina at Charlotte.

CHAPTER 4: RESULTS

This chapter describes the results of the statistical analysis conducted in the study. It contains details related to data collection, demographic characteristics of the sample, descriptive and inferential statistics of the data sets, and the results of analyses carried out to answer the research questions. As stated earlier, the study used a quantitative, correlational research design geared toward making use of statistics to identify trends and patterns within the sample, and by inference, the population. Additionally, the study examined the relationships between academic resilience, the perception of resiliency-building strategies, and academic achievement without assigning causality.

The four high schools used as research sites for the study had 439 potential participants—i.e., African-American male students in grades 10-12. All of which were invited to attend an information session, which was held at their respective schools and described the relevance and purpose of the study. From the group of viable participants, 267 chose to attend the information sessions and received a verbal invitation to participate in the research study. The researcher followed the recruitment procedures outlined in Chapter 3. Although 148 students completed the assent of minor or consent forms, only 111 of them provided the parental consent form needed to participate in the study. Based on this fact, the total response rate for the study was 42%. The researcher later removed four participants from the study because one was Latino as identified on his academic records and three others transferred out of the district, which made it impossible to access their academic records. The removal of these four participants left 107 participants in the sample population.

Demographic Information

Tables 1 illustrates the essential demographic characteristics—i.e., age, grade-level, school/research site, and socioeconomic status—of the sample population. All the participants (*n* = 107) in the study self-identified as African-American males. The mean age of the sample population was 16.85 years old, with 11th graders making up the majority of the participants (41%, *n* = 44). The sample contained participants (54.2%, *n* = 58) who self-reported they were eligible for F/R priced lunch as well as those (45.8%, *n* = 49) that reported they were not. The researcher later used the participants' responses about their eligibility to receive F/R lunch to determine their socioeconomic status based on the eligibility requirements for the National School Lunch Program (NCDPI, 2018b). The sample population also contained participants (20.6%, *n* = 22), who had been retained at least one or more times in their academic career as well as those (79.4%, *n* = 85), who had not been retained. The participants in the sample participated in extracurricular activities at varying levels including (a) none participation (8.4%, *n* = 9), (b) participation in athletics (55.1%, *n* = 59), (c) participation in non-athletic clubs and organizations (11.2%, *n* = 12), and (d) participation in multiple athletic and non-athletic activities (25.2%, *n* = 27). In the data analysis section, the researcher disaggregates the data using the participants' academic and personal differences to determine how these distinctions influence their levels of academic resiliency.

Table 1

Number of Participants by Age, Grade, School, Socioeconomic Status, and Participation in Extracurricular Activities

Variable	*n*	%
Age in Years		
15	5	4.7
16	34	31.8
17	44	41.1
18	20	18.7
19	4	3.7
Grade		
10	33	30.8
11	44	41.1
12	30	28.1
School		
A	43	40.2
B	20	18.7
C	24	22.4
D	20	18.7
Eligible for F/R Lunch		
Yes	58	54.2
No	49	45.8
Extra-curricular Activities		
None	9	8.4
Athletics	59	55.1
Non-Athletic Clubs	12	11.2
Multiple Activities	27	25.2

Survey Reliability

Before conducting the initial analysis, the researcher tests the reliability of the scales using the Cronbach's alpha. Cronbach's alpha is a standard measure of internal consistency—i.e., a measure of reliability (Gay et al., 2011; Huck, 2008; Liebenberg et al., 2013). As a result, the researcher used the Cronbach's alpha analysis to determine how much the items in each scale measured the same underlying construct—i.e.,

academic resiliency and the participants' perception of caring relationships, high expectations, and meaningful participation. Researchers (Gay et al., 2011; Huck, 2008; Liebenberg et al., 2013) recommend using the Cronbach's alpha to determine the reliability of a scale or subscale formed by multiple Likert-scale questions in a survey. There are differing opinions on what constitutes a good level of internal consistency; however, most researchers agree a value of 0.7 or higher represent an acceptable level (Liebenberg et al., 2013).

The Cronbach's alpha scores listed in Table 2 demonstrate an acceptable level of internal consistency for the scales and subscales: academic resiliency ($\alpha = .805$), resiliency-building strategies ($\alpha = .814$), meaning participation ($\alpha = .756$), and high expectations ($\alpha = .777$). The scale for caring relationships ($\alpha = .635$) was the only one that did not meet the recommended alpha value of 0.7; however, removing one item—i.e., questions 3—from the scale raised the alpha value to .749. Therefore, the researcher chose to omit item 3 (see Appendix A) and use only two of the initial items—i.e., questions 1-2—to measure the participants' perception of caring relationships in their schools**.** This decision ensured that all of the scales and subscales used to measure the constructs have a high level of internal consistency. As a result, the researcher concluded from the Cronbach's alpha scores that each scale appropriately measures its designated construct—i.e., academic resiliency and the perceptions of resiliency-building strategies.

Table 2

Cronbach's Alpha for Academic Resiliency and Resiliency-Building Strategies Scales and Subscales

	Number of Items	Cronbach's Alpha	*M*	*SD*
Academic Resiliency	12	.805	4.19	.51
Resiliency-Building Strategies	9	.814	3.15	.51
Perceptions of Caring Relationships	2	.749	3.28	.67
Perceptions of Meaningful Participation	3	.756	2.75	.80
Perceptions of High Expectations	3	.777	3.41	.55

Descriptive Statistics

One hundred and seven participants answered survey questions related to their perceptions of three resiliency-building strategies—i.e., caring relationships, opportunities for meaningfully participation, and high expectations. The minimum average score possible on any of the resiliency-building strategies is 1—i.e., participant makes a response of "1" or "Not at all true" on all the items—and a maximum average score of 4—i.e., student marks a response of "4" or "Very much true" on all the items. The mean scores and standard deviation on the participants' perception of the existence of resiliency-building strategies were as follows: (a) caring relationships ranged from 1 to 4 (M = 3.28, SD = .67); (b) high expectations ranged from 1.67 to 4 (M = 3.41, SD = .55); and (c) meaningful participation ranged from 1 to 4 (M = 2.75, SD = .80). The mean of the participants' perception of the existence of resiliency-building strategies—i.e., an average of all nine items related to caring teachers, meaningful participation, and high

expectations—ranged from 1.67 to 4 (*M* = 3.15, *SD* = .51). Table 3 provides a visual display of the descriptive statistics for academic resiliency and perceptions of resiliency-building strategies.

Table 4 shows the descriptive statistics for the various measures of the participants' academic performance. The researcher used four measures of academic achievement to answer the research questions related to academic performance. Table 4 includes the mean and standard deviation for GPA, weighted GPA, and Math1 and English 2 EOC assessment scores. The researcher collected the participants' academic achievement data from their academic transcript.

Table 3

Mean and Standard Deviation of Academic Resiliency and Perceptions of Resiliency-Building Strategies

	n	Minimum	Maximum	*M*	*SD*
Academic Resiliency	107	2.83	5	4.19	.51
Resiliency-Building Strategies	107	1.67	5	3.15	.51
Perceptions of Caring Relationships	107	1.00	4	3.28	.67
Perceptions of High Expectations	107	1.67	4	3.41	.55
Perceptions of Meaningful Participation	107	1.00	4	2.75	.80

Table 4

Mean and Standard Deviation of Academic Achievement Variables

	n	Minimum	Maximum	*M*	*SD*
GPA	107	1.06	3.81	2.46	.63
Weighted GPA	107	1.13	4.16	2.59	.74
Math 1 Score	102	235	272	249.27	8.63
English 2 Score	90	126	167	146.04	8.33

Research Question 1

Is there a relationship between the students' perception of the existence of resiliency-building strategies and their academic achievement? In this section, the researcher used Pearson's product-moment coefficient of correlation (Pearson's correlation; Coladarci et al., 2010) to examine whether there is a relationship between the participants' perception of the existence of resiliency-building strategies and their academic achievement.

In order to conduct Pearson's correlation, the researcher confirmed five assumptions:

1. The variables are measured on a continuous scale—i.e., variables are interval or ratio measures;
2. Each case—or participant's data set—contains a value for both variables;
3. The continuous variables must have a linear relationship;
4. There should be no significant outliers; and
5. The data should be bivariate normality (Green & Salkind, 2007).

By verifying the data meets these assumptions, the researcher can be confident the results of the Pearson's correlation are valid (Coladarci et al., 2010; Green & Salkind, 2007). The researcher inspected all of the participants' data before the analysis. Thus ensuring the first two assumptions were satisfied. The remaining assumptions were tested using SPSS statistics.

In SPSS, the researcher created a scatterplot matrix with a loess line—i.e., a type of best-fit line—and verified the relationship between the two variables was linear. In Figures 2-5, the scatterplot matrices of each achievement variable—i.e., GPA, weighted GPA, and Math 1 and English 2 EOC assessment scores—and resiliency-building strategies (RBS) scores—illustrate the data met the assumption of linearity. The researcher also inspected the scatterplot and verified there were no significant outliers in the data.

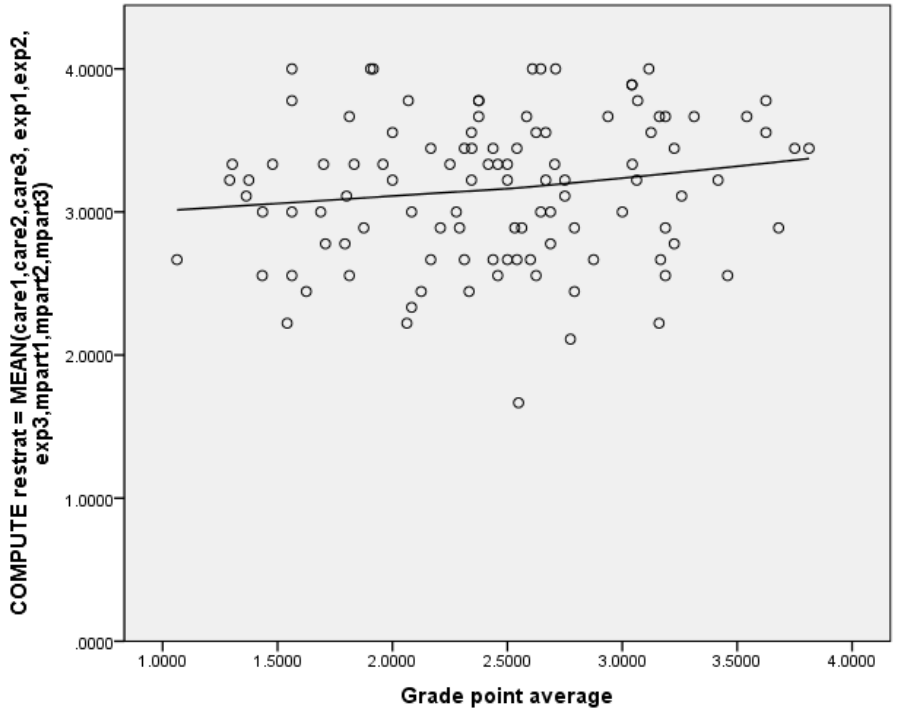

Figure 2. Scatterplot of Linear Relationship between GPA and Resiliency-Building Strategies.

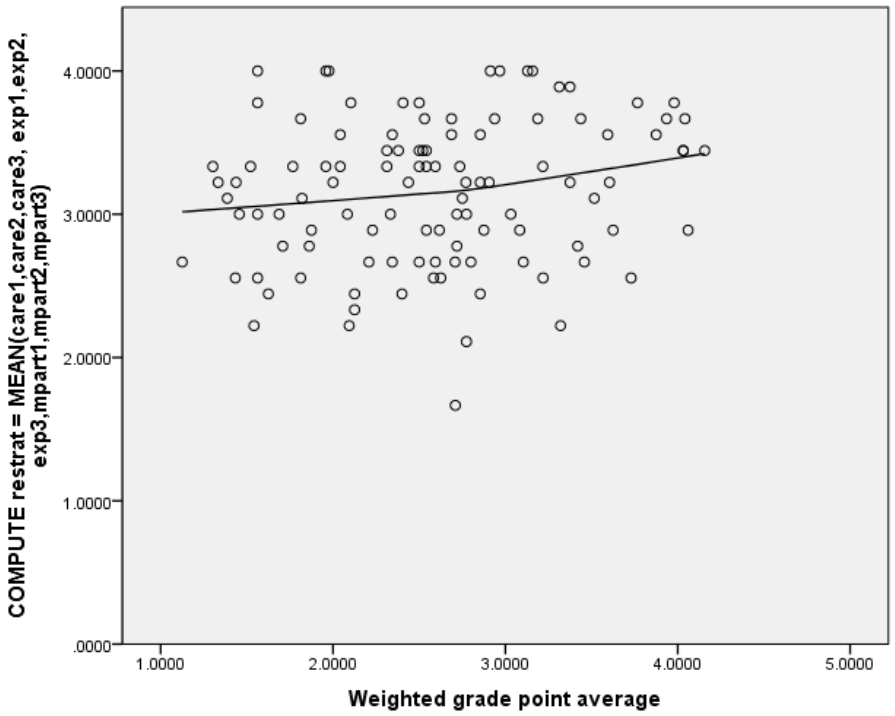

Figure 3. Scatterplot of Linear Relationship between Weighted GPA and Resiliency-Building Strategies.

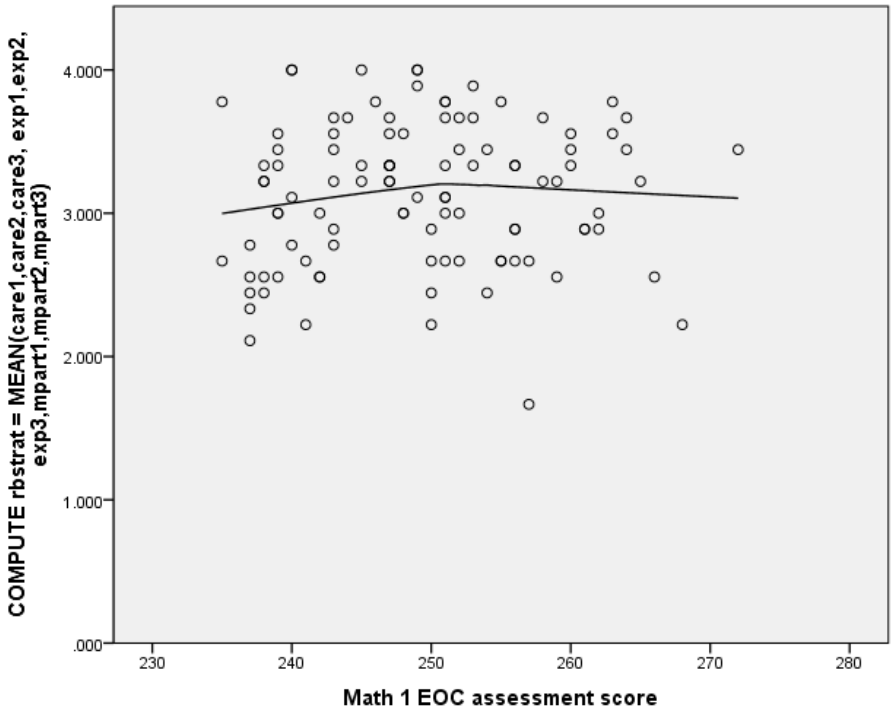

Figure 4. Scatterplot of Linear Relationship between Math 1 Scores and Resiliency-Building Strategies.

