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POVERTY AND HIGH SCHOOL GRADUATION: WHAT ARE THE ASSOCIATED
VARIABLES?

by

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In closing, to everyone working on or contemplating pursuing a doctoral degree, it is well worth the adventure. Learning never ends.

ABSTRACT

POVERTY AND HIGH SCHOOL GRADUATION: WHAT ARE THE ASSOCIATED VARIABLES?

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Education is pivotal to a better life for many individuals. Unfortunately, a large number of adolescents in poverty fail to complete high school; thereby limiting their opportunities for better employment options. However, there are adolescents who live in poverty and successfully complete high school, despite the adversities. This study, using archival data from the High School Longitudinal Studies of 2009 (HSLs:09) dataset, examined over 130 variables divided into four domains, family, school, teacher, and subjective wellbeing, and their influences on adolescents living in poverty who complete high school. Correlations and multiple regressions analysis were used to determine the predictors that were statistically significant in identifying which factors were associated with students who completed high school.

Results of this study revealed several variables of significance for each research question. Family variables included parents' in the home, parents' education level, mobility, and suspension as significantly related to high school graduation. School variables significantly related to high school completion included adequate resources, disrespect perceived by the teacher, and the math teacher not returning. Teacher variables statistically significant were math teacher entered education through alternative certification program and the science teacher sets high standards for students' learning. Student well-being variable results that were statistically significant in this study included getting good grades is important to the student, student's perception that the science teacher treats all students fairly, adolescent works for wages, and student's closest friend plans to go to college.

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CHAPTER I: INTRODUCTION

More than two million young adults, ages 16 to 24, lack a high school diploma or equivalent document (Stark & Noel, 2015). The unfavorable outlook for individuals who do not complete high school may include earning \$9,000 less annually, unemployment, and even prison. The National Dropout Prevention Center (Economic Impacts of Dropouts, 2016) reported 30% unemployment rates and a state prison population consisting of 75% dropouts. Dropout disparities exist among student ethnicities. The High School Longitudinal Study of 2009 indicated that dropout rates for African American and Hispanic students were 4.3 and 3.5 percent respectively, compared with Caucasian and Asian students at 2.1 and 0.3 percent respectively (National Center for Educational Statistics [NCES], 2015). Daunting statistics such as these can be discouraging and cast doubt on the country's future success.

Parents, who are important to children's social well-being and development, can play a pivotal role in their education (Parcel & Bixby, 2015). Adults who accomplish academic success beyond high school tend to influence their children to pursue education post high school (Smoke, 2013). The National Center for Children in Poverty (NCCP) indicates that higher education is one way to elevate a family's income (Douglas-Hall & Chau, 2007). The same report states that parents with less education are at an economic disadvantage, which affects their children.

Ratcliffe and McKernan (2012) found that employed parents have a positive effect on their children's well-being. While completing high school increases employment opportunities, available jobs at this level provide less income and often-inflexible work hours (Smoke, 2013). Full-time jobs, making minimum wage earnings,

rarely pay for childcare, rent, and other household costs. When there is not enough money for rent and other expenses, parents find themselves having to move, sometimes more than once, to provide shelter for their families (Ratcliffe, 2015). Ratcliffe (2015) reported that children with frequent moves, related to lack of funds for rent, have their education disrupted and a decreased chance of completing high school. For families who are in poverty and dealing with the impact of economic shortfalls, completing high school, let alone college, may be challenging.

Children raised in families in which the parents, even grandparents, also dropped out of school are more likely to live in households predisposed to generational poverty (Jensen, 2009). Poverty has detrimental effects on both young children and adolescents. Negative changes occur in neurological, social, and language developments when young children lack proper nutrition and access to stimulating environments during these formative years (Duncan & Magnuson, 2013). Considerable research exists on factors surrounding high school dropouts and the negative effects that follow (Doll, Eslami, & Walters, 2013; Orpinas & Raczyński, 2015). Less research focuses on the students who endured various forms of adversity including poverty, poor schools, inexperienced teachers, disabilities, and second language learning to name a few. How do these students survive and even thrive in the face of social inequities? What motivates students to graduate high school or leave school and complete a General Education Development (GED)?

The children's classic, *The Little Engine Who Could* (Piper, 1930), in which a little engine used the power of perseverance to overcome a challenging situation, may allude to one perspective on why some students remain in school. Could perseverance be

the difference between those who succeed and those who fail? If it were only as simple as repeating a motivating phrase to make it through life's challenges, maybe more people would achieve success. Students' aspirations and expectations play a crucial role in their academic achievements (Kattab, 2015). However, the complexities and interwoven nature of today's schools and schooling experiences require multiple factors working in tandem to bring about a positive outcome.

The literature describes perseverance as one term used to describe "how" some individuals survive challenges and forge ahead successfully. Authors have used words like resilience, grit, and growth-mindset to detail the unique abilities of some people to achieve success in the face of hardships (Fink, 2013; Laursen, 2015; Phillips, Turner, & Holt, 2014). Other scholars have extended their research to include packaging for products and strategies to teach the missing skill set to students thus promoting a harmonious environment (Fink, 2013; Olson, 2011). School wide efforts to teach character strengths may work for some students; however, application and fidelity are serious considerations in the overall outcome. This study will examine factors that may be more specific to individual learners that helps propel them ahead.

Horace Mann (1848) once described education as the great equalizer for the betterment of humanity. Do educators today agree with Mann's position from over 150 years ago? Does education remain the great equalizer? Have leaders and policy makers provided equitable educational opportunities for all students? Societal differences, as evidenced by school dissimilarities, produce performance outcomes that vary between states, districts, schools, and even student groups (About National Assessment Education Progress [NAEP], 2016). There are researchers who identify various characteristics, such

as school configuration, motivation, adult relationships, and family issues, that undermine success for students entering middle schools and continue to separate their academic performance in future grades. Exploring and identifying elements that promote student success in earlier grades must be a priority for educators and decision makers. Waiting until high school may be too late (Ellerbrock, Kiefer, & Alley, 2014; Hoschchild, 2003; Rockoff & Lockwood, 2010)

Middle school, compared with elementary and high school, receives considerable attention from scholars for a variety of reasons. Middle school is a time when the focus on learning collides with other variables, such as peer pressure, social development, and cognitive and physical changes (DeBose & Borders, 2011). Louisiana Superintendent Cecil Picard referred to middle school as the “Bermuda Triangle” of education because the focus on learning decreases in part due to psychosocial development (Meyer, 2011). Yecke (2006) shared that one view of middle school is that it is a place where expectations for academics and behaviors are secondary to the rush of hormones. One man noted for exploring the middle school environment and curriculum was William Alexander (McEwin, 1992). The middle school concept described by Alexander (1973), considered by many the father of the American middle school, called for an educational environment continuous in learning and designed to meet the elusive needs of the “in-between-agers” (p. 29). It takes an educator with a holistic view of these changes to understand and work with middle school students (Meyer, 2011).