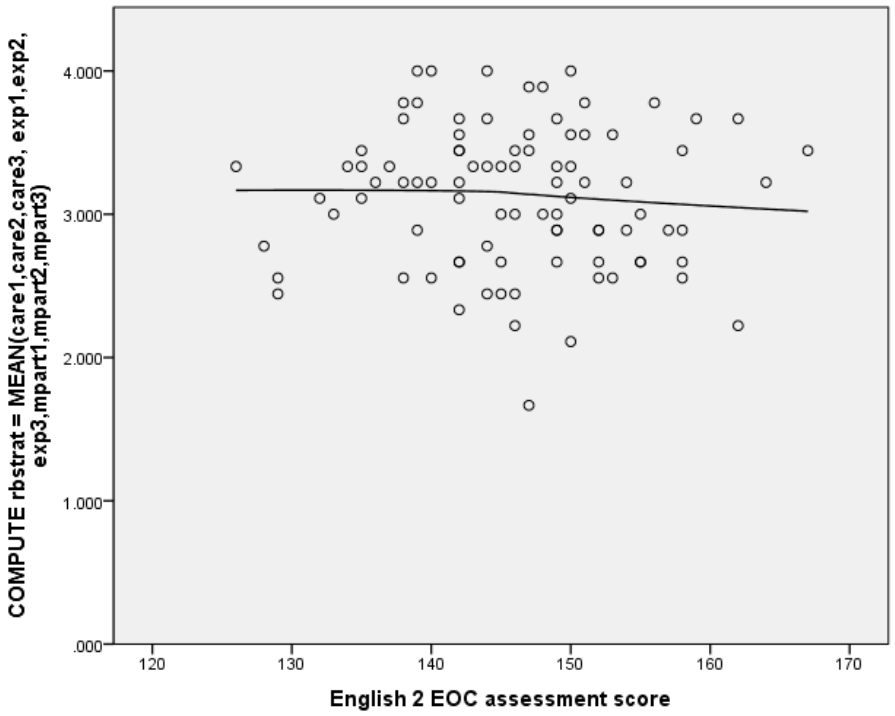

Figure 5. Scatterplot of Linear Relationship between English 2 Scores and Resiliency-Building Strategies.

The assumption of bivariate normality is challenging to assess. Therefore, Green and Salkind (2007) suggest using the univariate normality—i.e., approximately normal distribution—for each variable. The researcher followed Green and Salkind's (2007) recommendation and tested for normality using the Shapiro-Wilk's test, which is the most commonly used numerical method. It is also acceptable to use graphical methods—i.e., histogram and Normal Q-Q Plots—to illustrate the normality of the continuous variables (Coladarci et al., 2010; Green & Salkind, 2007; Huck, 2008). The Shapiro-Wilk's test of normality provides an accurate numerical test for normality; whereas, the Normal Q-Q plot provides a visual representation of the distribution of the data. Therefore, the researcher utilized both statistical test—i.e., Shapiro-Wilk's—and graphical test—Normal Q-Q Plot—to verify the assumption of normality.

Shown in Table 5, the results of the Shapiro-Wilk's test yielded mixed results. The assumption of normality for GPA (p = .30), Weighted GPA (p = .08), and English 2 EOC assessment scores (p = .97) was met, as evident by the fact that $p > .05$. However, the assumption of normality for the perception of resiliency-building strategies (p = .04) and Math1 EOC assessment scores (p = .02) is not met based on the results of the Shapiro-Wilk's test, which produced a p-value less than .05. However, the Normal Q-Q plot in Figure 6 illustrates that the perception of resiliency-building strategies data does have a normal distribution. Likewise, the Normal Q-Q plot in Figure 7 shows the Math1 assessment data has a normal distribution. It is important to note that using the Shapiro-Wilk's test with large sample sizes (e.g., above 50 cases) can lead to a statistically significant result—i.e., data are non-normal—even when the data is normally distributed (Green & Salkind, 2007). Therefore, for larger sample sizes, graphical interpretation is often preferred (Green & Salkind, 2007). With that said, all of the variables met the assumption for normality, as assessed either numerically or graphically.

Table 5

Test of normality of continuous variables

	Shapiro-Wilk's	*df*	*p*
GPA	.985	107	.30
Weighted GPA	.978	107	.08
Math 1 Score	.969	102	.02
English 2 Score	.994	90	.97
Perceptions of Resiliency-Building Strategies	.975	107	.04
Academic Resiliency	.940	107	.01

Note. The statistical significance of the Shapiro-Wilk's test of normality is $p > .05$.

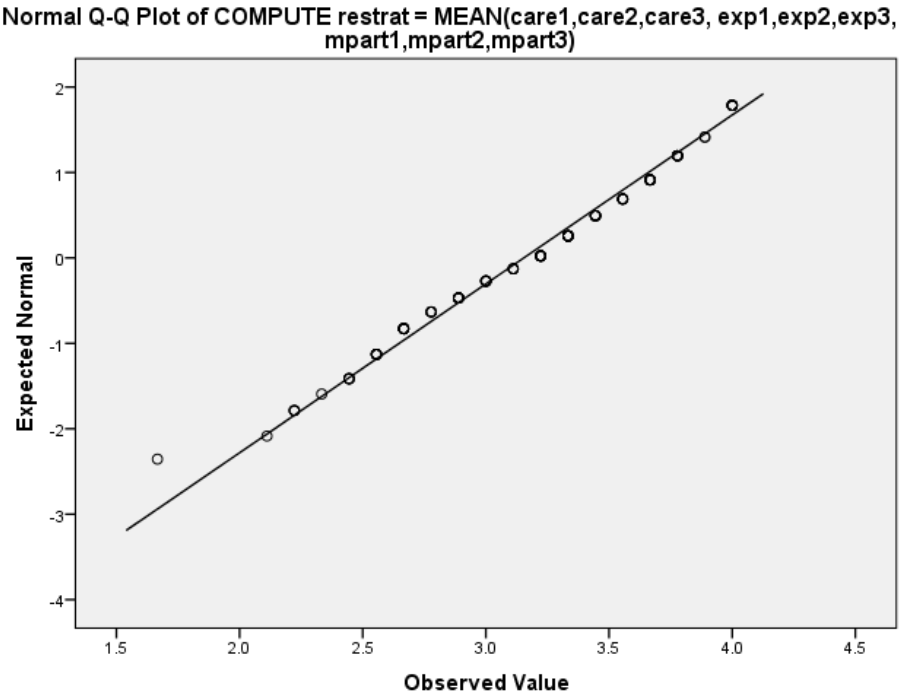

Figure 6. Normal Q-Q Plot for Perceptions of Resiliency-Building Strategies.

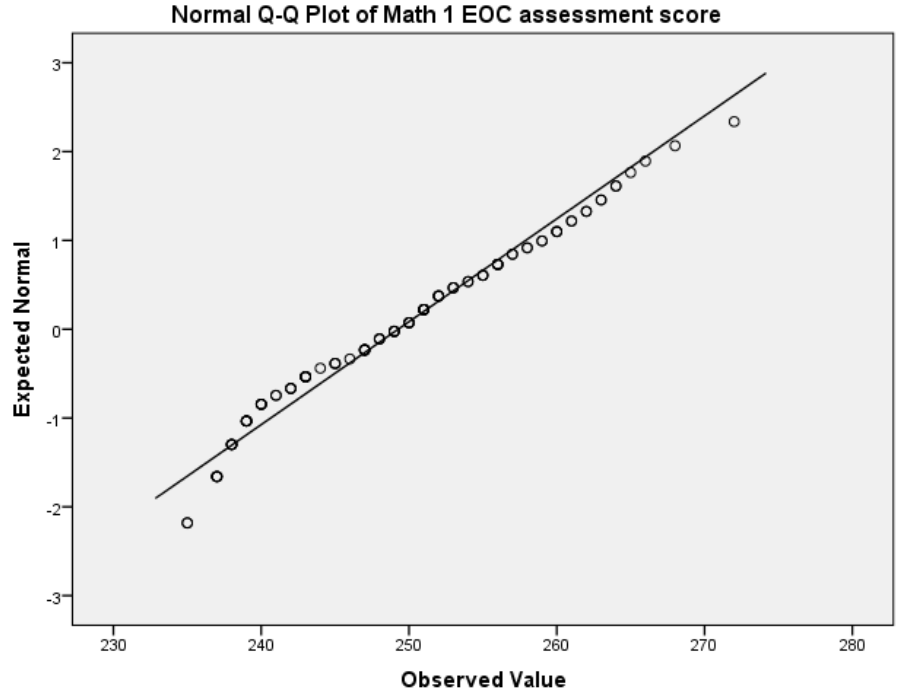

Figure 7. Normal Q-Q Plot for Math 1 Scores.

Once all assumptions were satisfied, the researcher ran the Pearson's correlation to test the relationship between the GPA and perception of resiliency-building strategies (RBS scores). The Pearson's correlation coefficient is $r(105) = .142$. Based on Coladarci and his colleagues (2010) this correlation coefficient indicates a small positive correlation between the participants' GPA and their RBS scores. However, the statistical significance ($p = .14$) of the correlation coefficient is greater than .05. Therefore, the researcher concluded there was no statistically significant correlation between GPA and perception of resiliency-building strategies.

The researcher conducted similar analyses using the other measures of academic achievement. The results of the Pearson's correlation for the relationship between participant's weighted GPA and RBS scores were similar. The Pearson's correlation coefficient is $r(105) = .178$, $p = .07$ for weighted GPA and RBS scores shows that there was no statistically significant correlation between the two variables. The results of Pearson's correlation examining Math 1 and English 2 end-of-course in relationship to the perception of resiliency-building strategies produced the subsequent findings:

1. The correlation coefficient, *r,* for the correlation between Math 1 scores and RBS scores is $r(100) = .072$, $p = .47$.
2. The Pearson's correlation coefficient, *r,* for the correlation between English 2 scores and the perception of resiliency-building strategies is $r(88) = -.039$ $p = .72$.

These findings indicated there is no statistically significant correlation between (a) English 2 scores and RBS scores, or (b) Math 1 scores and RBS scores. Since the results of the Pearson's correlation analysis were not statistically significant as evident by p-

values greater than .05, the researcher concluded that the participants' perceptions of resiliency-building strategies do not correlate with any measure of their academic achievement.

Research Question 2

To what extent does the students' perception of the existence of resiliency-building strategies correlate with their level of academic resilience? The focus of this section is on whether there is a correlation between the participants' perception of the existence of resiliency-building strategies and their level of academic resiliency. As described previously, the researcher measured academic resiliency using a scale calculated from questions adopted from the CYRM-12. The academic resiliency scale demonstrated a high level of internal reliability as seen by its Cronbach's alpha ($\alpha = .805$) on Table 2. Additionally, the scale used to measure the participants' perception of resiliency-building strategies and the three subscales—i.e., caring relationships, high expectations, and meaningful participation—had high Cronbach's alpha scores.

The researcher used Pearson's correlation to determine whether there was a relationship between the participants' academic resiliency scale score and the scale and subscale scores used to measure their perception of resiliency-building strategies. In addition to analyzing the relationship between academic resiliency and perception of the existence of resiliency-building strategies, the researcher used Pearson's correlation to examine the subscale scores of caring relationships, opportunities for meaningful participation, and high expectations.

Similarly to the analysis in the previous section, the researcher verified five assumptions before conducting the Pearson's correlation. The researcher confirmed the

first two assumptions during the data entry process for SPSS. The three remaining assumptions—i.e., linear relationship between the variables, no significant outliers, and the normal distribution of the data—were verified during the analysis process.

In SPSS, the researcher created a scatterplot matrix with a loess line and verified that the relationship between the two variables was linear. In Figures 8-11, the scatterplot matrices of the continuous variables illustrate all the data met the assumption of linearity. In Figure 12, the boxplots of the data for the participant's perception of caring relationships shows there was one outlier—i.e., case 24. After removing the outlier and redoing the boxplots of the variables, three additional outliers—i.e., case 10, 53 and 75 as shown in Figure 13—appeared in the boxplot for academic resiliency data. The researcher removed the outliers, created boxplot of the remaining data, and concluded that were no significant outliers remaining in the data. The last assumption regarding the normal distribution of the data was verified graphically using the Normal Q-Q Plot for each of the variables. Having satisfied all assumptions, the researcher conducted Pearson's correlation on the variables.

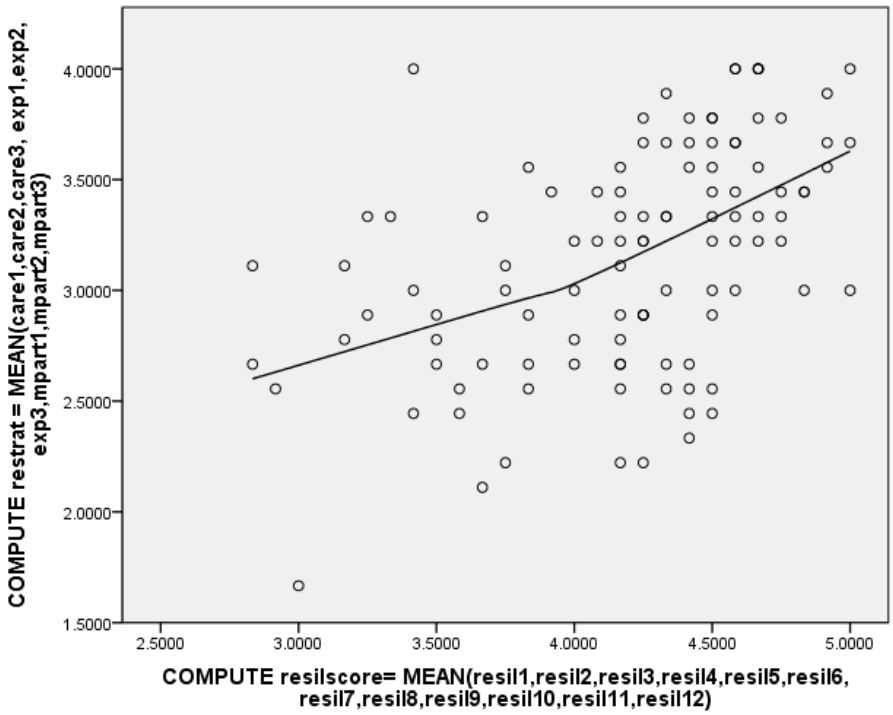

Figure 8. Scatterplot of Linear Relationship between Academic Resiliency and Resiliency-Building Strategies.

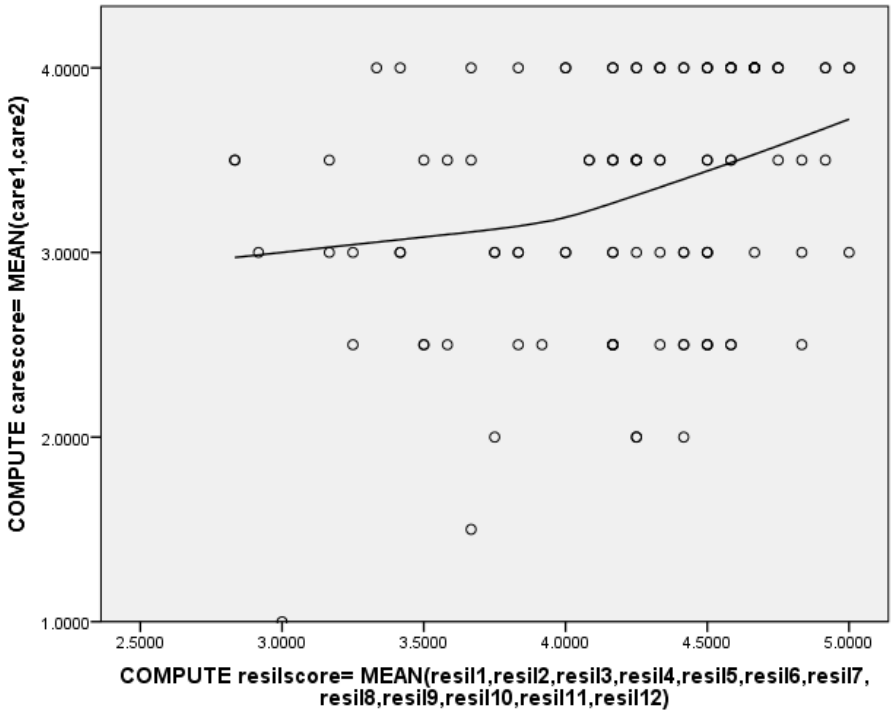

Figure 9. Scatterplot of Linear Relationship between Academic Resiliency and Caring Relationships.