In school-related matters, teachers are the most significant factor affecting student achievement (Daniels, 2011). Teachers yield considerable power and influence in the context of school (Ferlazzo, 2012). As instructors, teachers decide how to deliver the

curriculum. In addition, most students are with teachers in school about 7-8 hours per day, which equates to approximately 1,260 instructional hours per year (Hull, 2011). While school leaders often review assessment scores to determine teachers' effectiveness, there may be other measures to consider. For example, educators who choose to address circumstances occurring in the lives of students that may affect their learning are equally effective (Teachers Matter, 2012). Children preoccupied with family, friends, or other issues, are less likely to make learning a priority (Daniels, 2011). Teachers who take the time to notice and inquire when students seem forlorn, worried, or engage in behaviors that detract from learning, can actually have a positive effect, especially on middle level learners (Duncan, 2011). Students who enter education as second language learners, especially in middle school, bring additional issues to the environment.

English language learners (ELLs) may initially appear to be at a disadvantage trying to learn new techniques to communicate with peers and teachers. The number of ELLs entering public schools has increased significantly over the years. In the 2013-2014 school year, an estimated 4.5 million ELLs or 9.3 percent registered in U.S. public schools, with a majority entering urban areas (English Language Learners in Public Schools, 2016). While schooling may present a challenge, in the U.S. 63% of limited English proficient students graduated, and in Texas, the total percentage of graduates was 72% (Common Core of Data [CCD], 2013). ELL students often come from homes in which multiple languages may be spoken, and learning English can be an asset both to the student and the national global market (For Each and Every Child, 2013).

Determining how students, who are second language learners, survive middle school and

manage to graduate may be instrumental in working with other students with disadvantages, such as special needs learners.

Equity for individuals with disabilities is a concern especially for children in schools. Disabilities include physical, emotional, cognitive, and any combination of the aforementioned. To address meeting the varied needs of individuals with disabilities, Section 504, the Rehabilitation Act of 1973 and the Education for All Handicapped Children Act of 1975 were enacted (U.S. Department of Education, 2016). Any entity granted federal funds could not discriminate against any individual with disabilities (Aron & Loprest, 2012). Children with disabilities receive educational protections under the Individuals with Disabilities Education Act (IDEA) of 1975 (U.S. Department of Education, 2016). Under this legislation, all children, despite the disability, are eligible to receive a free and appropriate education (Benedict, Thomas, Kimerling, & Leko, 2013).

Providing an equitable education for children with disabilities has evolved over time. The instructional impetus has shifted from functionally based to more academically based learning (Spooner & Browder, 2014). Earlier programs focused on shaping behaviors based on responses; next, programs shifted their focus to functional instruction to promote independent living; and later school programs shifted to academic-based learning for all levels (Spooner & Browder, 2014). Reauthorization of IDEA occurred in 2004 with additional requirements such as highly qualified teachers, performance goals and indicators, criteria required by reporting organizations, development of alternate assessment, greater access to the general education curriculum, and special rules for eligibility determination (U.S. Department of Education, 2016). Schools receive additional federal dollars to ensure adequate funding and compliance. These changes

have made a positive difference evidenced by 63% of students with disabilities graduating across the U.S., with an even higher graduating total in Texas at 78% (Common Core of Data [CCD], 2013). Children with disabilities have processes in place to address behaviors that would ordinarily exclude them from education. Not all students have this option when it comes to accommodating different behaviors.

The expectations for behaviors in schools are that all students have access to a quality-learning environment without interruptions. Exclusion from school and missed learning opportunities can be the consequence for students who are unable or unwilling to comply. One reason for these outcomes can be the discipline policies of zero tolerance in place in some schools and districts (Zeide, 2016). Data collected by the Office of Civil Rights identified disparities in school discipline patterns among ethnic groups (Civil Right Data Collection [CRDC], 2014). Findings revealed that suspensions for African American students are three times the rate of Caucasian students. This research led to an outcry for school systems to reevaluate their discipline procedures to ensure equity for all children. Changes such as this afforded more students the opportunity to remain in school, pursue an education, and potentially graduate.

Need for the Study

The existence of inequities in education is a documented fact; however, not all students succumb to the same fate even when exposed to similar environments (Balfanz, 2009; Collopy, Bowman, & Taylor, 2012; Klees & Qargha, 2014). Research shows school factors can make a difference in early identification of students with academic challenges coupled with early intervention. Practices including alignment of curriculum, federal civil rights legislation, monitoring attendance, academic progress, and reviewing discipline

procedures have resulted in improved educational opportunities for diverse learners (Balfanz, 2009; For Each and Every Child, 2013). Attention to these processes is only part of the issue when focusing on secondary education, due to the psychosocial variables unique to each student in the environment.

Declines in middle school academic performance, which is a concern for school leaders, make the secondary school setting of this study important (Ryan, Shim, & Makara, 2013). The manner in which educators interact with students to help them connect and remain in school is crucial. Educational inequities including lack of teacher experience, teacher diversity, poverty, inadequate resources, and other elements, foster disadvantages for many diverse students; however, some of the learners in this group, though disadvantaged, manage to achieve success.

Inequities affect students' well-being and performance (Hochschild, 2003; Logan, Minca, & Sinem, 2012; Pickett, 2016; Slavin, 1998). Children from poverty enter the educational arena academically lagging their peers (Duncan & Magnuson, 2013). This deficit coupled with the psychosocial issues in the secondary school setting has the potential to adversely affect school performance and ultimately graduation. How do these diverse students dealing with multiple disadvantages continue trying in school? Are there hidden home or school factors that may help more students reach graduation? This study will seek to determine which positive factors are common among adolescents from poverty who persevere through various social inequities both in school and at home and manage to graduate.

Purpose of the Study

The aim of this research is to focus on students, living in poverty, identified for poor educational outcomes yet complete high school and graduate. Declines in academic performance between elementary and secondary schools are noted in the literature; however, facets associated with secondary school students living in poverty and graduating high school is limited (Lessard, Butler-Kisber, Fortin, & Marcotte, 2014; Lessard, Fortin, Marcotte, Potvin & Royer, 2009, Williams, 2015). The purpose of this study is to use education data to examine home, school, teacher, and student factors that may contribute to understanding how some students, living in poverty, complete high school in the face of overwhelming social inequities. These findings will provide information for school and community leaders battling the decline in middle school performance, as well as insight on intrinsic or extrinsic motivators used by some students of poverty to help them make it to graduation.

Middle school is the ideal context due to the concerns regarding academic decline; however, the dataset for this study will include incoming ninth grade students who just completed middle school (Ryan, Shim, & Makara, 2013). Students in the middle grades undergo significant changes in various dimensions almost simultaneously. Physical changes are evident in many students; however, psychological development is not as visible (Vawter, 2010). In middle and high school, students are apt to have several teachers in overcrowded classes, which decrease the likelihood of developing quality teacher-student relationships (Kennedy-Lewis, 2013). Students in adolescence are striving to assert their independence and identity while seeking approval of their peers (Caskey & Anfara, 2014). The secondary setting deserves further examination.