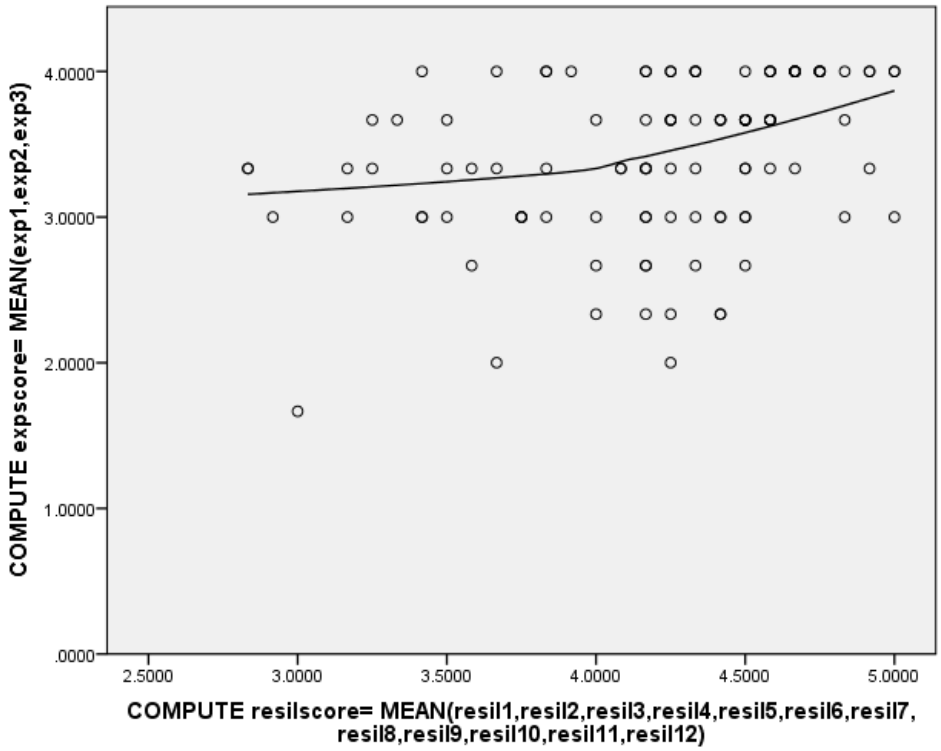

Figure 10. Scatterplot of Linear Relationship between Academic Resiliency and High Expectations.

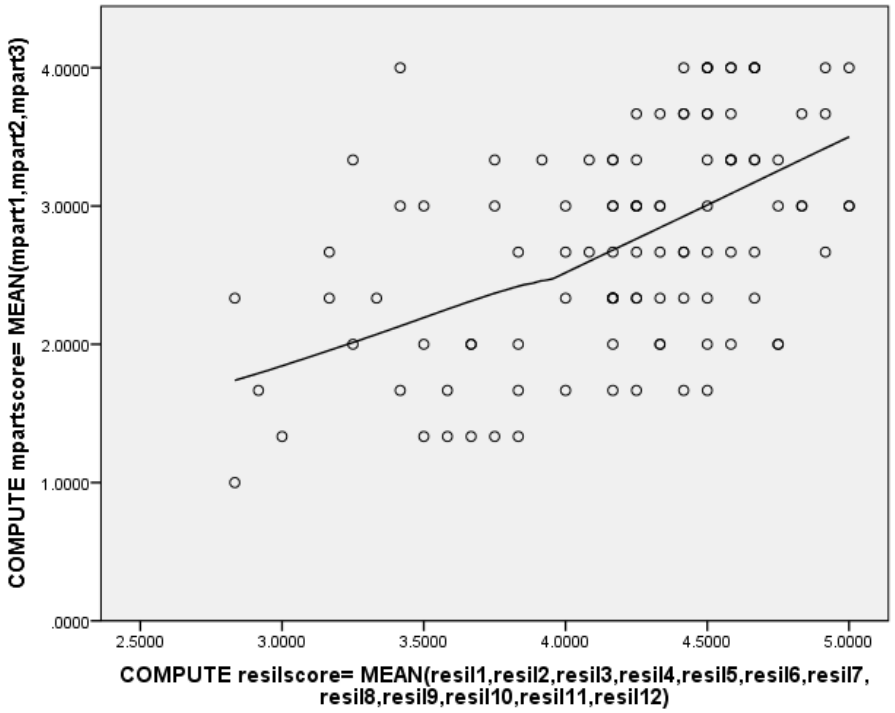

Figure 11. Scatterplot of Linear Relationship between Academic Resiliency and Meaningful Participation.

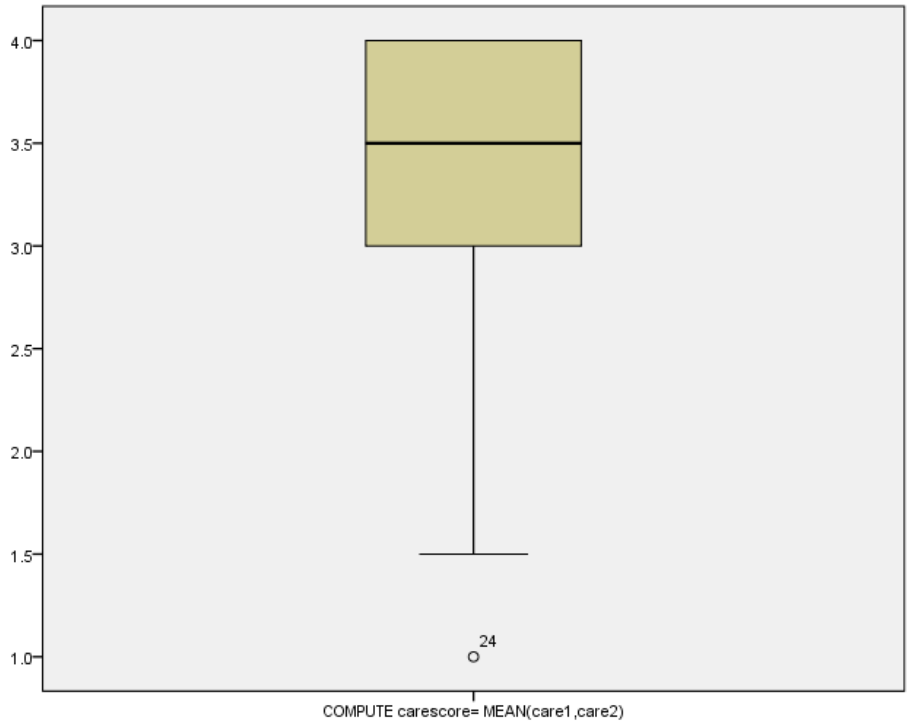

Figure 12. Boxplot of Participants' Perception of Caring Relationships

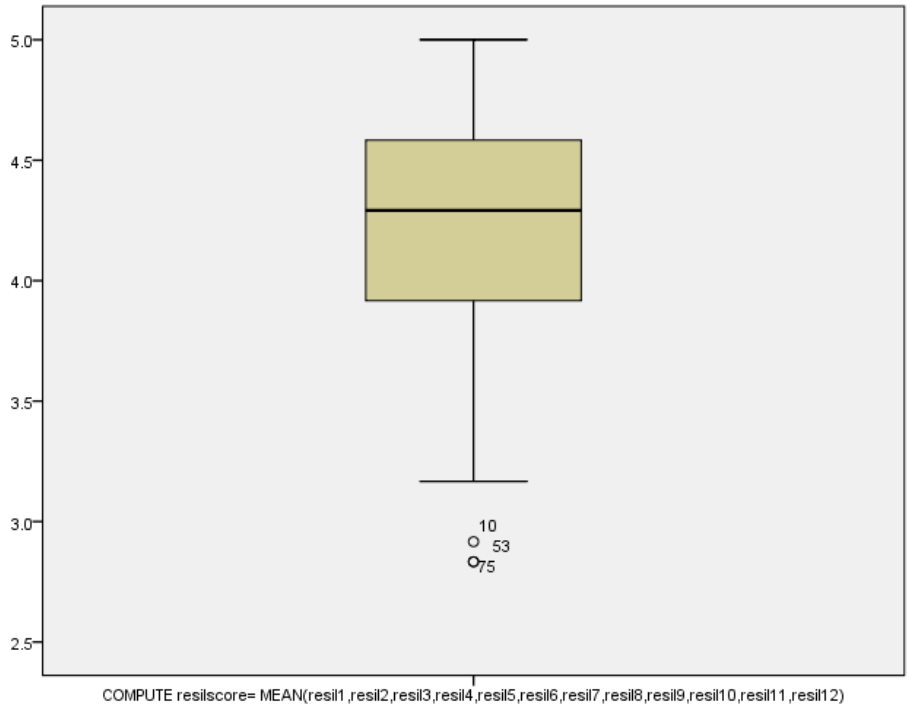

Figure 13. Boxplot of Academic Resiliency Scores.

Based on the removal of the outliers, the researcher re-calculated the means and standard deviations for the variables. The researcher displays the new means and standard deviations in Table 6. The Pearson's correlation coefficient, *r*, listed in Table 7 shows the strength of the correlations between the variables. Additionally, the correlations identified are statistically significant as shown by p-values less than .01. More specially, the correlation analysis revealed the following results:

1. Small positive correlations exist between academic resiliency and perception of caring relationship ($r(101) = .273$, $p < .01$); academic resiliency and perception of high expectations ($r(101) = .296$, $p < .01$); and perception of caring relationship and perception of meaningful participation ($r(101) = .276$, $p < .01$).
2. Moderate correlations exist between perception of high expectations and perception of meaningful participation ($r(101) = .389$, $p < .01$); academic resiliency and perception of meaningful participation ($r(101) = .427$, $p < .01$); and academic resiliency and resiliency-building strategies ($r(101) = .431$, $p < .01$).
3. Large correlations exist between perception of caring relationships and perception of high expectations ($r(101) = .614$, $p < .01$); perception of caring relationships and perception of resiliency-building strategies ($r(101) = .711$, $p < .01$); perception of high expectations and resiliency-building strategies ($r(101) = .800$, $p < .01$); and perception of meaningful participation and perception of resiliency-building strategies ($r(101) = .795$, $p < .01$).

These findings indicate there is a positive correlation between academic resilience and resiliency-building strategies. Positive correlations also exist between academic resilience and individual resiliency-building strategies-i.e., caring relationships, meaning participation, and high expectations. Therefore, higher perceptions related to the presence of resiliency-building strategies can predict higher levels of academic resiliency. In other words, students who perceive there are resiliency-building strategies in their school tend to have higher levels of academic resiliency than those who do not have similar perceptions.

Table 6

Mean and Standard Deviation of Academic Resiliency and Resiliency-Building Strategies

	n	Minimum	Maximum	*M*	*SD*
Academic Resiliency	103	3.17	5	4.24	.45
Resiliency-Building Strategies	103	2.11	4	3.18	.49
Perceptions of Caring Relationships	103	1.50	4	3.30	.64
Perceptions of Meaningful Participation	103	1.33	4	2.80	.77
Perceptions of High Expectations	103	2.00	4	3.43	.53

Table 7

Pearson's Correlation of Academic Resiliency and Resiliency-Building Strategies

	AR	CR	HE	MP	RBS
Academic Resiliency	-	.273**	.296**	.427**	.431**
Perceptions of Caring Relationships		-	.614**	.276**	.711**
Perceptions of High Expectations			-	.389**	.800**
Perceptions of Meaningful Participation				-	.795**
Resiliency-Building Strategies					-

Note. $^{**}p < .01$ (2-tailed). AR = academic resiliency; CR = perception of caring relationships; HE = perception of high expectations; MP = perception of meaningful participation; RBS = perception of resiliency-building strategies.

Research Question 3

Is there a relationship between students' level of academic resilience and their level of academic achievement? Similar to the analysis of questions 1-2, the researcher verified all assumptions before conducting the Pearson's correlation. The scatterplot matrices in Figure 14 -17 shows a linear relationship between the academic resiliency and academic achievements—i.e., GPA, weighted, and Math 1 and English 2 EOC assessment scores. There were no significant outliers in the data, as assessed by inspection of the scatterplots. The assumption regarding the normal distribution of the data was verified numerically and graphically in Questions 1-2—see Table 5. Figure 18 shows the Normal Q-Q Plot, which verified the assumption of normality for academic resiliency. Having satisfied all the assumptions, the researcher conducted the Pearson's

correlation on academic resiliency and all four measures of academic achievement, individually. The results of the Pearson's correlation analysis are as follows:

1. The correlation coefficient, *r*, for the relationship between academic resiliency and GPA indicated a statistically significant, small positive correlation, $r(105) = .227$, $p < .05$.
2. The correlation coefficient, *r*, for the relationship between academic resiliency and weighted GPA showed a statistically significant, small positive correlation, $r(105) = .228$, $p < .05$.
3. There was no statistically significant correlation between academic resiliency and Math 1 EOC assessment scores, $r(100) = .055$, $p = .58$.
4. There was no statistically significant correlation between academic resiliency and English 2 EOC assessment scores, $r(88) = .170$, $p = .11$.

Although the analysis yielded mixed results, there is a correlation between the universal measure of academic achievement—i.e., GPA and weighted GPA—and academic resiliency. However, the same was not so with regards to the participants' Math 1 and English 2 EOC assessment scores. There was not a significant correlation between the participants' academic resiliency scores and their Math 1 or English 1 assessment scores. Regardless, the correlation between the participants' GPA—and weighted GPA—and their levels of academic resiliency provided enough empirical evidence to conclude there is a correlation between academic resiliency and academic achievement as assessed by the participants' GPA and weighted GPA. In other words, the students with higher levels of academic resiliency have higher grade-point averages.

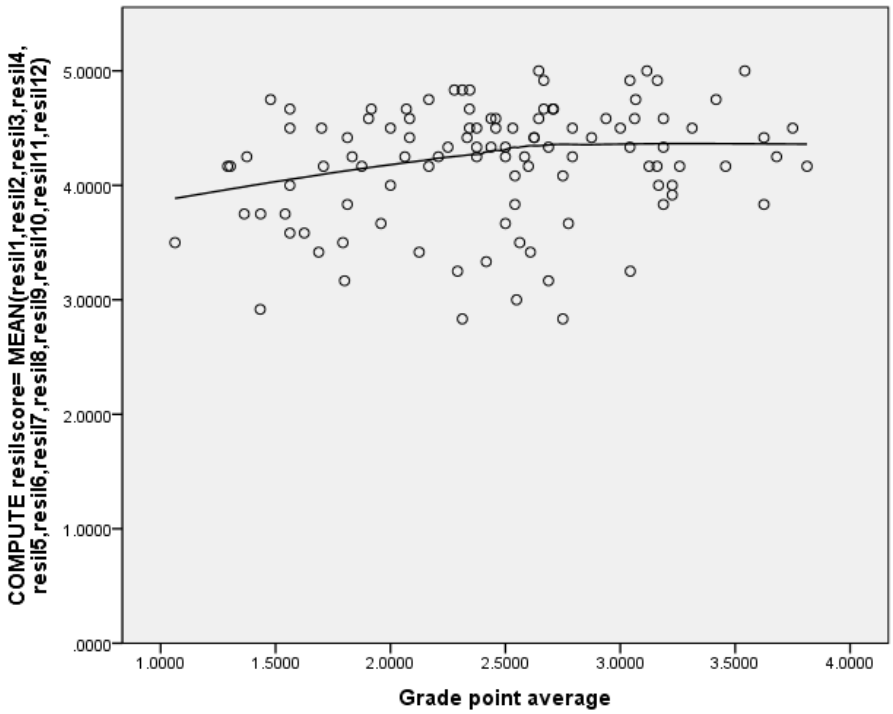

Figure 14. Scatterplot of Linear Relationship between Academic Resiliency and GPA.

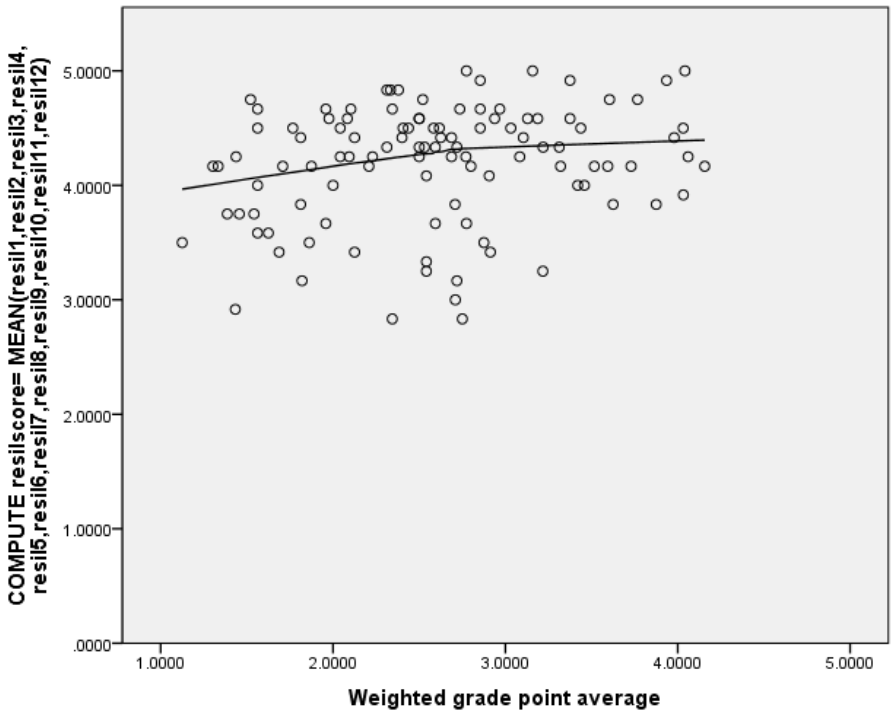

Figure 15. Scatterplot of Linear Relationship between Academic Resiliency and Weighted GPA.

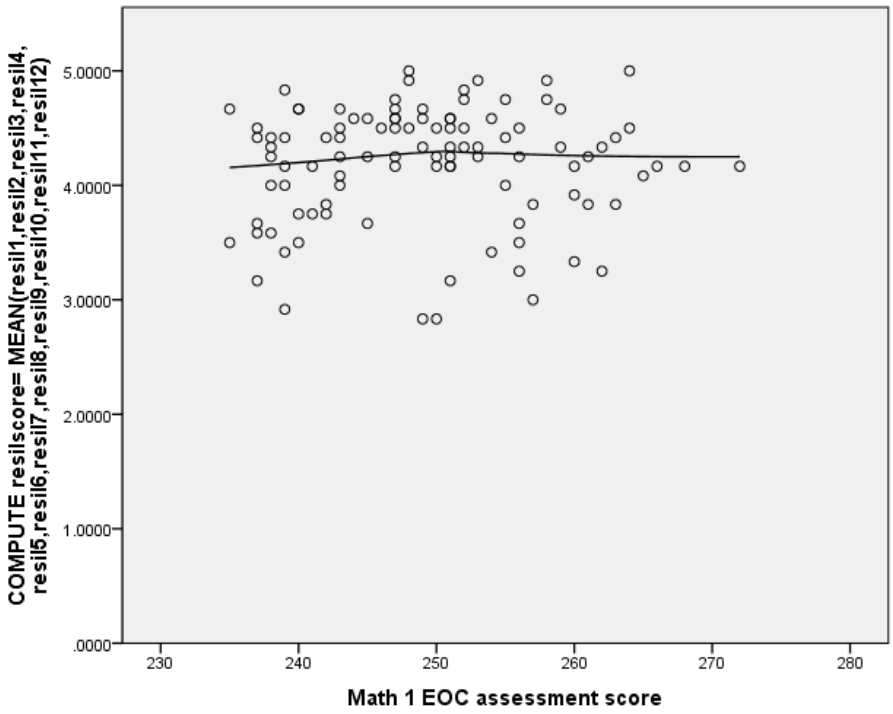

Figure 16. Scatterplot of Linear Relationship between Academic Resiliency and Math 1 Scores.

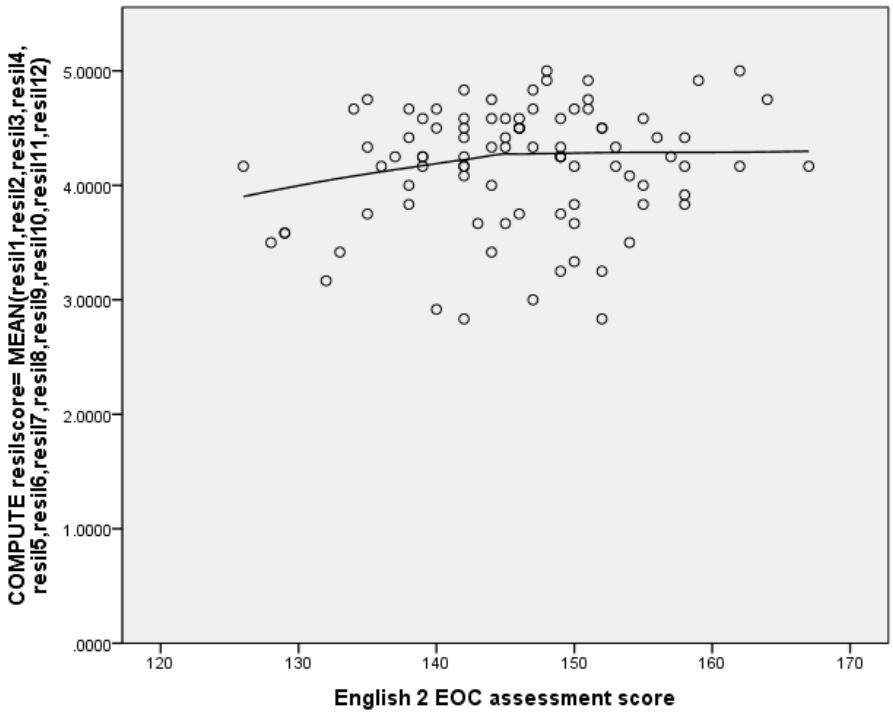

Figure 17. Scatterplot of Linear Relationship between Academic Resiliency and English 2 Scores.

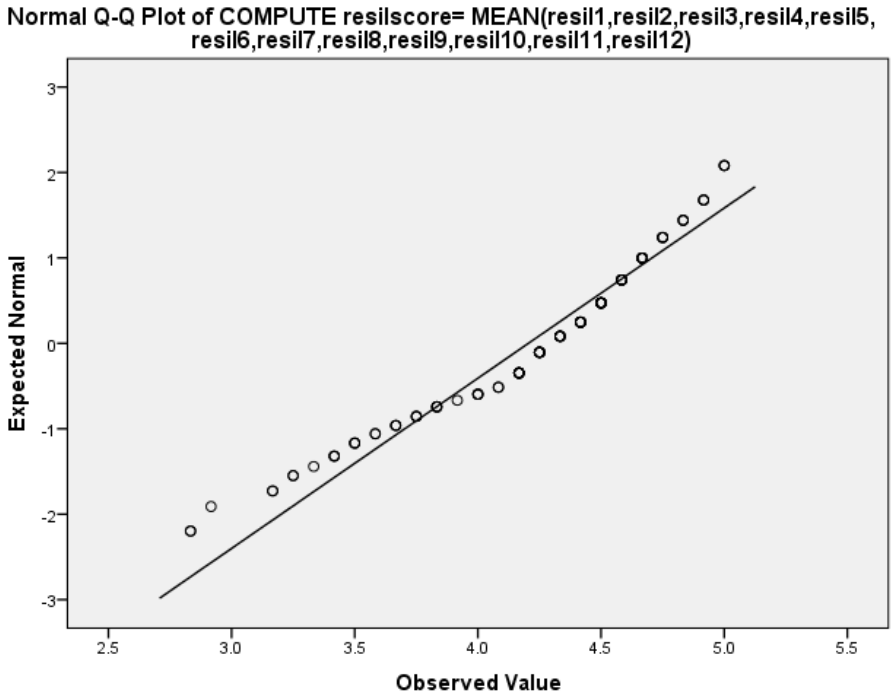

Figure 18. Normal Q-Q Plot for Academic Resiliency.

Research Questions 4-7

Earlier in this chapter, the researcher used the Pearson's Correlation to establish there were correlations between (a) academic resiliency and resiliency-building strategies, and (b) academic resiliency and academic achievement—i.e., GPA and weighted GPA. These findings lead to the exploration of the differences in the mean scores of academic resiliency among different participant groups categorized by their: (a) grade, (b) extracurricular involvement, (c) socioeconomic status, and (d) retention rate. In preparation for additional analysis, the researcher re-coded the participants' demographic information. Table 8 contains the mean and standard deviation of GPA and academic resiliency level for recoded categories—e.g., grade-level, eligibility for free or reduced-price lunch, participation in school-sponsored extracurricular activities, and grade-level retention.

The statistical analysis in this section used independent-samples t-test (*t*-test) and one-way analysis of variance (ANOVA) to determine whether the mean differences between different groups of participants were statistically significant. Conducting analysis using the *t*-test and the ANOVA required the researcher to verify six assumptions about the data. The first three assumptions include (a) the dependent variables must be interval or ratio type data, (b) independent variables must be categorical with two or more groups, and (c) independence of observation, which means the participants' data is independent of one another (Huck, 2008). The researcher verified these three assumptions in order to determine the most appropriate statistical analysis for testing the mean difference. The researcher verified the other assumptions—i.e., no significant outliers, normal distribution of the dependent variables, and homogeneity of variances—using SPSS (Green & Salkind, 2007; Huck, 2008).

Researchers (Gay et al., 2011) recommend using the *t*-test to analyze whether a difference exists between the mean values of two independent groups—e.g., students retained in school and students not retained—on a continuous dependent variable—e.g., academic resiliency. Additionally, the *t*-test allowed the researcher to determine whether the difference between the two groups is statistically significant (Gay et al., 2011; Green & Salkind, 2007). Therefore, the researcher used the *t*-test to evaluate the mean differences in the level of academic resiliency for the following groups:

1. Participants who are eligible for free and reduced-price lunch and those who are not;
2. Participants retained at least once in their academic career and those not retained.

On the other hand, researchers (Gay et al., 2011; Huck, 2008) suggest using the one-way ANOVA to examine the mean difference between three or more groups. Consequently, the researcher used the ANOVA to analyze the mean difference of academic resiliency between participant groups categorized by grade and levels of involvement in extracurricular activities. It is worth noting that the researcher had to verify the same set of assumptions for both the *t*-test and the ANOVA. The proceeding sections provide a detailed description of the results of the *t*-test and the ANOVA conducted on the different participant groups.

Table 8

Mean and Standard Deviation of GPA and Academic Resiliency

			GPA		Academic Resiliency	
Category	*n*	%	*M*	*SD*	*M*	*SD*
Grade						
10	33	30.8	2.45	.68	4.20	.41
11	44	41.1	2.48	.67	4.12	.57
12	30	28.0	2.43	.53	4.29	.53
Received F/R Lunch						
Yes	58	54.2	2.24	.60	4.15	.56
No	49	45.8	2.71	.58	4.25	.46
Retained in School						
Yes	22	20.6	2.09	.54	3.94	.53
No	85	79.4	2.55	.62	4.26	.49
Extra-curricular Activities						
None	9	8.4	2.40	.62	4.10	.68
Athletics	59	55.1	2.40	.61	4.15	.49
Non-Athletic Clubs	12	11.2	2.25	.64	4.21	.54
Multiple EC Activities	27	25.2	2.70	.66	4.31	.51

Questions 4. Is there a difference in the level of academic resiliency between students retained in school and those not? To answer this research question, the researcher used the independent-sample t-test (*t*-test). The *t*-test analyzed the mean differences between participants who had different rates of grade-level retention.

Six assumptions had to be satisfied in order to validate the results of the *t*-test. The researcher verified the first three assumptions when selecting the appropriate statistical analysis and determining the measurements to use—i.e., nominal, ordinal, interval and ratio. By the first assumption, the dependent variable—academic resiliency—is continuous. More specifically, academic resiliency is measured using a scale score ranging from 1 to 5, where 1 is the lowest level of academic resiliency, and 5 is the highest level. The researcher verified the second assumption by confirming that each of the independent variables consists of two independent groups—i.e., a group of participants who had been retained at least one grade-level and a group that has not. The researcher established the data met the third assumption—i.e., independence of observation—by determining there was not a relationship between the data of each group. In essence, the groups used in the analysis satisfied the assumption because they consist of different participants; therefore, are independent of each other (Green & Salkind, 2007).

The researcher verified the final three assumptions using SPSS. The boxplot of the data revealed four outliers in the group of participants, who had been retained once in their academic career. The researcher removed the outliers and reran the analysis. The second analysis of the data revealed four addition outliers in the same group. The

researcher removed these outliers and ran the analysis once more. Figure 19 contains the boxplot of data with all of the outliers removed from the dataset.

The next assumption examined during the analysis was that of normality. The researcher used the numerical—i.e., Shapiro-Wilk's test for normality—and graphical—i.e., histogram—methods to determine normality—i.e., normally distributed data. Results of the Shapiro-Wilk's test ($p > .05$) revealed that the academic resiliency scores for both groups are normally distributed. As a result, the researcher concluded the data for each group meet the assumption of normality. In Figure 20, the histogram and normal curve of the academic resiliency scores for the two groups also illustrates the data has a normal distribution. In regards to the final assumption, the researcher checked for homogeneity of the data using the Levene's Test of homogeneity of variances. Since the p-value for the Levene's Test ($p = .001$) is less than .05, the researcher concluded the data did not meet the assumption of homogeneity.

Since the data violated the assumption of homogeneity, the researcher used the results calculated by the *t*-test when the variance is not equal. The *t*-test revealed that the mean difference of the academic resiliency scores between the two groups—i.e., participants ($n = 22$) who had been retained and participants ($n = 76$) who had not—was significance. Data are mean ± standard deviation unless otherwise stated. The average academic resiliency scores were lower for participants who had been retained (3.94 ± .53) than the participants who had not been retained (4.38 ± .34). The mean difference of 0.45 (95% CI, .20 to .69), $t(26.3) = 3.723$, $p = .001$ was statistically significant.

There is a significant difference in the levels of academic resiliency between students held back at least one grade level and those not held back. Based on the results

of the analysis, the researcher concluded that participants who had been retained had lower levels of academic resiliency than those who had not.

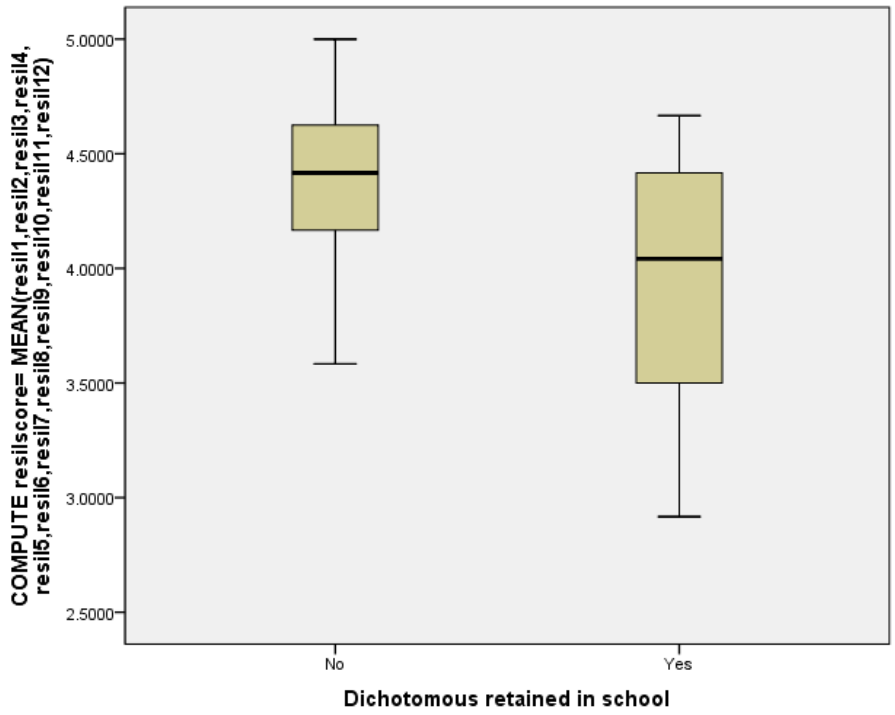

Figure 19. Boxplots of Participants Retained or Not Retained in School.