Research Questions

Archival data for this study originated from the NCES-High School Longitudinal Study of 2009 (HSL:09). The research questions guiding this approach are:

RQ1. What family-related factors help incoming ninth grade students identified as living in poverty remain in school and graduate high school?

RQ2. What school-related factors help incoming ninth grade students identified as living in poverty remain in school and graduate high school?

RQ3. What teacher-related factors help incoming ninth grade students identified as living in poverty remain in school and graduate high school?

RQ4. What factors associated with students' subjective wellbeing help incoming ninth grade students identified as living in poverty remain in school and graduate high school?

Definitions

Character strengths. Positive personality traits that when exhibited can lead to a productive life outcome (Shoshani & Sloan, 2012).

Diversity. The demographic composition of students and staff, including race/ethnicity and culture reported to local and state education agencies. The ethnic groups included in the study will include African American, Hispanic, and Caucasian.

Ethnicity. Demographic information reported by individuals identifying the race and culture of children and adults in the school system. The school system collects the information so it is available for statistical purposes for various agencies.

Family variables. Factors, events, or situations that may occur in the home or within the family structure that influence students positively or negatively. This includes parents' marital status, education level, employment, and household income.

General Educational Development (GED). Test administered to students who are no longer attending high school and if passed, equates with high school level proficiency.

High school completion. Students who have learned prerequisite skills from elementary, middle school, and are entering a setting focused on academic preparation for the adult world, which culminates with completion of high school and receiving a high school diploma, or GED.

Inequity. Having processes in place to ensure all individuals receive what they need to participate at the same level as non-disadvantaged individuals. This term involves distribution based on needs rather than the same amount or quantity for everyone.

Middle school. The grades ranging, usually, between six and eight which are housed on the same campus, or may be combined with either elementary or secondary school depending on the configuration.

Mobility. Students who change schools due to moves not associated with grade completion for the particular campus level.

Poverty. Living in conditions with extremely limited or nonexistent necessities to sustain life. This situation includes limited financial and social resources often relying on support from governmental or social agencies to meet needs like food, housing, and health care.

Socioeconomic status (SES). Measurement of various factors comparing and ranking members in society including family's income, education, and employment.

Subjective Well-being. An adolescents' satisfaction with their quality of life (Diener, 2000).

Teachers. Educators responsible for providing quality education to K-12 students and helping them become productive members of society and global citizens.

CHAPTER II: REVIEW OF THE LITERATURE

Adolescents entering high school are about to embark on a journey in which their decisions and actions can have long reaching consequences. The psychosocial changes that started in middle school continue and intermingle with academic demands that count toward achieving a high school diploma. In addition to these realities, some students come from poverty because of circumstances most likely beyond their control. Some adolescents burdened with counterproductive life conditions may become discouraged and believe that graduation is unimportant or unachievable. However, there are other adolescents, in similar situations, who use various means at their disposal and manage to graduate. While those in the latter group deserve accolades for their efforts, one must recognize, explore, and eliminate societal inequities that perpetuate differences in status so more young people can graduate (Ritter, 2015).

“Inequality” and “inequity” are two words often used interchangeably: both deal with the concept of differences between individuals or groups. The two terms, however, bring about different outcomes in practice (Bronfenbrenner, 1973; Klein & Huang, 2010). Equality refers to everyone receiving the same portion or an equal share, whereas equity relates to everyone receiving what they need to allow full participation without limitations or disadvantages. The former, inequality, which focuses on equal distribution or sameness, can be objective and easier to quantify. The latter, inequity, often includes a needs assessment component and opens the door to subjectivity for determination of who receives benefits. For this study, the focus will be on social inequities, which influence schools by allowing disparity in resources and making graduation a challenge for students who are victims of poverty. Variables examined include factors associated with home,

school, teachers, and youth's subjective wellbeing as related to adolescents living in poverty and completing high school. Students living in poverty have disadvantages in their environment that can distract from focusing on education. Households with frequent relocations due to inability to pay rent, low paying jobs or unemployment, and schools with inadequate resources create inequities for adolescents that can impede a quality education. This review will discuss inequities in society and schools that adolescents of poverty must overcome to complete high school.

Understanding Social Justice in Schools

The fight for equitable environments for all people is a part of social justice. Advocates for social justice recognize the varied complexities and details needed to ensure all individuals have a fulfilled life. Social justice is a complex concept with varying interrelated factors (North, 2008). North offered a pictorial model (see Figure 1), which addresses educational social justice as well as the interrelationship or overlap of the three concepts: Recognition and redistribution, macro- and micro-level processes, and knowledge and action.

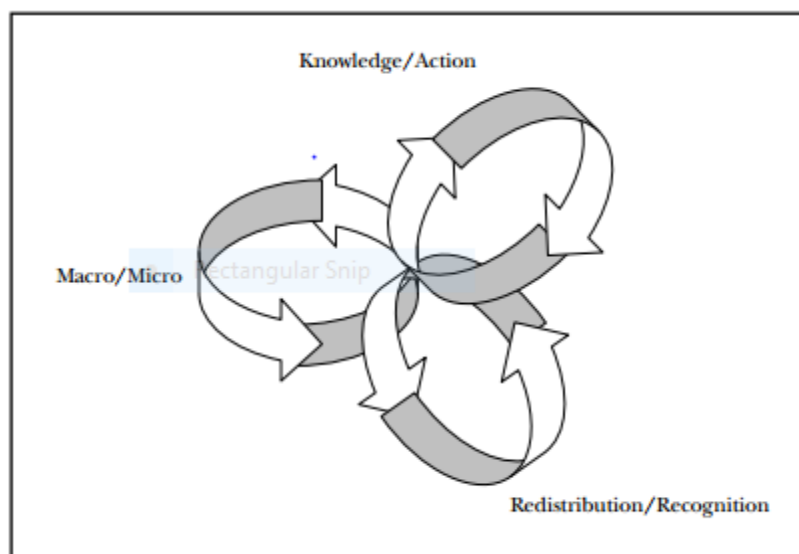


Figure 1. Pictorial model of Social Justice in Education. North (2008) used interlocking rings to visually represent social justice in education.

Redistribution and recognition. North (2008) credited the works of Lynch and Baker (2005) and Kumashiro (2002) in describing various approaches to encapsulating social justice; however, she describes a cyclic model applicable in the educational context. Redistribution encompasses economic, social, and cultural arenas. In each domain, the premise is sharing the bounties so everyone has something. The economic realm includes sharing of assets for dwellings and community services; in society, shifting resources for equal educational services and accommodations; and in culture, establishing processes allowing expression of beliefs and principles of all groups, not just the dominant group.