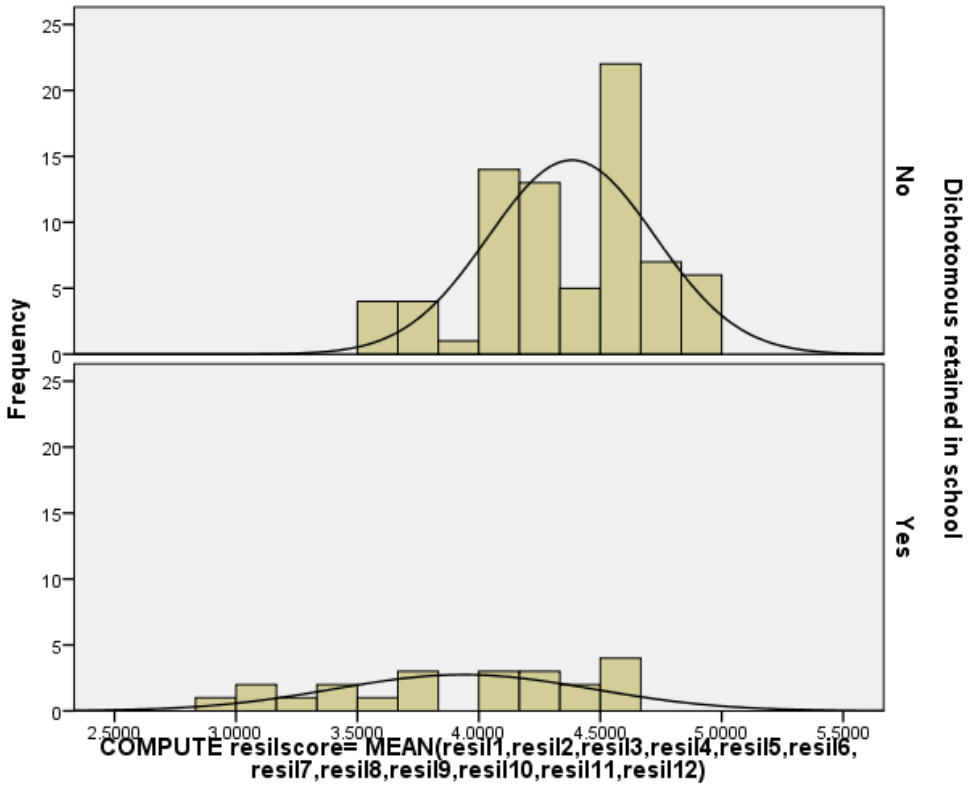

Figure 20. Histogram and Normal Curve Distribution of Retention Groups.

Question 5. Is there a difference in the level of academic resiliency between students who received free and reduced-price lunch and those who did not? Similar to Question 4, the researcher conducted analysis to check whether there were statistically significant differences in the mean scores of academic resiliency between participants (n = 58, 4.15 ± .56) who received free and reduced-price (F/R) lunch and participants (n = 48, 4.27 ± .43) who did not. In the initial check for outliers, the researcher found a single outlier and removed it from the data set. The mean and standard deviation displayed above represents the data after removing the outlier. The researcher checked for normality using both numerical and graphical methods and concluded the data for each group met the assumption. Using the Levene's Test of homogeneity of variances, the researcher found that the p-value for the Levene's Test (p = .098) is greater than p = .05; therefore, the assumption of homogeneity was satisfied.

After verifying all the assumptions, the researcher examined the results of the *t*-test and found the mean difference of 0.12 (95% CI, -.075 to .32), $t(104) = 1.22$, $p = .227$ was not statistically significant. Therefore, the researcher concluded that the academic resiliency scores for participants who received F/R lunch were no different from the scores of participants who did not receive F/R lunch. In general, the academic resiliency levels of students who receive F/R lunch are no different from the levels of students who do not receive F/R lunch.

Question 6. If there a difference in the level of academic resiliency between students in different grades? This analysis of academic resiliency examined the mean differences between groups of participants in three different grades—i.e., 10, 11 and 12. It is common practice to use a one-way ANOVA—also referred to as between-subjects ANOVA—to determine the mean differences between more than two groups (Huck, 2008). Similar to the *t*-test in the previous section, the researcher verified the assumptions about the data—i.e., no significant outliers, normality, and homogeneity—before interpreting the results. The researcher found five outliers and removed them. The remaining data contained no outliers, as assessed by inspection of a boxplot shown in Figure 21. After the removal of the outliers, the number of participants in each group declined leaving a smaller sample per grade: 10^{th} grade ($n = 26$, $4.38 \pm .19$), 11^{th} grade ($n = 44$, $4.12 \pm .57$), and 12^{th} ($n = 29$, $4.34 \pm .47$).

The researcher used the Shapiro-Wilk's test to check the assumption of normality. The academic resiliency scores for the 10^{th}- and 11^{th}-grade groups had a normal distribution, as assessed by the Shapiro-Wilk's test ($p > .05$). The Shapiro-Wilk's p-value for the 12^{th}-grade group was 0.04. As a result, the researcher used the histograms shown

in Figure 22 to determine the academic resiliency scores for the 12th-grade group were also normally distributed. However, the data violated the assumption of homogeneity of variances, as assessed by Levene's test for equality of variances (i.e., $p < .05$). Therefore, the standard ANOVA could not be used to examine the differences between groups (Green & Salkind, 2007). As an alternative, the researcher used the results of the Welch's ANOVA to determine whether statistically significant differences exist in the mean scores of academic resiliency for the different grade-level groups. The results of the one-way Welch ANOVA showed that the mean difference in the levels of academic resiliency between the different grade-level groups was statistically significant, Welch's $F(2, 56.835) = 3.874$, $p = .026$.

The researcher conducted the Games-Howell post hoc test, which is used to compare group differences when the assumption of homogeneity of variance is violated to determine differences between the individual groups (Green & Salkind, 2007). The test results showed there were differences in mean scores of academic resiliency in the three grade-level groups. There was a decrease in the mean academic resiliency score from 4.38 ± .19 in the 10th-grade group to 4.12 ± .57 in the 11th-grade group, a decrease of -.263 (95% CI, -.490 to -.037) was statistically significant ($p = .019$). However, the results indicated there was no difference between the 11th- and 12th-grade groups or between the 10th- and 12th-grade groups.

The Welch ANOVA revealed there were differences in the academic resiliency levels between the different grade levels. However, the Games-Howell post hoc test showed that the only statistically significant difference was between the 10th- and 11th-grade groups. Because significant differences did not exist between the three grade levels,

the researcher recommends conducting further analysis with a large sample before concluding the findings are generalizable to the population.

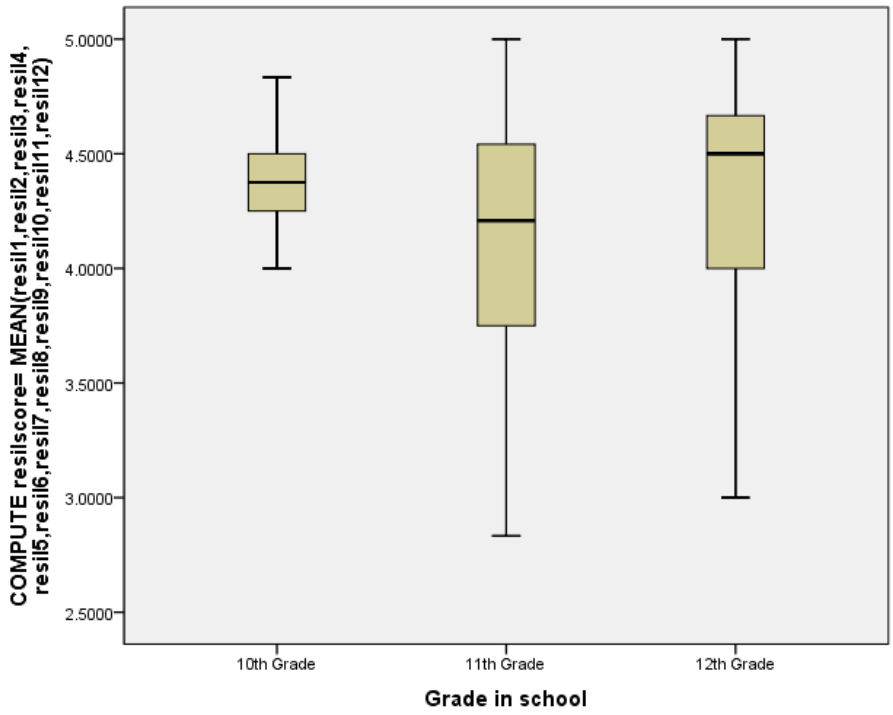

Figure 21. Boxplots of the Groups separated by Grade Level.

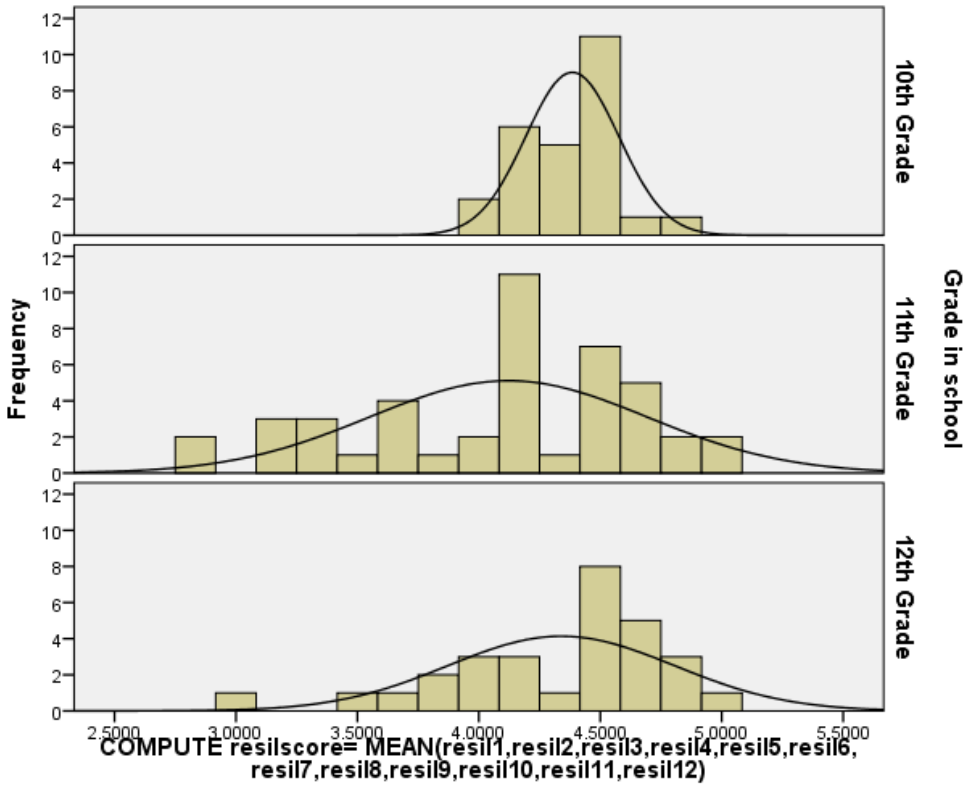

Figure 22. Histograms of Resiliency Scores for 10th-, 11th-, and 12th-Grade Groups.

Question 7. Is there a difference in the level of academic resiliency between students involved at different levels of participation in extracurricular activities? The last one-way ANOVA investigated whether the mean academic resiliency scores were different for groups who had different levels of involvement in extracurricular activities. The researcher sorted the participants into four groups: non-participants (n = 9, 4.10 ± .68), athletics (n = 54, 4.26 ± .36), non-athletic clubs/organizations (n = 12, 4.21 ± .53), and multiple extracurricular activities (n = 24, 4.44 ± .35). The researcher removed eight outliers from the data set. Thus, the means and standard deviations displayed above represent the data after removing the outliers.

The data for each group had a normal distribution, as assessed by Shapiro-Wilk's test ($p > .05$) and the histograms. However, the assumption of homogeneity was not met, as assessed by Levene's test ($p < .001$). As a result, the researcher used the results from

the Welch ANOVA to examine the mean differences between the groups. The results revealed that the mean academic resiliency scores of the groups were not statistically significant, Welch's $F(3, 22.42) = 1.1805$, $p = .175$. In other words, the participants' levels of academic resiliency did not differ significantly based on their varying levels of participation in extracurricular activities.

Summary

In this chapter, the researcher used descriptive and inferential statistics—i.e., Cronbach's alpha, Pearson's correlation, *t*-test, and one-way ANOVA—to answer the research questions as to whether there is a correlation between academic resiliency, resiliency-building strategies, and academic achievement. The analysis of the data produced mixed results; however, the findings revealed correlations among some variables. The most notable of the findings was the correlation that exists between academic resiliency and academic achievement. The results of the Pearson's correlation led to additional analysis, which examined the mean differences of academic resiliency among the participants categorized by (a) socioeconomic status, (b) grade-level, (c) involvement in extra-curricular and (d) retention rate. The results of the investigation indicated there were differences in the academic resiliency of groups based on grade level and grade-level retentions. Conversely, there were no differences in the academic resiliency of groups separated by socioeconomic status and involvement in extracurricular activities. In the next chapter, the researcher provides a detailed discussion of the results and explains the relevance of the findings.

CHAPTER 5: DISCUSSION

The purpose of the current research study was to explore if relationships existed between academic resiliency, resiliency-building strategies and academic achievement among African-American male high school students in grades 10th, 11th, and 12th. Survey methodology was used to collect data about the participants, and measure their level of academic resiliency and their perceptions about resiliency-building strategies—i.e., caring relationships, high expectations, and opportunities for meaningful participation—in school. This chapter provides a summary of the results of the study followed by conclusions, implications, and recommendations for future research on this topic.

Each year, more than a million students drop out of school. This consistent trend is a concern of researchers and educators across the country because of the negative impact the dropout rate has on society (Lewis et al., 2010; Sum et al., 2009). More importantly, students who drop out of school experience adverse outcomes throughout their lives such as higher rates of unemployment and incarceration, lower income-earnings, and more significant health issues (Lewis et al., 2012; Sum et al., 2009; Toldson & Lewis, 2012). These adverse outcomes are particularly true for African-American males, who drop out of school at a higher rate than males from other ethnic groups (Levin et al., 2007; Lewis et al., 2012; Lewis et al., 2010; Schargel & Smink, 2004).

To combat the enduring problem of academic failure, which often leads to students dropping out of school, researchers (Henderson et al., 2007; Henderson & Milstein, 2003) recommend implementing resiliency-building strategies—i.e., provide caring and support, set and communicate high expectations, and offer opportunities for

meaningful participation—that promote academic resiliency and lead to higher levels of academic achievement. Based on this premise, the present research study examined the relationship between academic achievement, resiliency-building strategies and academic resiliency among African-American males. The primary goal was to find statistical evidence as to whether or not there is a correlation between participants' perception of resiliency-building strategies in their school, levels of academic resiliency, and academic achievement.

It is essential to understand the relationship between academic achievement and academic resiliency as well as how resiliency-building strategies can foster academic resiliency in students who may be at risk of academic failure. To this end, the researcher developed research questions to explore the relationship between academic resiliency, academic achievement, and the perception of resiliency-building strategies in a sample population of African-American male high school students. The researcher expected the answers to the research questions would provide useful insight into the ways educators can improve the academic success of students who are on a path to academic failure, which ultimately may lead to them dropping out of school.