Two examples of redistribution in action include taxation and disaster relief organizations. In each example, pooled resources gathered from the masses aid those in need. Homeowners pay local property taxes that help fund school districts (Public Education Funding in Texas, 2016). The school funding system in Texas, outlined in Chapter 41 Wealth Equalization Code, requires that property rich districts share finances with property poor districts (TEA, 2016). The number of entities in need often far exceeds the available resources, which leaves some without enough financing. North (2008) added that if redistribution is functioning as intended, elimination of oppression and marginalization is possible.

Recognition includes the ability to advocate for the members' well-being in any setting (Speight & Vera, 2004). This reflects individual demands for honor and fair and equal treatment (North, 2008). When the privileged make statements regarding "...hard-

working individuals will achieve success in life...” (p. 1186), a plausible conclusion is that the less successful individual did not put forth effort. Educators who view underprivileged students in this manner operate from a deficit perspective. Deficit views can perpetuate stereotypes such as viewing students who do not perform well on assessments devised by the dominant culture, as being intellectually inferior and consequently over represented in special education and remedial classes. Students need to receive equal access to a quality education that values their individualities, cultures, and differences (Kelly, 2011).

Macro- and micro-level processes. Distribution of resources both in society and education occur primarily on two levels: The macro level consists of global and organizational levels, and the micro level refers to individual interactions (Speight & Vera, 2004). Macro level processes include educational policies reportedly made in the best interest of all children. To illustrate, some students have limited access to advanced level courses, a lack of experienced teachers, and inadequate school resources, all within the same school district due to differential funding (Civil Rights Data Collection [CRDC], 2014). One school in an affluent area may have nice looking facilities and ample resources, while another school in a low SES area may have dilapidated buildings with graffiti and not enough materials for every student. According to the NCES 2011 Fiscal Report, within the state of Texas, disparity exists between school districts and expenditure per pupil:

- Northside ISD has an enrollment of 95,851 with a current expenditure per pupil of \$8,067;

- Austin ISD has an enrollment of 85,697 with a current expenditure per pupil of \$9,432;
- Dallas ISD has an enrollment of 157,162 with a current expenditure per pupil of \$9,561.

School leaders responsible for establishing and enacting policies and procedures typically make decisions that work in favor of the dominant culture (North, 2008). On a large scale like school funding, inequity is evident, but micro level processes can be more obscure, subtle, and individualized. For example, school hiring decisions that are racially or gender biased may be difficult to prove as these practices are usually at the discretion of the employer. Potential or actual employees who wish to challenge a hiring outcome may need evidence to support their assertion, which can be difficult to obtain. Another example occurs inside the classrooms. Some schools expect teachers to meet and plan quality instruction with their colleagues. However, the implemented curriculum is at the discretion of individual teachers and more difficult to oversee. Teachers are responsible for many instructional decisions with little need to justify their selections or activities.

Knowledge and action. In the school system, educators place great emphasis on the intellectual development of students as measured by academic achievement (Lynch & Baker, 2005). Learning should be purposeful, relevant for the students, and transferrable outside the school setting. The premise of knowledge and action in the social justice arena is that learning should culminate in measures to address inequities discovered (North, 2008). Knowledge, coupled with action can be instrumental in addressing oppression and promote steps toward change (North, 2008).

Teachers' responsibilities include providing learning opportunities for all students. However, studying facts to accumulate knowledge is purposeless without a well-rounded perspective for the learning experience. For instance, one high school Texas Essential Knowledge and Skills (TEKS) objective requires students to understand historical points beginning in 1877 to the present (Texas Education Agency [TEA], 2016). The relevance of this new learning to oppressed or marginalized students will depend on the teachers' perspectives and background knowledge. Students should experience knowledge gained through the viewpoint of other cultures to challenge the status quo of societal practices (North, 2008).

An example of knowledge and action is an excerpt about slavery released from Texas Public School social studies textbooks, which paints a casual, almost harmonious relationship between slaves and masters (Finger, 2015). Publishers' information, printed as facts, mentioned slaves using their prior experiences to help settle the land, which draws attention to a positive aspect of slavery. In reality, this perspective draws attention from the lived experiences of the people of color. Therefore, educators' knowledge on these issues is imperative and gathering this information can lead to corrective action.

Social justice education expectations exceed the notion of teaching students about disparities in history toward various marginalized people. Underrepresented groups, advocating for recognition, serve as an impetus for educators to reexamine information taught to students. Educational resources that fairly depict the various cultural differences in society may not be available in all schools. High poverty schools lack adequate resources and properly trained teachers (NCES, 2010).

Poverty Related Issues in Schools

Poverty across the nation is 14.8%, which equates with 46.7 million people (DeNavas-Walt & Proctor, 2014). In 2015, for a family of three, the estimated threshold to fall under the poverty line was \$15,397, whereas, a family of eight was \$41,017. In 2014, 13% of men and 16% of women lived in poverty (Poverty USA, 2016). The poverty rate for senior citizens in 2014 was 14% after adjustments for the Supplemental Poverty Measure, which takes into account the various government programs assisting low-income families and individuals. African Americans comprise the highest poverty rate at 26%, Hispanics at 24%, Asians at 12%, and Caucasians at 10% (U.S. Census, 2014). The net worth for working-class families' income is 70 times less than the net worth of upper-class families (Drake, 2013). Families in poverty also include children, with 15 million under the age of 18 (DeNavas-Walt & Proctor, 2015).

Families with limited funds focus on essentials like food and shelter, which may supersede academics. Gorski (2008) identified perpetuated myths about poor people and education spread by ignorance. One myth that connects directly to schools is that poor parents do not value formal learning and therefore do not participate in their children's education. Work schedules, jobs without privileges of leaving for school events, transportation, and childcare were among reported obstacles that interfered with parental involvement in economically challenged communities.

Poverty significantly challenges children in matters of school readiness (Garcia & Weiss, 2015). Learning of critical skills for long-term survival begins at birth. Adequate prenatal care, nutrition, and lifestyle choices for some indigent mothers-to-be results in babies born with various conditions that may impede their development (French, Lewis,

& Neville, 2012). Researchers Garcia and Weiss (2015) examined pre-academic and social skills of kindergarten students to identify learning gaps so decision makers would have information about potential anomalies and can determine how to proceed. Students from impoverished environments have the proclivity to start school lagging academically behind their peers and some fail to narrow the gap as they matriculate through school. Lack of on-grade level performance and falling behind are reasons cited by some students who dropped out of school (Why Students Drop Out, 2016).

Researchers are seeking definitive findings to pinpoint what factors detract less-privileged students from the path of graduation as well as how schools, families and communities can work together to address the issues (Balfanz et al., 2014; Hauser & Koenig, 2011). In addition, scholars are examining what motivates adolescents to persevere, despite societal challenges, to graduate (Wilson, 2015). Several school districts in Oakland, California are working to identify an accountability system to help assess students' school performance, and key points for consideration in the transition from middle to high school.