Utilizing a self-report survey developed from Child and Youth Resilience Measure-12 (Liebenberg, Ungar, & LeBlanc, 2013) and Healthy Kids Resilience Assessment (Constantine, Benard, & Diaz, 1999), the researcher collected data from 107 African-American male students in grades 10-12. The data provided by the participants allowed the researcher to test whether correlations exist between the variables—i.e., academic resiliency, the perception of resiliency-building, and academic achievement—using SPSS statistics software. The proceeding sections provide a detailed summary of

the significant findings of the Pearson's correlation, *t*-test, and one-way ANOVA analysis, implications of the findings, and recommendations for future research.

Summary of Findings

The study produced mixed results regarding the relationship between academic resiliency, resiliency-building strategies, and academic achievement. The statistical analysis explored research questions intended to determine whether there was a correlation between the three constructs:

1. Perception of resiliency-building strategies (i.e., RBS score) and academic achievement (i.e., GPA, weighted GPA, Math 1 EOC assessment scores, and English 2 EOC assessment scores);
2. Perception of resiliency-building strategies (i.e., RBS score) and academic resiliency score; and
3. Academic resiliency score and academic achievement (i.e., GPA, weighted GPA, Math 1 EOC assessment scores, and English 2 EOC assessment scores).

Additionally, the researcher developed research questions to examine whether differences existed in the academic resiliency levels of the various groups of participants:

1. Is there a difference in the level of academic resiliency between students retained in school and those not?
2. Is there a difference in the level of academic resiliency between students who received free and reduced-price lunch and those who did not?
3. Is there a difference in the level of academic resiliency between students in different grades?

4. Is there a difference in the level of academic resiliency between students involved at different levels of participation in extracurricular activities?

The researcher examined the first three research questions using Pearson's correlation. However, the analysis of the questions related to differences between the participants' levels of academic resiliency used independent-sample t-test and one-way analysis of variances. The results of the analyses provide insights into the relationships between the academic resiliency, academic achievement, and the perception of resiliency-building strategies as well as lend support to earlier research on academic resiliency.

Research Question 1. The goal of this analysis was to determine if there was a correlation between the dependent variable—i.e., academic achievement as measured by GPA—and the independent variable—i.e., the perception of resiliency-building strategies as measured using items adapted from the HKRA (Constantine et al., 1999). The researcher interpreted the results of the data collected from African-American male students in grades 10-12. The Pearson's correlation analysis indicated there was no significant correlation between the participants' GPA and their perceptions of resiliency-building strategies in their schools. Therefore, the results were not generalizable for the population.

Although the results of the initial analysis did not show a relationship between the perception of resiliency-building strategies and GPA, the researcher tested all the available measures of academic achievement—i.e., weighted GPA, Math 1 scores, and English 2 scores. The additional analysis, allowed the researcher to exhaust all possibilities in the effort to test whether there was a correlation between resiliency-building strategies and academic achievement. The results of the other Pearson's

correlation analyses similarly indicated there was no significant correlation between the academic achievement—i.e., GPA, weighted GPA, and Math 1 and English 2 EOC assessment scores—and the perceptions of resiliency-building strategies. As a result, the researcher concluded there is no relationship between the participants' perception of resiliency-building strategies and their levels of academic achievement.

Implications of the findings. The results of the study indicated that students' perception of resiliency-building strategies is not enough to predict academic success. Consequently, the findings in the present study are not consistent with a research study conducted by Corprew and Cunningham (2012) that suggest resiliency-building strategies such as students' perceptions of positive support factors—i.e., school staff—helped African-American adolescence males find success in the face of adversity—e.g., racism, discrimination, economic deprivation and living in high-risk environments. Similarly, other researchers (Hanson & Austin, 2003; Scales, Benson, Roehlkepartain, Sesma, & Van Dulmen, 2006) found that students who reported experiencing resilience assets—i.e., caring relationships, high expectations, and meaningful opportunities to participate in school—at higher rates had higher standardized achievement test scores.

Based on the conflicting findings of the current study and earlier research studies, the researcher has to consider factors that may have influenced the results in the study. One factor to consider is GPA measures academic achievement, which is directly related to individual characteristics of the student such as intelligence, motivation, self-concept, and autonomy; whereas, their perceptions of resiliency-building strategies are based more on the student's individual school experiences, which is beyond the student's control. This point is relevant because the participants in the study attended four uniquely

different schools. As a result, there is a possibility that the participants' different educational experiences had varying effects on their academic performance.

Considering the participants in the study attended different schools with different demographic makeups, it makes sense that their educational experiences differed. Forty-three of the participants attend a high poverty school with approximately 82% of its students receiving F/R lunch, and an enrollment population of 52% Hispanic, 32% African-American, and 12% White, and 4% Multi-Racial and Other (NCDPI, 2018a, 2018d). Whereas, twenty-four of the participants attended a school with only 27% of the student population received F/R lunch and an enrollment population of 68% White, 13% African-American, 14% Hispanic, and 5% Multi-Racial and Other (NCDPI, 2018a, 2018d). The differences between the schools illustrate the point that participants have different educational experiences, which can influence their perceptions as well as academic achievement. As a result, the researcher considered the differences when interpreting the usefulness of the results.

Research shows that racial and economic makeup of a school influence students' educational experiences (Erberber, Stephens, Mamedova, Ferguson, & Kroeger, 2015; Toldson & Lewis, 2012; Toldson et al., 2009). There are numerous factors associated with attending high poverty schools with a high minority population. For example, these schools, in many cases, lack certified—or highly qualified—teachers, and have higher rates of teacher and principal turnover, higher rates of suspension or expulsion, and lower rates of daily student attendance (Lewis et al., 2010; Moore & Lewis, 2012). All of these issues influence students' perceptions of resiliency-building strategies as well as academic performance. Based on this premise, the researcher acknowledges that this

study did not account for the multitude of other factors that may have directly affected the students' academic performance and their perceptions of resiliency-building strategies and possibly skewed the results.

Furthermore, the sample population in the study might also account for the discrepancy between findings in the current study and similar research studies (Jennings, 2003; Scales et al., 2006; Stewart, 2007). Table 1 displayed in Chapter 4 shows the number of participants from each school—i.e., 43, 20, 24 and 20, respectively from schools A-D—and the number of participants in each grade-level—33, 44, and 30, respectively for grades 10-12. The sample of the target population may not have been large enough to reflect the shared educational experiences of African-American males attending these schools accurately. Gay and his colleagues (2011) recommend that if the population size is approximately 500, then the sample size should be 50% of the population—i.e., approximately 250 participants. Based on this recommendation, there is a possibility the sample population in the current study is not large enough to represent adequately the different experiences students in the target population have daily.

In essence, the students' perceptions of resiliency-building strategies encompass a variety of school experiences. As a result, a small sample of the target population may not adequately represent all of the unique as well as shared experiences of African-American males attending the schools used in the study. The student's educational experiences connect directly to the school and its economic and demographic composition, courses and the quality of the teachers who provide the instruction, interaction with teachers and peers, and disciplinary consequences—i.e., suspension or expulsion—imposed because of disciplinary infractions (Erberber et al., 2015; Toldson et

al., 2009). These school-related factors are critical to the students' perceptions of their school experiences, which ultimately lead to their perceptions of resiliency-building strategies (Jennings, 2003; Morrison & Allen, 2007). Therefore, examinations of the relationship between academic achievement and resiliency-building strategies should include other factors such as engagement, motivation, attendance, instructional practices, disciplinary consequences, and peer interaction. By including these factors, researchers can get a more comprehensive view of the participants' perceptions of resiliency-building strategies, which may yield results consistent with those of earlier research studies.

It would also benefit researchers to investigate the students' perceptions of resiliency-building strategies in school where teachers are already utilizing these strategies. By conducting research studies in schools already utilizing resiliency-building strategies, researchers can measure the level to which teachers are using resiliency-building strategies in conjunction with the students' perceptions. Catalano, Haggerty, Oesterle, Fleming, and Hawkins (2004) conducted a similar study to examine two intervention programs intended to increase protective factors, decrease problem behavior, and improve academic achievement. The findings of Catalano and his colleagues (2004) serve as evidence that utilizing targeted teaching practices to build resiliency can increase opportunities for classroom participation, boost the students' recognition of teacher expectations, improve achievement test scores, and lead to more positive educational experiences.

Research Question 2. The analysis discussed in this section sought to determine whether the independent variable—i.e., participants' perceptions of the existence of resiliency-building strategies measured by RBS scale scores—correlate with the

dependent variable—i.e., academic resiliency measured by a scale score calculated using items for the CYRM-12 (Liebenberg et al., 2013). The proceeding discussion does not include the correlation that exists between the resiliency-building strategies. Based on the Cronbach's alpha analysis and the connection between the subscales used to measure the participants' perceptions of the individual resiliency-building strategies and resiliency-building strategies as a whole, the researcher expected to get a significant correlation between the scale and its subscales. Furthermore, past research (Constantine & Benard, 2001; Furlong et al., 2009; Hanson & Kim, 2007) had already established the existence of a correlation between resiliency-building strategies.

The results of the Pearson's correlation analysis showed statistically significant correlations between academic resiliency and the scale and subscale scores for resiliency-building strategies. The following relationships were statistically significant ($p < .01$):

1. Academic resiliency and the perception of resiliency-building strategies—includes all three subgroups—has a moderate positive correlation
2. Academic resiliency and the perception of meaningful participation have moderate positive correlation;
3. Academic resiliency and the perception of caring relationship have a small positive correlation;
4. Academic resiliency and the perception of high expectations have a small positive correlation.

The findings demonstrated that the participants' perceptions of the existence of resiliency-building strategies in their school correlate positively to their levels of academic resiliency.

Implications of the findings. The findings in the study support those of earlier studies (Corprew & Cunningham, 2012; Luthar, 2006), which posit that school staff, more specifically teachers, are influential in the development of adolescents. The point is even more pertinent for African-American males because their perceptions of teacher support play a critical role in their academic achievement and future accomplishment in life (Corprew & Cunningham, 2012; Swanson, Cunningham, & Spencer, 2003). Luthar (2006) further explains in her analysis of resilience that supportive relationships with teachers provide benefits that are more significant for children of color, who may have less exposure to healthy relationships with adults, than their White counterparts. Therefore, the positive correlation that exists between caring relationships and academic resiliency provides further support to the theory that positive relationships between students and school staff are vital to the development of resiliency that can lead to success in school and later in life.

Furthermore, research conducted by Furlong and his colleagues (2009) suggest that resiliency-building strategies serve as external resources that can meet the basic development needs—i.e., love, belonging, respect, identity, mastery, and meaning—of students who regularly experience adversity in their lives. From this perspective, the findings in the current study contribute to the idea that developing positive relationships, setting high expectations, and providing meaningful opportunities to participate can foster academic resiliency and mitigate the adversities that place African-American males at risk of academic failure. Similarly, the study conducted by Jennings (2003) revealed that students are more likely to pursue academic goals when they perceive emotional support, high expectations, and nurturance in school. To this end, teachers and school

staff need to implement resiliency-building strategies aimed at helping students develop the ability to overcome academic and personal adversity, which are within their control.

Research Question 3. The goal of the analysis described in this section was to determine whether a correlation existed between the dependent variables—i.e., academic achievement measured by GPA, weighted GPA, and Math 1 and English 2 EOC assessment scores—and the independent variable—i.e., academic resiliency measured by a scale score calculated using items for the CYRM-12. The results of the analysis showed there was a positive correlation between the participants' level of academic resiliency and their GPA. Likewise, there was a positive correlation between academic resiliency and weighted GPA. However, the results of the analyses testing the relationship between (a) academic resiliency and Math 1 scores and (b) academic resiliency and English 2 scores indicated there was no correlation among variables.

Implications of the findings. In the present study, the analysis yielded varied results regarding the correlation between academic achievement and academic resiliency. The results provided significant evidence that a correlation existed between the participants' GPA—and weighted GPA—and their levels of academic resiliency. These findings are consistent with the results of research (Stewart, 2007; Williams & Bryan, 2013) that proposes academic resiliency—and the protective factors linked to it—contributes to the academic success of African-American males. There is a growing body of research (Borman & Overman, 2004; McGee, 2013; Morales & Trotman, 2004; Williams & Bryan, 2013) that show a connection between academic resiliency and academic achievement of minority students, especially those who are at risk of academic failure due to their circumstance. Likewise, the findings in this study revealed a clear link

between academic resiliency and academic achievement measured by GPA as well as weighted GPA.

To the contrary, the findings related to the academic resiliency and academic achievement measured by standardized testing—i.e., Math 1 and English EOC assessment scores—show no relationship between them. These findings are unlike those of other studies (Borman & Overman, 2004; Cappella & Weinstein, 2001; Finn & Rock, 1997) that established a correlation between similar assessment scores and academic resiliency. Although the results varied based on the measure of academic achievement used, the researcher concluded that because of a positive relationship between the most commonly used measures of academic achievement—i.e., GPA and weighted GPA—and academic resiliency there is a correlation between academic achievement and academic resiliency. On that basis, the researcher recommends educators utilize instructional practices that develop academic resilience in their students. This point is evident in the research on academic resiliency, which has shown that academically resilient students are more successful in school than non-resilient students (Borman & Overman, 2004; Padrón, Waxman, & Lee, 2014; Waxman & Huang, 1996; Winfield, 1994). Accordingly, educators who foster academic resiliency in their students are preparing them for success beyond the classroom.

Research Questions 4-7. To explore the relationships involving academic resiliency and the participants' personal and academic experiences, the researcher used the participants' responses to the background questions on the survey to categorize them into groups. The researcher categorized the participants by grade, involvement in extracurricular activities, socioeconomic status, and retention rate. The results of the *t*-test

and one-way ANOVA analysis of the mean difference of academic resiliency scores provided the subsequent findings:

1. Question 4: The *t*-test analysis revealed there was a difference in the level of academic resiliency between students who had been retained and those who had not. The mean academic resiliency scores were higher for participants who had not been retained during their academic career than the scores of those who had been.
2. Question 5: The *t*-test analysis found no difference in the level of academic resiliency of participants who received F/R lunch and those who did not.
3. Questions 6: The results of the one-way ANOVA showed there was a difference in the mean academic resiliency scores of participants in different grades—i.e., 10^{th}, 11^{th}, and 12^{th}. Participants in the 10^{th} grade had a higher mean academic resiliency score than participants in the 11^{th} grade. Whereas, there was no significant difference between 10^{th}- and 12^{th}-grade scores or 11^{th}- and 12^{th}-grade scores.
4. Question 7: The results of the ANOVA comparing the mean differences between participants who have different levels of involvement in extracurricular activities were not statistically significant.

The examination of the mean difference of academic resiliency scores among the participants illustrated that different educational experiences and personal circumstances influence academic resiliency.

Implications of the findings. Findings from the current study indicate there are differences in the levels of academic resiliency between participants who had been

retained in school and those who had not. Research examining the negative impact of grade-level retention has on academic achievement revealed that grade-level retention serves as a definitive indicator of academic failure and often leads to continued patterns of failure, especially if targeted interventions are not put in place to support students (Early et al., 2003; Eide & Showalter, 2001; Jimerson & Kaufman, 2003). Additionally, Randolph, Fraser, and Orthner (2004) posit that grade retention makes students even more vulnerable to academic failure. In essence, grade retention can serve as a risk factor that further impedes the academic success of students, who are already at risk of academic failure due to myriad challenges in- and outside of school. For that reason, educators should use resiliency-building strategies to minimize the negative impact caused by grade-level retention.