Equity in education is an ongoing concern for people committed to providing quality-learning opportunities for all students (Morris, Selmer, Martucci, White, & Goodykoontz, 2011). Students from poverty are more likely to attend underfunded schools (Jensen, 2009). Studies indicate that the gap in students' academic performance is more about the lack of opportunity, rather than their ability, that contributes to underachievement (Collopy et al., 2012; DeMatthews & Mawhinney, 2014; Milner, 2012). Collopy, Bowman, and Taylor (2012) noted that addressing the lack of

opportunities will influence students' performance, and that educators are in the position to directly acknowledge and bring attention to any deficits.

The Office of Civil Rights (OCR) (2014) is responsible for overseeing compliance with civil rights legislation by organizations that receive federal funds. Historically, certain groups, like minorities and women, received unfair treatment and lacked equal protection under the law (Lincoln, 1863, Heyman, 1991). Adherence to civil rights legislation includes avoiding discrimination based on race, color, national origin, gender, religion, disability, or age (OCR, 2014). Unequal treatment causing some people to receive more and others less can lead to discrepancies in job opportunities and earned income. Families with less resources have the propensity for impoverishment. This agency also collects data, biennially (every other school year), on education and civil rights matters relevant to schools and produces a comprehensive report for stakeholders (Civil Rights Data Collection, 2014). The 2013-2014 Civil Rights Data Collection (CRDC) revealed suspension rates for African American students were three times the rates of Caucasians (CRDC, 2014). While the former group makes up 16% of total school enrollment, the infractions leading to suspensions account for 27%.

Another area reflecting inequities is college and career readiness. High poverty schools often have limited availability of advanced level courses for their students (Rich, 2014)). About one-fourth of schools with the largest number of African Americans and Hispanic students do not offer Algebra II; in addition, chemistry is not available at one-third of those schools (CRDC, 2014). Data from the CRDC 2014 report indicated the number of students enrolled in Advanced Placement (AP) courses is extremely low:

- Of the 27% of African American and Hispanic students enrolled in AP courses, only 18% can qualify with a score of three or higher on the AP exams.
- English Language Learners, which account for 5% of high school enrollment, account for only 2% of students taking at least one AP course. Of the 2% taking at least one AP course, only 1% can achieve a qualifying score of three or higher on the AP exam.
- Students with disabilities, under the umbrella of Special Education, make up 12% of high school enrollment; however, only 2% were eligible to take AP courses of which only 1% earns a three or higher on the AP exam.

Families of poverty often lack the expertise, not care, to navigate the education system and learn about academic opportunities that will enhance their child's future (Gorski, 2008). Necessities like food, shelter, and employment demands take precedence and preclude parents exploring advanced academic courses and questioning educational decisions for children. This study will explore other family and home dynamics associated with adolescents from poverty who complete high school.

Family related factors

Home and community environments are important factors in the development of children (Shonoff & Phillips, 2000). The opportunity to develop and reach full potential heightens when children grow up in an environment inclusive of safety and positive relationships with caring adults (Sandstrom & Huerta, 2013). Quality home environments that support the well-being of developing children include parent(s) who spend time

interacting and communicating with them about life happenings. Does this need change as children develop into adolescents? Even though some adolescents experience developmental changes that are challenging, research reveals that family and home relationships are equally important (Cavendish, Montague, Enders, & Dietz, 2014).

Mobility. Family relocation can be disruptive to the educational stability of many young people (Herbers, Reynolds, & Chen, 2013). As children enter school, they learn routines and procedures, make friends, and are acquainted with adults outside their families. Family moves, whether during or at the end of the school year, result in disruptions in academics and breaks in social relationships (Herbers et al., 2013). The reasons behind family relocations vary and can have an effect on the children. Voigt, Shinn, and Nation (2012) indicated when families move due to promotions or financial windfalls, children are likely to reap positive advantages; however, when families have to move due to economic downturns, disadvantages are more likely. Two studies examined the effects of mobility on students' academic performance.

The setting for the first study was a large urban district in Tennessee focusing on middle school students (Voigt et al., 2012). A majority of the campuses selected had enrollment counts of less than 750 students, high poverty, and reported elevated incidents of bullying behaviors. Data were gathered and analyzed, including state standardized assessment scores for both reading and math, socioeconomic status, and mobility, using latent growth-curve modeling (LGM) to determine long term effects of mobility and academic performance (Voigt et al., 2012). Results reflected that children of poverty were inclined to experience higher mobility compared with peers of economic means. The outcomes of the study revealed that increased mobility negatively affect both math

and reading skills and in addition have negative long term effects on reading abilities (Voigt et al., 2012).

In the second study, data from the National Longitudinal Study of Adolescent Health examined mobility and predictions of high school dropouts (Metzger, Fowler, Anderson, & Lindsay, 2015). The researchers examined mobility and predictions of high school dropouts. Waves 1, 2, and 4 of the longitudinal study provided data on high school graduation, neighborhood environmental factors, peer behaviors, and school characteristics (Metzger et al., 2015). Analysis included two phases; one was a set of logistic models used to predict the odds of moving, and the second phase used logistic regression models to determine high school graduation based on mobility (Metzger et al., 2015). Results revealed increases in mobility, even one move per year, decreased chances of achieving a high school diploma by 50% (Metzger et al., 2015).

Family mobility, while disruptive for school age children, is a complex process reflecting societal, systemic issues (Herbers et al., 2013). Families who move because of job advancements are subject to potentially better living conditions. Students of poverty, who endure frequent moves, often do so out of necessity (Voight et al., 2012). Is it possible that the lag in academic performance by students of poverty is attributable to fragmented learning experiences associated with mobility?

Family configuration. Family dynamics comprise a plethora of interacting factors, which affect each member differently, especially adolescents struggling with psychosocial development. Changes in societal perspectives on what constitutes a family unit may cause discussion as to whether family configurations make a difference in the well-being of adolescents.

For instance, Leme, Del Prette, and Coimbra (2015) conducted a correlation design study to ascertain if family configuration mattered. Participants in the study included 454 adolescents, between 13 and 17, who received questionnaires addressing social skills, social support, and psychological well-being scales in the context of their family units. Students came from three types of families: nuclear (204 students), separated (142 students), and blended (130 students). The authors defined nuclear families as biological mother and father of the respondent; separated meant the biological mother did not live with the biological father or other individuals for at least two years; and blended in which the biological mother lived with a non-biological father for at least two years.

One instrument utilized to gather data was the Social Skills Inventory for Adolescents, which consisted of 38 items divided into six domains: Empathy, self-control, civility, assertiveness, affective approach, and social resourceness (Leme et al., 2015). The dependent variable was the psychological well-being of the adolescent and the independent variables included the six domains from the Social Skills Inventory for Adolescents, and the social support systems information from family, friends, and teachers (Leme et al., 2015). Data analysis performed, which included correlation and stepwise multiple regression, indicated, in this setting, family configuration was not a factor in the psychological well-being of the teenagers (Leme et al., 2015).