Although few studies link academic resiliency and grade-level retention, it is evident that grade retention negatively influences the academic outcomes of many students (Eide & Showalter, 2001; Jacob & Lefgren, 2009; Stearns et al., 2007). Therefore, it is essential that educators incorporate resiliency-building strategies—e.g., set high academic standards, provide appropriate feedback and praise, and offer opportunities for students to experience responsibility—that promote academic resiliency, even before students demonstrate patterns of failure (Downey, 2008; Rak & Patterson, 1996). As evident by the findings in this study, retaining students hurts their levels of academic resiliency. Therefore, utilizing resiliency-building strategies to increase academic resiliency can counteract the harmful effects of grade retention.

There was a significant difference in academic resiliency between the 10th- and 11th-grade groups. However, there were no differences in academic resiliency between

10th- and 12th-grade or 11th- and 12th grade. As a result, the researcher concluded additional analysis using a larger sample population would be necessary to determine whether grade level influences the student's level of academic resiliency.

The other factors—i.e., socioeconomic status and involvement in extracurricular activities—used to examine differences in the participants did not produce any significant findings. However, in their study, Randolph and her colleagues (2004) found that involvement in extracurricular activities lessened the negative impact of grade retention, which increases the chances of dropping out of school. Moreover, Morrison and Allen (2007) suggest that extracurricular activities—e.g., athletics, interest-based clubs, performing arts, student government, and school newspaper—foster a sense of community for students and their connection or bond to the school. Considering this point, the patterns in the participants' academic resiliency levels related to their levels of involvement in extracurricular activities are worth noting.

As the participants' levels of involvement in extracurricular activities increased, so did their levels of academic resiliency. This pattern is consistent with findings of other studies (Hawkins & Mulkey, 2005; Williams & Bryan, 2013), which showed students who participate in extracurricular activities, especially athletics, displayed more resilient qualities—i.e., high levels of motivation and engagement—than those who do not participate in extracurricular activities. Although the current study did not show a statistically significant difference in the participants' levels of academic resiliency related to their involvement in extracurricular activities, the patterns in the data suggest additional research may lead to a better understanding of the effect extracurricular activities have on academic resiliency.

Limitations of the Study

Like any research study, the current study has limitations beyond the control of the researcher (Gay et al., 2011). Therefore, it is wise to evaluate the results of this study with its limitations in mind. The concise nature of the non-experimental quantitative research design used in the study is a limitation. This research design does not involve experimentation or applied treatment; therefore, there is no post-treatment data to gather or analyze (Gay et al., 2011). Consequently, the study focused on a small number of variables and the results were not as in-depth as those of an experimental research study (Gay et al., 2011).

The non-experimental quantitative design influenced the researcher's ability to establish a strong correlation between the variables. Additionally, the use of a non-experimental method may not provide enough data to make a convincing argument for a correlation (Gay et al., 2011). This point is especially problematic when the correlation coefficients are small. The size of the correlation coefficient determines the strength of the relationship between the variables and influences how confidently the researcher can make predictions about the variables (Gay et al., 2011). Accordingly, non-experimental, correlational research methodology can determine relationships between the variables. However, causal-comparative or experimental studies are needed to determine the nature of the relationship (Gay et al., 2011).

The cross-sectional design of the study also serves a limitation. Unlike a longitudinal research study, cross-sectional designs cannot examine the impact of the variables over time (Gay et al., 2011). Using a cross-sectional design is troublesome when examining the strategies used to build resilience because it does not allow the

researcher to analyze developmental changes in the student related to implementing resiliency-building strategies. As a result, future studies of academic resilience would benefit from using a longitudinal design model because it offers an opportunity to examine the impact of resiliency-building strategies on academic resilience as time progresses.

The self-report survey is an appropriate method for collecting data, but it is also a limitation of the study. The shortcomings of using a self-report survey include:

1. The participants' responses were limited to the available choices on the survey,
2. The extent of the student's effort to read and comprehend each question is beyond the control of the researcher,
3. The participants may not respond truthfully to the survey questions.

Also, survey items measured with Likert scales limit the participants to only the available response options (Gay et al., 2011). In the case of the current study, the participants had four response choices for the survey items used to measure perceptions of resiliency-building strategies and five response choices for items used to measure academic resiliency. As a result, the participants might select choices that do not accurately represent their feelings. The participants could also inadvertently misinterpret the response options.

The participants' truthfulness when answering the survey questions could be a limitation of the study. If the participants are not truthful, the fraudulent responses could skew the results of the data. For example, research findings (Leos-Urbel, Schwartz, Weinstein, & Corcoran, 2013; Mirtcheva & Powell, 2009) show there is a stigma

associated with subsidized meal programs. As a result, some students who are eligible for F/R lunch are reluctant to admit they receive F/R lunch (Mirtcheva & Powell, 2009). As a result, participants might provide a false response to the question about their eligibility for F/R lunch, which could lead to the researcher assigning them to the wrong group and inevitably getting inaccurate results. In the case of this example, the researcher should use other measures—i.e., parent's education, income, and occupation—to establish socioeconomic status (Nicholson, Slater, Chriqui, & Chaloupka, 2014).

Another limitation of the study involved the delivery method for the survey. Initially, the researcher planned to administer all the surveys online. However, some participants did not have access to a computer on the day the researcher administered the surveys. As a result, those participants completed a paper copy of the survey. Using a mixed mode approach—i.e., offering the option of completing an online and paper survey—allowed all the participants to complete the survey even when there was limited access to computers (Carini, Hayek, Kuh, Kennedy, & Ouimet, 2003). However, the decision to use a mixed mode method might have inadvertently influenced the participants' responses to the survey items.

In a 2003 study, Carini and his colleagues found that responses to online surveys were more favorable than responses to the same surveys given in the paper form. Similarly, other studies showed that adolescents disclose more personal information in online questionnaires than in pencil-and-paper version (Mangunkusumo et al., 2005; Wang et al., 2005). Based on these findings, one can reasonably argue there are differences in the responses of the participants who took the online survey and those who took the paper version. Therefore, researchers should consider the potential differences in

the participants' response to online surveys as opposed to paper surveys when collecting survey data.

The final limitation of the study was the small sample size. Out of 439 possible candidates for the study, only 107 students volunteered to participate in the study. As a result, the sample population in the study did not contain 50% of the available target population. The sample size is a limitation of the study and may have influenced the results of the statistical analysis comparing different groups of participants. For example, the sample contained only five participants who were 15 years old. Therefore, the researcher reorganized the age groups and combined 15- and 16-year old students into a single group. This type of adjustment allowed the researcher to make some of the groups large enough to meet the recommended minimum 30-participant threshold (Gay et al., 2011). However, the small sample size might have skewed the results of the analysis and produced no statistically significant findings. Whereas, analysis using a more extensive sampling of the target population might have produced significant results. In future studies of academic resiliency and resiliency-building strategies, researchers should obtain a larger sample size in order to represent the target population more accurately.

Implications for Educators

Given the current concerns regarding the academic performance of African-American males, the findings presented in this study point to many implications for educators, especially those who want to change the negative academic trajectory of African-American males. It is important to acknowledge the fact that many minority children, especially African-American males, face adversity in- and outside of school. Although educators cannot resolve many of the issues students encounter outside of

school, much can be done to remove the barriers these students face in school. This point is evident in findings from this and other research studies (Borman & Overman, 2004; Cappella & Weinstein, 2001; Miller, 1999; Rak & Patterson, 1996), which suggest there is a positive relationship between academic resiliency and the academic success of African-American males. Therefore, educators should expose African-American males to resiliency-building strategies, which can mitigate the adverse effects of risk factors.

The current study found there was a correlation between the perception of resiliency-building strategies and academic resilience among African-American male students. Additionally, there was a correlation between academic resilience and GPA. Given both these findings, it makes sense that implementing programs and interventions that utilize resiliency-building strategies would increase the students' levels of academic resiliency and eventually lead to better academic performance. This argument is supported by research findings (Levin et al., 2007; Livingston & Nahimana, 2006; McGee, 2013) that illustrate the need to create interventions, curriculum, and programs focused on improving academic resiliency and achievement among African-American males.

The current study did not establish a direct connection between the perception of resiliency-building strategies and academic achievement; however, it did establish a relationship between resiliency-building strategies and academic resiliency, and academic resiliency and academic achievement. Whereas, other research studies (Jennings, 2003; Scales et al., 2006; Waxman & Huang, 1996) found a link between perceptions of resiliency-building strategies—i.e., establishing caring and support relationships, setting high expectations and providing opportunities to participate in meaningful ways—and

academic achievement in African-American males. As a result, educators should use resiliency-building strategies to foster academic resilience, which can ultimately lead to academic success (Downey, 2008; Henderson, 2013; West-Olatunji et al., 2008). There is no universal approach to developing academic resiliency. Nonetheless, educators should seek to better understanding of how a students' perception of their educational experiences influence their level of academic resiliency and academic performance. Most importantly, teachers should read literature and research on academic resiliency and participate in professional development aimed at implementing resiliency-building strategies in classrooms and schools.

Aside from gaining a better understanding of academic resiliency and resiliency-building strategies, educators should identify interventions and programs founded on the philosophy of fostering academic resiliency. Such interventions may be especially beneficial to African-American males, who are at the highest risk of academic failure and adverse life outcomes. Research (Jennings, 2003; Scales et al., 2006; Waxman & Huang, 1996) has shown that resiliency-building strategies, such as caring relationships with adults, may mitigate the adversities facing many African-American males. While other studies (Morales, 2010; Morrison & Allen, 2007; Wisdom, Rees, Riley, & Weis, 2007) have indicated that setting high expectations for students and providing them with the skills and resources needed to meet those expectations can increase their level of connectedness to the school. To this end, teachers, as well as support staff, should create advisory groups for students primarily to develop positive relationships between students and teachers.

Seminal work on academic resiliency (Benard, 1991; Garmezy & Rutter, 1983; Werner & Smith, 1992; Winfield, 1994) describes the positive impact that caring adults have on the lives of students faced with adversity. Therefore, educators need to look for opportunities to develop caring and supportive relationships with African-American males, who often need more incentive to engage in school (Williams & Bryan, 2013). With this in mind, researchers (Henderson et al., 2007; Henderson & Milstein, 2003; Toldson et al., 2009) provide educators with practical strategies for integrating resiliency-building strategies into their daily classroom routines and instructional practices. For example, teachers can incorporate these resiliency-building strategies (Benard, 2004; Henderson et al., 2007; Henderson & Milstein, 2003):

1. Caring and support—Creating a positive and nurturing classroom where students feel a sense of belonging, and there is an emphasis on cooperation and caring, celebrations and rites of passages, and reaching out to get and give help when needed;
2. High expectations--Setting clear academic goals and expectations, providing opportunities for supportive and corrective feedback, facilitating cooperative learning opportunities and celebrating achievements; and
3. Meaningful participation—Creating opportunities for high levels of student involvement and responsibility in the classroom, diversifying effective teaching and learning strategies, encouraging involvement in extracurricular activities, and recognizing the value of participating and cooperating.

Teachers who want to remove the academic obstacles encountered by many African-American males can start by implementing these strategies as well as those outlined in the literature on academic resiliency.

Implications for Educational Leaders and Policymakers

Education reform has been an integral part of the national debate on improving the American educational system since the National Commission on Excellence in Education (1983) released its report, *A Nation at Risk*. Educational leaders and lawmakers have continuously worked to increase educational standards for students and teachers. National school reform efforts have included curriculum guidelines and courses of study—e.g., North Carolina Standard Course of Study (NCDPI, 2018d) and Common Core and Essential Standards (NCDPI, 2012)—as well as state and national testing standards. However, there is little evidence showing that educational reform efforts have focused on increasing school-related protective factors—i.e., resiliency-building strategies. This finding is odd based on the fact that researchers (Benard, 2004; Henderson & Milstein, 2003; Werner, 2007) have identified strategies and practice that can mitigate many for the risk factors that continue to plague many students, especially minority students attending schools in low-socioeconomic, urban communities.

The findings in this study show a relationship between academic achievement and academic resiliency among African-American males. Furthermore, the findings reveal that students' perceptions of resiliency-building strategies correlate to their levels of academic resiliency. Therefore, one can make a logical argument that implementing resiliency-building strategies can increase students' level of academic resiliency, which in turn, can increase their level of academic achievement. Based on this premise,

policymakers would be well advised to address educational reform through the framework of resiliency (Benard, 2004; Henderson et al., 2007).

By developing educational reform policies that promote the resiliency-building strategies examined in the study, policymakers can foster resiliency in students, who are at risk of academic failure because of the structural and systemic problems in American's education system. Literature (Benard, 2004; Henderson, 2013; Henderson & Milstein, 2003) on academic resiliency describes the characteristics of schools and classrooms that building resiliency in students and help them overcome issues commonly associated with academic failure. As educational leaders move towards systemic reform—aimed at reforming and restructuring the entire education system—they should consider implementing planned and coordinated interventions and strategies that provide long-term, substantial and sustainable increases in student achievement (Samel, Sondergeld, Fischer, & Patterson, 2011). To this end, educational leaders should consider the findings in this study that establish a relationship between the perceptions of resiliency-building strategies and academic resiliency. By focusing on academic resiliency, policymakers can implement policy changes that address the systemic and structural barriers hindering the academic success of African-American males (Thompson, 2010).

Policymakers should develop policies that target the barriers, which impede the academic progress of African-American males. The most common barriers are the social injustices that influence all aspects of their lives. In their study, Toldson and his colleagues (2009) found that African-American males can learn in supportive educational environments that effectively work with families and communities, and provide culturally relevant instruction. Therefore, educational leaders can create a supportive and caring

learning environment for African-American males by implementing policy and practice solutions that ensure equitable resources, college and career readiness, and fair discipline practices (Toldson & Lewis, 2012). These policies and educational practices should encourage administrators and teachers to work with parents and communities to implement programs based on sound research.

Educational leaders should focus their energy on developing and expanding programs that support academic and personal development, build academic resiliency, and eliminate social injustices found in many schools with large populations of minority students from low-socioeconomic backgrounds. African-American males encounter issues of biased disciplinary policies, low-level tracking in academic areas, unfair distribution of financial resources, less qualified teachers, and limited access to technology (Toldson & Lewis, 2012; Toldson et al., 2009; Whiting, 2009). In urban schools with high poverty and high minority student population, African-American males are more likely, than their affluent and White counterparts, to have teachers teaching the core subjects—i.e., math, English, science, and social studies—who are not certified in these subjects (Toldson & Lewis, 2012). Also, an overwhelming percentage of teachers in all schools, particularly urban schools, are White and female (Moore & Lewis, 2012). As a result, many African-American students are being taught by teachers who lack the knowledge and skills needed to teach in urban districts (Darling-Hammond & Friedlaender, 2008). There is also a shortage of African-American teachers, particularly males. Consequently, African-American male students rarely have teachers who look like them (Moore & Lewis, 2012; Toldson & Lewis, 2012). Therefore, it is essential that educational leaders provide teachers with ongoing, high-quality professional

development that improves their ability to teach rigorous and relevant content to diverse learners.

Another barrier that contributes to the academic struggles of African-American males is the discipline gaps—i.e., disparities in disciplinary actions given to African-American students and males from other ethnic groups, particular White males (Monroe, 2005). African-American males are suspended and expelled at a significantly higher rate than their White peers (Toldson & Lewis, 2012). Monroe (2005) proposes that African-American males are two to five times more likely to be suspended than their White counterparts. The leading causes of the inequalities in discipline practices are: (a) culturally based norms and expectations created by white and middle-class individuals in positions of power in the educational setting, and (b) zero tolerance policies, which overly utilize suspension as a means of handling disciplinary infraction committed by African-American males (Monroe, 2005; Toldson & Lewis, 2012; Toldson et al., 2009).

Monroe (2005) offers recommendations for addressing the disparities in disciplinary practices:

1. Provide teachers with professional development opportunities to examine conscious and unconscious racial bias and gender stereotypes;
2. Incorporate and value culturally responsive disciplinary strategies that promote culturally familiar behavior management practices and build stronger relationships between students, parents, and teachers; and
3. Maintain learners' interest through engaging instruction and culturally responsive curriculum that students find relevant, meaningful, and affirming.

Ending racial disparities in school discipline plays a significant role in building academic resiliency among African-American because it directly influences the effectiveness of resiliency-building strategies (Monroe, 2005; Moore & Lewis, 2012; Samel et al., 2011). To close the discipline gap and increase academic resiliency among African-American males, policymakers and educational leaders have to reshape individual and institutional orientations to discipline and create environments of caring and support as opposed to environments that use stern disciplinary approaches, which unfairly penalize males of color (Monroe, 2005).

Because of educational inequalities, African-American males rank highest among students who drop out of school, score poorly on tests, have low GPAs, and higher placements in special education (Whiting, 2006). In order to address these issues as well as barriers to academic success among African-American males, educational leaders and administrators should focus on building academic resiliency (Samel et al., 2011; Toldson & Lewis, 2012; Whiting, 2006):

1. Caring and support—Provide training and resources to teachers on cultural competence, empathy and respect, defense management, and build positive relationships. Replace traditional disciplinary practices, which lead to suspension, with restorative justice, which focuses more on repairing the damage rather than suspending or expelling students.
2. High Expectations—Eliminate biases, stereotypes, and misinformation from schools by embracing the philosophy that all African-American males are capable of the highest levels of academic achievement.

3. Meaningful Participation—Offer a curriculum that meets the admissions requirements at the most competitive public university in the state and utilizes a culturally responsive curriculum that helps build a sense of purpose, self-concept, and ethnic identity.

To develop effective reform policies, policymakers and educational leaders should target school factors—i.e., caring teachers, high expectations for student achievement, opportunities to engage meaningfully in the education environment—that build academic resilience and contribute to academic achievement, particularly among African-American males.

It is equally important for policymakers to address the systemic inequalities that impede the academic success of African-American males. African-American males are over-represented in special education, under-represented in gifted classes, over-represented among dropouts, over-represented among students suspended or expelled and over-represented among students who are unmotivated and choose to disengage academically (Toldson & Lewis, 2012; Whiting, 2006; Whiting, 2009). As a result, many African-American males, especially those from lower socioeconomic backgrounds, generally face an uphill battle to achieve in school (Erberber et al., 2015). With this in mind, the results of the current study have the potential to assist policymakers in developing, testing, and implementing interventions targeted to African-American males and improving their academic performance.

Recommendation for Future Research

The academic performance of minority students illustrates the need for more research on academic resilience. Some researchers (Levin et al., 2007; Lewis et al., 2010;

Livingston & Nahimana, 2006; Swanson et al., 2003) would argue that there is an even greater need for further investigation on resiliency-building strategies and their impact on academic achievement of African-American males. There is a lack of longitudinal studies, which examine the development of academic resilience, in current literature to date. Ideally, future research should utilize a longitudinal design model and focus on the fostering academic resiliency over time using resiliency-building strategies. Longitudinal studies would allow researchers to measure the existence and impact of these strategies as well as risk factors at different stages of the student's academic career (Gay et al., 2011).

Research (Rak & Patterson, 1996; Richardson et al., 1990; Werner, 2007) has shown that the development of academic resilience is a dynamic process influenced by both risk and protective factors, and is continuously changing over time. Researchers (Martin & Marsh, 2009; Morales, 2010) support the idea that over time an individual's levels of academic resilience increase and decrease as he or she is exposed to different risk factors and uses protective factors associated with resiliency-building strategies. As such, a longitudinal approach would be ideal for further investigation of the impact of resiliency-building strategies on academic resilience and academic achievement. Also, longitudinal studies would allow for the examination of long-term outcomes other than GPA, such as high school graduation and dropout rates, and college attendance and completion.

To develop more substantial academic resiliency theories, researchers should continue testing hypotheses related to the development of academic resiliency and how resiliency-building strategies—i.e., caring school personnel, high expectations, and meaningful participation—and other protective factors—e.g., parental support, mentors,

future aspirations, persistence, and self-esteem (Morales, 2010; Morales & Trotman, 2004)—work together to support the development process. Therefore, researchers should examine more complex hypotheses such as how resiliency-building strategies influence risk factors directly linked to the school such as grade retention, racial biases, out of school suspensions and expulsion. By gaining a better understanding of these types of relationships, researchers and educators will be able to improve their ability to facilitate the process of building academic resiliency in African-American males, which they can also use to foster resiliency in other students.

It would also be interesting to explore how resiliency-building strategies commonly found in schools—i.e., caring relationships, opportunities to participate meaningfully, and high expectations—are linked to the development of internal protective factors—i.e., social competence, autonomy and sense of self, and sense of meaning and purpose (Benard, 2004). Researchers (Constantine et al., 1999) propose that the presence of resiliency-building strategies—also referred to as external protective factors—are predictive of resiliency outcomes because of their influence on the developmental needs of students—i.e., sense of connection, belonging, identity, respect, power, and ultimately meaning. Based on this premise, future research examining the connection between the resiliency-building strategies and internal protective factors may lead to a greater understanding of how these internal and external protective factors work together in the dynamic process of developing resilience. Ultimately, providing students with the ability to overcome challenges that could inevitably hinder them from future success.

The research on gender and resiliency also provides thought-provoking ideas about how to expand research in this area (Sun & Stewart, 2007; Wisdom, Rees, Riley, & Weis, 2007). Sun and Stewart (2007) posit that girls develop at a faster rate than boys do; this is particularly true in the areas of empathy, help-seeking, and goals and aspirations for the future. Also, male and female students often describe different societal expectations. The expectations for girls are high and conflicting; whereas, the expectations for boys center on messages of being tough and unemotional (Wisdom et al., 2007). Based on this premise, female students may have different perceptions about the existence of resiliency-building strategies, especially as it relates to the level of expectations they experience. African-American females' perceptions of positive expectations are even more relevant because they regularly combat negative stereotypes related to their appearance, femininity, personality, and intelligence (Evans-Winters, 2007). Therefore, it would be interesting to compare academic resiliency and educational experiences of African-American females and their male counterparts.

To expand this study further, the researcher would include African-American females in the sample population. Research (Morales & Trotman, 2004; Sun & Stewart, 2007; Wisdom et al., 2007) shows that African-American females are plagued by similar adversities as African-American males especially living in urban communities, for example, racial biases, poverty, physical abuse, and homelessness. In some case, African-American female students endure even greater hardships--i.e., sexual harassment and abuse, and racial and gender stereotypes (Smith-Evans & George, 2014). Future studies should aim to recruit African-American male and female students and examine academic

resiliency, resiliency-building strategies and academic achievement between the two groups.

Using male and female students may provide even greater insight into whether resiliency-building strategies influence the academic resiliency among the genders differently. By understanding whether differences exist in how African-American male and female students perceive resiliency-building strategies as well as differences in their level of academic resilience, researchers can better guide the instructional practices of educators. Also, it would be interesting to examine whether males and females differ in their responses to the risk factors that jeopardize their academic success. Findings from such studies could help educators integrate resiliency-building strategies that promote academic resilience in both male and female students who are at risk of academic failure due to any number of adversities or hardships.

Research in this area should move beyond the non-experimental design described in this study. Additional research should examine the relationship that may exist between academic achievement and the actual implementation of resiliency-building strategies as opposed to students' perceptions of the existence of such strategies. Using an experimental research design, the researcher might compare academic resiliency and academic achievement of students attending schools—e.g., charter schools, magnet schools, and other non-traditional public schools—that may use different approaches to developing academic resiliency among their students. Research (Bosworth & Earthman, 2002; Henderson et al., 2007; Rak & Patterson, 1996) has shown that there are various methods for integrating resiliency-building strategies into the learning environment. For example, some schools have developmental ninth-grade transitions programs that

incorporate resiliency-building strategies, whereas others have focused on mentoring programs, which utilize these strategies. Furthermore, some schools have integrated resiliency-building strategies into their school culture through Positive Behavior Intervention Support. Regardless of the method, it would be worthwhile for researchers to examine the achievement results of schools with similar racial, socioeconomic, and cultural demographics, but different strategies for fostering academic resiliency among their students.

Lastly, researchers should consider conducting this research study as a mixed-method. The findings related to the perception of the resiliency-building strategies and academic resiliency leads the researcher to believe that qualitative analysis—i.e., open-ended questions on the survey, observation, and interviews—would allow for a greater understanding of the participants' perception of resiliency-building strategies and how their perceptions influence their academic achievement. Additionally, the inclusion of qualitative data would offer insight into the participants' educational experiences that could provide additional understanding about the impact of academic resiliency on academic achievement.

Conclusion

Mounting evidence related to academic resiliency in African-American males is leading researchers and educators to believe that understanding how and why some students can overcome life's challenges and succeed in school can serve as a way of promoting academic success in all students, especially those of color. Although it is necessary to continue studying the achievement disparities between minority students and their White counterparts, the traditional approaches of examining the issue of student achievement through the lens of deficiencies and risk factors are no longer useful and

have minimal impact of promoting student success. It may seem prudent to focus on the role that poverty, educational opportunity gaps, and funding disparities have played in the persistence of the achievement gap, but building-level educators—i.e., teachers, counselors, and administrators—have little to no control over these issues. Therefore, it is better to invest time and energy in studying factors, which contribute to academic resilience, especially those over which educators have the most considerable influence. The study of resiliency-building strategies offers researchers the opportunity to provide educators with the tools needed to change the lives of students who, based on their current circumstances, are at risk of failure in school and life.

While students' perceptions of resiliency-building strategies did not correlate to academic achievement, their perceptions of resiliency-building strategies did correlate to their levels of academic resiliency. This finding serves as evidence that the students' perceptions about their teachers' educational practices and philosophies influence their levels of academic resiliency. With that in mind, it would be prudent for researchers to continue to examine which resiliency-building strategies are most effective in fostering academic resilience. Continued research in this area would allow educational leaders to implement interventions and strategies that would ensure the ongoing development of resilience in students, especially those who, without these support mechanisms, would most likely succumb to the struggles they face daily.

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APPENDIX A: RESEARCH STUDY SURVEY CONSTRUCTS AND SCALES

Research Study Survey Constructs and Scales

Item	Scale	Variable
1	AR	I have people I look up to.
2	AR	Getting an education is important to me.
3	AR	My parent(s)/caregiver(s) know a lot about me.
4	AR	I try to finish what I start.
5	AR	I am able to solve problems without harming myself or others.
6	AR	I know where to go in my community to get help.
7	AR	I feel I belong at my school
8	AR	My family will stand by me during difficult times
9	AR	My friends stand by me during difficult times
10	AR	I am treated fairly in my community
11	AR	I have opportunities to develop skills that will be useful later in life
12	AR	I enjoy my cultural and family traditions
13	CR	There is a teacher or some adult who really cares about me.
14	CR	There is a teacher or some adult who tells me when I do a good job.
15	*CR	There is a teacher or some adult who notices when I'm not there.
16	HE	There is a teacher or some adult who always wants me to do my best.
17	HE	There is a teacher…who listens to me when I have something to say.
18	HE	There is a teacher or some adult who believes that I will be a success.
19	MP	At school, I do interesting activities.
20	MP	At school, I help decide things like class activities or rules.
21	MP	At school, I do things that make a difference.

* Indicates the item was removed from the scale measure

AR = Academic Resiliency
CR = Caring Relationship
HE = High Expectations
MP = Meaningful Participation
RS = Resiliency-Building Strategies (scale consist of items 13-21)

APPENDIX B: ACADEMIC RESILIENCE SURVEY

This survey asks about things you may have done during different periods of time, such as during your lifetime (you ever did something), 12 months, or 30 days. Each question provides different information. Please pay careful attention to these time periods.

Section I: Background Information

Please select the answer that is most appropriate.

1. Type in your Participant Number *(ID number assigned to you by the researcher).*
2. How old are you?
   [ ] 15 years old
   [ ] 16 years old
   [ ] 17 years old
   [ ] 18 years old
   [ ] Older than 18 years old
3. What grade are you currently in?
   [ ] 10th
   [ ] 11th
   [ ] 12th
4. Do you receive free or reduced-price lunch at school? *(Receiving free or reduced-price lunches means that lunch at school is provided to you for free or you pay less for it.)*
   [ ] Yes
   [ ] No
5. What best describes where you live? *(A home includes a house, apartment, trailer, or mobile home)*
   [ ] A home with one or more parents or guardian
   [ ] Other relative's home
   [ ] A home with more than one family
   [ ] Friend's home
   [ ] Foster home, group home, or waiting for placement
   [ ] Hotel or Motel
   [ ] Shelter, car, campground, or other transitional or temporary housing
   [ ] Other living arrangement
6. What is the highest level of education your parents or guardians completed? *(Mark the educational level of the parent or guardian who went the furthest in school.)*
   [ ] Did not finish high school
   [ ] Graduated from high school
   [ ] Attended college but did not complete a four-year degree
   [ ] Graduated from college
   [ ] Don't know

7. How many times have you been retained or repeated a grade?
   [ ] None
   [ ] 1 time
   [ ] 2 times
   [ ] 3 or more times

8. In the past 30 days, how often did you miss an entire day of school for any reason?
   [ ] I did not miss any days of school in the past 30 days.
   [ ] 1 day
   [ ] 2 days
   [ ] 3 or more days

9. During the past 12 months, about how many times did you skip school or cut classes?
   [ ] 0 times
   [ ] 1-2 times
   [ ] A few times
   [ ] Once a month
   [ ] Twice a month
   [ ] Once a week
   [ ] More than once a week

10. What extracurricular activities are you involved in at school? *(Please select all options that apply.)*
    [ ] None
    [ ] Athletics (e.g., football, basketball, baseball, soccer, etc.)
    [ ] Performing Arts (e.g., Marching Band, Theatre, Chorus, Drama, Step-Team, etc.)
    [ ] Clubs or Organizations (e.g., Student Government, Robotics Club, FBLA, FFA, etc.)
    [ ] Other

11. During the past 12 months, have you participated in a mentoring program at your school?
    [ ] Yes
    [ ] No

Section II: Personal Experiences

To what extent do the sentences below describe you? Circle one answer for each statement.

	Not at All	A Little	Some what	Quite a Bit	A lot
1. I have people I look up to	1	2	3	4	5
2. Getting an education is important to me	1	2	3	4	5
3. My parent(s)/caregiver(s) know a lot about me *(for example, who my friends are, what I like to do)*	1	2	3	4	5
4. I try to finish what I start	1	2	3	4	5

5. I am able to solve problems without harming myself or others *(for example by using drugs and/or being violent)*	1	2	3	4	5
6. I know where to go in my community to get help	1	2	3	4	5
7. I feel I belong at my school	1	2	3	4	5
8. My family will stand by me during difficult times *(for example if I am sick or have done something wrong)*	1	2	3	4	5
9. My friends stand by me during difficult times *(for example if I am sad or in some kind trouble)*	1	2	3	4	5
10. I am treated fairly in my community	1	2	3	4	5
11. I have opportunities to develop skills that will be useful later in life *(like job skills and skills to care for others)*	1	2	3	4	5
12. I enjoy my cultural and family traditions	1	2	3	4	5

Section III: Educational Experiences

Please select the answer that matches how TRUE you feel each of the following statements is about your SCHOOL and things you might do there.

At my school, there is a teacher or some other adult…

	Not at All True	A Little True	Pretty Much True	Very Much True
13. who really cares about me.	1	2	3	4
14. who tells me when I do a good job.	1	2	3	4
15. who notices when I'm not there.	1	2	3	4
16. who always wants me to do my best.	1	2	3	4
17. who listens to me when I have something to say.	1	2	3	4
18. who believes that I will be a success.	1	2	3	4

At school…

	Not at All True	A Little True	Pretty Much True	Very Much True
19. I do interesting activities.	1	2	3	4
20. I help decide things like class activities or rules.	1	2	3	4
21. I do things that make a difference.	1	2	3	4

Section IV: Self Check

Please select the answer that is most appropriate.

To the best of my ability…

	Yes	No
1. I answered the questions on this honestly.	1	2
2. I answered the questions on this survey carefully.	1	2
3. I understood the questions in this survey.	1	2