Parent's marital status. One component of family structure is the relationship of the parents of the adolescent. Does it make a difference if the parents are married? Parke (2003) notes that family configurations have changed over the years. Attributable factors mentioned were babies born to unmarried parents and elevating divorce rates.

Historically, married parents were the norm in society (Parke, 2003). However, changes in societal perspectives on the value of marriage and child rearing take center stage.

The Institute for Family Studies, located in Charlottesville, Virginia, completed a study using archival data from entities like the U.S. Bureau of the Census American Community Survey, National Center for Education Statistics, and Florida Department of Education Statistics, to report on the relationship between married couples, school discipline, and high school graduation (Wilcox & Zill, 2016), . The researchers performed a multivariate regression analysis on the five following demographics in several counties in Florida:

- Percentage of married families
- family income
- Average adult education level
- percentage of African Americans students
- percentage of Hispanic students

The multiple correlation coefficient was $R=.76$ which means a strong linear correlation exist between the variables. Wilcox and Zill (2016) posits concerning adolescents' high school graduation, family structure rates second to parents' education level and ahead of race, ethnicity, and income as predictors.

Disciplinary problems were another area examined in the study. Analysis of family demographics, school discipline, inclusive of both in and out of school suspensions, and high school graduation rates revealed that counties with the highest, 41.7 per 100 pupils, and lowest, 3.2 per 100 pupils, suspension rates had the lowest high school graduation rates (Wilcox & Zill, 2016). The prevailing finding was counties with

the highest married population, among other variables including college educated, highest income, and percentage of Hispanic children, also reported fewer suspensions related to serious offenses. Regression analysis of the five family demographics, inclusive of African American students, revealed that three factors, married families, college degreed adults, and Hispanic students, were associated with lower suspension rates (Wilcox & Zill, 2016).

All families serve as an institution in which each member determines a manner to cope and survive (McGregor, 2015). Middle school children who remain in a stable family group have the potential for better academics and behaviors (Cavendish et al., 2014). Children with traditional family structures have some form of support to explain their determination. What happens to children who do not have this option?

Caring adult relationship. An African proverb states raising a child takes the involvement of all stakeholders (African Proverb of the Month, 1998). Children fare better in life when family, neighbors, and the community work together to ensure a proper, nurturing environment (Shonkoff & Phillips, 2000). There are real world examples when catastrophes befall families or neighbors, and the entire community, both local and distant, came to their aid. Examples like fires, floods, and any type of major loss, moves other uninvolved individuals to reach out and help. When disasters strike, emotional and physical support is not dependent of whether people have resources. Children, who grow up knowing their neighbors and are involved in the community, observe adult discourse in action, which can serve as a model.

Communities also offer students attention from adults outside the family. Some of these adults may have enriching life experiences or careers to share, which may not be

present in the adolescents' immediate family circle. Other community offerings, which may not be available in some diverse areas, include libraries, parks, and neighborhood activities (Shonkoff & Phillips, 2000). Even when those resources are not present, residents of more heterogeneous neighborhoods learn to be creative and improvise. These skill sets can also be examples of problem solving and ingenuity, which serve as a model to impressive young minds. Information and examples shared from both home and community can be encouraging and help instill important life values that will have long-term benefits for adolescents when the school system is not enough.

Parents' education level. Information collected by Child Trends Databank (2015) reveals that parental education level is a contributor to students' academic success. Children who grow up in an environment where adults strive for and attain higher educational levels have positive role models. The education level of the mother, who is often the caregiver in the home, is important to their children's academic achievements in school (Lacour & Tissington, 2011). While families from poverty struggle with reduced or lack of sufficient income, the mother's education plays a significant factor in educational outcomes of children. Parents who achieve higher levels of education most likely expect their children to emulate their example. In addition, parents more formally educated tend to seek out better schools, participate in school events, and advocate for their children to receive the best possible services (Eaglite, 2016).

Kirk, Lewis-Moss, Nilsen, and Colvin (2011) studied the effect of parents' educational expectation on adolescences' educational aspirations. The qualitative study, conducted in Kansas, involved participants from a federally funded program designed to reach families from the lower socioeconomic realm. Participants included 171 parents

and their children, ranging in age from 11 to 19. The study consisted primarily of two surveys; the one for parents consisted of 45 questions focusing on beliefs about college attendance, expectations for children's education, personal educational attainment and family members' college attendance; the student survey focused on personal goals about college, type of student they are, and level of parent support. The results reveal that predictions of students' aspiration for advanced education can be associated with parents' expectations (Kirk et al., 2015). Another finding of the study was that the parents' aspiration for their children did not change based on their education level; however, one challenge that separated the two groups was familiarity with navigating entry into college and paying for expenses (Kirk et al., 2015).

Acharya and Joshi (2009) studied the influence of mothers' and fathers' educational level on their adolescents' motivation to achieve in four areas, academics, general interest, dramatics, and sports. Participants in the study included two hundred 16-19 year olds, grouped into four categories based on their parents' education level. The eligible graduation levels for parents included post graduation, graduation, intermediate, and high school. Deo-Mohan instrument, which included 50 survey questions, measured students' achievement motivation. The results concluded that the education level of the parents' is an early indicator of students' future success (Acharya & Joshi, 2009). Highly educated parents should be better equipped to provide exposure to pre-literacy and numeracy skills necessary for educational success.

Parents' employment status. Working parents in the household have the potential to both serve as a positive role model and provide additional benefits for the members (Heinrich, 2014). Being able to afford the essentials of a stable home

environment helps ensure the well-being of children. The level of education attained by the parent highly affects their employability. Households where parents earned less than a high school diploma account for 82% of low-income families compared with 57% of households with a high school diploma (Douglas-Hall & Chau, 2007). Low-income jobs tend to have long hours, late evening and night shifts, and increased stress levels for workers (Heinrich, 2014). Literature exists that present differing perspectives on the benefits of mothers and fathers' working and unemployment's effects on children.

Lombardi and Cooley (2013) conducted a study of 538 mothers and children of low income. The research focused on the mother's employment and young children's overall development and well-being. In the developmental years, the mother's work can have an effect on the child, especially if long hours and high stress are factors (Heinrich, 2014). The study, conducted over a two-year period, consisted of three waves of interviews with the mothers or primary female caregiver and cognitive assessments of selected children, ages 24 to 54 months (Lombardi & Cooley, 2013). Compensated maternal participants also self-reported on their job characteristics, including hours worked, wages, and availability of health insurance. The results revealed four clusters regarding the mother's employment experiences

- unemployed women-mothers not working during the two years of the study;
- low quality, low participation-mothers who were stable in a low wage job without health benefits;
- moderate quality, unstable employment-mothers who had an average of three jobs, limited health insurance; and

- high quality, stable employment-mothers with higher wages and health insurance and worked one or two jobs during the time of the study.

Findings from the study revealed that the mothers in the study did not increase their wages or gain promotions over time (Lombardi & Cooley, 2013). Children of mothers in cluster four, higher wages and insurance benefits, had fewer negative social adjustments to school and reflected greater pre-academic skills (Lombardi & Cooley, 2013). According to this study, children whose mothers have higher quality jobs offering health insurance tend to fare better academically than their peers.

Another quantitative study by Rege, Telle, and Votruba (2011) focused on the effect of the father's unemployment on children's academic performance. The information for the study, gathered from Statistics Norway, was a longitudinal dataset dating back to 1992. The database included student and parent demographics and employment information. Research focused on the effects of plant closures in Norway for mothers and fathers on their children. The findings presented in the paper reflected that fathers' more than mothers' job loss adversely affects children's academic performance (Rege, Telle, & Votruba, 2011). Contributors to this outcome include mental distress and societal views on the role of the male in the home (Rege, Telle, & Votruba, 2011).

Unemployment negatively affects society and families (Khim, 2011). For unemployed adults, returning to work, coupled with low education levels, can be problematic. These losses of employment can adversely affect the children in the household (Irons, 2011). Families in poverty, who experience decreased finances due to job loss, also endure accompanying struggles for food, housing, and education (Irons, 2011).

Employed adolescents. Families in poverty lack financial resources and as a result, adolescents may decide or face the expectation of taking on employment to help. The effects of working have varied outcomes on adolescents (Mortimer, 2010). Some young adults feel a sense of responsibility and excel in their employment. For others, the added load presents a challenge and their academics suffer. The work environments and their effect on adolescents should also receive consideration for employment options.

A study conducted by the Urban Institute using archival data from 2008-2012 American Community Survey centered on students who exit school for employment to benefit their families (Scott, Zhang, & Koball, 2015). This group, termed “early high school leavers” and “working youths,” was markedly different from their peers. The data reflected a majority were older, Hispanic, and males (Scott, Zhang & Koball, 2015). The family contribution by the working youths can account for 20% or more of the annual household income (Scott, Zhang, & Koball, 2015). Some students in poverty are electing to drop out to help support their families over remaining in school. That group is not the focus of this research. Rather, the focus is on adolescents who remain in school despite facing similar challenges, yet they complete high school. Inequities in education are also stifling the growth potential of many minority students. Examination of issues related to ethnicity and poverty occur in the following section.

School Related Factors

Ethnicity and Poverty

African Americans and Hispanics experience a higher rate of unemployment than any other groups and poverty rates for African Americans and Hispanics are more than double the numbers for Asians and Caucasians; both statistics paint a bleak outlook for

minorities in society (Reidenbach & Weller, 2010). This same disparity exists in schools as evidenced by research that shows that 39% of African American and 32% of Hispanic children live in poverty compared with 13% for both Caucasian and Asian children (NCES, 2015). Students dealing with poverty focus less on academics, which affect their performance in school (Jensen, 2009). Since educational achievements equate with future successes, the process of poor school performance leading to poverty is cyclic in nature (Deitchman, 2015).

Education is a crucial component of building a successful future for any community (Harsh & Mallory, 2013). In a report by Stuart Kerachsky, Deputy Commissioner, students' performance in the country's highest poverty schools aligned with the education received in third world countries. In addition, African American and Hispanic students make up a majority of the population of high poverty schools at both the elementary and secondary levels (NCES, 2010).

The classification of a high poverty school depends on the number of students receiving free or reduced lunch; high poverty schools in the U.S. have 76-100 percent student participation in the National School Lunch Program (NCES, 2015). According to the federal poverty guidelines, to qualify for subsidized school meals the family's income must be at or below 130% for free lunch, or at or below 180% for reduced meals (Child Nutrition Programs: Income Eligibility Guidelines, 2016). Under the federal poverty guidelines, a family of four would have an annual income under \$24,300; therefore, this same family must earn less than \$31,525 annually to qualify for the school free lunch program.

Research reveals that children who grow up in poverty have many challenges to overcome (NCES, 2015). A lack of resources, instabilities, and insecurities can impede children of poverty's emotional and social development (Jensen, 2009). This and other factors contribute to outcomes of lower academic performance, consequences for behaviors exhibited by children of color that are viewed as unacceptable in the school setting, and decreased chances of completing high school. CRDC (2014) findings report that African American girls receive suspensions at a higher rate than most boys and girls of any other ethnicity. The report also shares that suspensions are two times higher for students with disabilities than those without. These decisions, which may or may not be justifiable based on actions, lead to exclusion from school and missed learning opportunities.

Studies have revealed a "...causal link between educational exclusion and criminalization of youth..." referred to as the school-to-prison pipeline (Wilson, 2014, p. 49). Similar to the education system, in which minorities make up a large percentage of students in high poverty schools, people of color make up a majority of prisoners. According to the Bureau of Justice Statistics (2015), 37% of African American males and 22% of Hispanic males were in custody. Prison demographic data revealed that 3% of African American men, 1% of Hispanic men, and 0.5% of Caucasian men were serving sentences of at least one year in prison (Prisoners in 2014, 2015). Mirror images of minority underperformance in schools and prison population composition identify an educational and societal problem of injustice.

Zero tolerance procedures enacted in some schools have a tendency to work against students of color with behaviors that are contradictory to the norms. Wilson

(2014) referred to zero tolerance as unequivocal discipline measures designed to eradicate behaviors deemed unacceptable by the organization. Once meant to allow law enforcement officers to remove undesirables from the community, zero tolerance evolved into administrators using varying behaviors to remove students from schools (Wilson, 2014). Suspensions resulted for behavioral offenses not considered mandatory for exclusion from school (CRDC, 2014).

The CRDC report (2014) finds that African American students receive suspensions at higher rates than other ethnic groups. Data supporting these findings from studies in three large cities, Portland, Oakland, and Chicago, also reflect significantly higher numbers of suspensions for students of color (Rudd, 2014). Rudd cited work by the American Liberties Union, Children's Defense Fund, and the U.S. Department of Justice supporting findings that educational policies like "zero tolerance" and stereotypical bias thinking by administrators attribute to the excessively high numbers. Implicit bias may result in educators having lower expectations of students of color, which may be a contributor to the disparities in discipline and education.

The premise of equality for all is the foundation of this nation; however, true equality is contingent upon various factors (Gaztambide-Fernandez & Howard, 2013). All individuals should have equal opportunity for a life with dignity and pursuit of well-being. Contrary to the statement of equality for all is the realization that access to finances and resources make this aspiration more of a reality for some than others. Economic privilege allows societal advantages for some members, which affords them a better way of life. These differences take on many facets and do not seem equitable to all involved (Speight & Vera, 2004). The possession of means is imbalanced as evidenced by

the fact that the median household income for African Americans is \$30,000 less than for Caucasians. Furthermore, more females than males live in poverty, and 40% of schools serving low-income students receive less district funding (Baker, 2012; U.S. Department of Education, 2016).

Determined adolescents, which are the focus of this study, endure many similar circumstances yet complete school. Exceptional is the word that describes these students because they seem to defy the statistical odds. When family members or friends fail to persevere, what drives them to continue? Could there be factors in the home, community, or school that serve as motivators when all else seems hopeless?

General Educational Development (GED)

General Educational Development (GED) is a series of academic tests managed by the American Council on Education and Pearson (About GED Testing Service, 2017). Some students and families, whether disheartened by the inequities in schools or other life events, leave education only to realize the societal limitations without a high school diploma. While obtaining a GED is not the preferred educational method for adolescents, Bowen and Nantz (2014) found that achieving a GED was of great value to those who were not able to continue their traditional education due to their life circumstances.

Bowen and Nantz (2014) investigated the life stories of seven low-income women living in an urban community pursuing a GED. Their interviews included questions on their experiences at the community center, motivation for seeking a GED, support systems, and serving as a role model to others. Themes that emerged from the study aligned with previous research focusing on the value, anticipated and actual, of the GED. In addition, economic and non-economic values to society warranted discussion. The

economic value afforded recipients the possibilities of better paying jobs associated with a high school degree. Non-economic values included a sense of pride for the accomplishment and optimism for the future. Each participant had his or her own perspectives on the value of achieving a GED. Findings from the study also addressed the issue that institutions of higher education should focus on the instruments used for GED to ensure students are prepared to enter colleges and universities and bridge any gaps in learning to help improve chances of future success (Bowen & Nantz, 2014).

Heckman, Humphries, LaFontaine, and Rodriguez (2017) examined a different outcome for GEDs. In the previous study, participants were older than high school age and did not have a high school diploma. What about examinee who were at or younger than high school age and wanting to take the GED? Other researchers considered a counterpoint that obtaining a GED may be a motivator for students to drop out of high school knowing they had the option of still obtaining high school credentials (Heckman et al., 2017). These researchers conducted three studies examining the GED program in relation to high school graduation rates.

The first study focused on the difference in passing standards across the country. In 1997, the GED passing rate was 40 with a mean of 45 across the tests, which allowed standardization. This change, which necessitated some states having to adjust their scoring process for compliance and alignment, set the stage for the study. The states that did not need to change their scores were the control group, while those making changes were the treatment group. The analysis examined GED testing and high school dropout rates. Results indicated that raising the passing scores to obtain a GED led to a decrease in dropout rates (Heckman et al., 2017).

High school authorization to take the GED served as the basis of the second study. This option targeted students at risk of dropping out of school and providing them a pathway for high school completion. For some students, this may seem like an easy option to getting a high school diploma without having to remain in school. One variation was student qualifiers for being at risk, which was state specific (Heckman et al., 2017). Common Core data identified students who used the GED as opposed to remaining in school and graduating. The student group consisted of three cohorts by grades, eighth, ninth, and tenth. Calculations to determine the GED graduates included the total number of diplomas issued divided by the students enrolled in school four years earlier. Findings in the second study revealed a 4% decrease in high school completion rates in Oregon after implementation of the high school authorization program for GEDs (Heckman et al., 2017).

The GED's introduction in California was the impetus for the third study. According to the 1974 education code in California, the GED would equate with a high school diploma for state and local government agencies. Measurement of the effects of introducing the GED included high school graduation rates which compared California and all other states across a six-year span, three years before implementation in 1974 and three years after (Heckman et al., 2017). The results reflected that California, which once led the nation in high school completions, experienced a 3% decrease in graduation rates after initiation of the GED program (Heckman et al., 2017).

The GED is beneficial for post high school age individuals who need a second chance at getting a high school diploma when attending high school is no longer an option (Bowen & Nantz, 2014). Students who fail to complete high school are highly

likely to drop out and then find employment elusive (McDaniel & Kuehn, 2013).

Possibly the problem starts well before graduation. Students who grow up in poverty are disadvantaged before they start school (Garcia & Weiss, 2015). Once they enter school, the condition of the schools, disposition of school leaders, and the skill sets of the teachers may have an impact on their performance.

Middle School Setting

Students in the middle school setting face a multitude of challenges to achieve any measure of success. Elementary students have one teacher most of the day and the same classmates. For students from unstable homes, according to Khan (2012), this security, familiarity, and having a teacher who knows and cares, can help them flourish. If students struggle in elementary school, the chances of them adjusting to and improving in middle school diminish. The number of teachers and classmates increase in the secondary school. Attending school daily, when opportunities for success decrease, becomes a challenge and results in more absences (Khan, 2012). Even though more students begin to fall behind academically and socially, others manage to forge ahead and accomplish success in the turbulent middle school environment.

Middle school is a setting designed to meet the varied needs of this age group, usually inclusive of grades six through eight. The concept of middle school emerged in 1973 and had the intent of a campus tailored to meet the needs of the group called “in-between-ager” (Alexander, 1973, p. 29). Alexander, credited with advocating for changing junior high to a middle school model, stressed that junior high school, as currently designed, failed to meet the needs of adolescents in the 11-14 age range. Meyer (2011) agreed that middle schools needed grade reconfiguration, so that students received

proper attention to help curb the perception that “...behaviors and learning suffer...” in this setting (p. 42). The intent was for more focus on students’ interest inventories and less emphasis on grades (Pace, 1996).

Yecke (2006) agreed that schools using the K-8 model for middle school had better outcomes. A mixed methods study by Kim, Schwartz, Capella, and Seidman (2014) examined grade span configuration. The study included academic data from a longitudinal study and qualitative sources including interviews with parents, educators, and students. The student sample was predominately Caucasian (62%) and closely equal in gender representation. Educator information only included level of education and years of experience. The findings from this study revealed the K-8 configuration was supportive of the needs of students and represented a more positive school climate. The researchers concluded that grade configuration alone is insufficient to address the poor academic performance; additional structures to support the varied needs of middle level learners was lacking.

Gibson (2014) compared the middle school setting to the middle child in a family. The first-born, similar to high school students, receives attention because he or she is making landmark accomplishments and the family applauds each event. He or she will be venturing into the real world to make a life for him or herself. The youngest child, analogous to elementary school, receives similar attention since he or she is the last one in the family growing up, traversing through milestones, and represents the parents’ last connection with youth (Meyer, 2011). Middle children’s accomplishments can receive little attention from parents leading to this group feelings ignored or their efforts are

unimportant, which can be similar to middle school. These feelings can lead to unproductive behaviors in the context of school.

Middle school students vacillate between being compliant children and asserting their emerging independence as teenagers (Caskey & Anfara, 2014). The psychosocial development of adolescents includes a focus on their peers and fitting in with others (Cushman & Rogers, 2008). Middle school is also a time when students shy away from adult approval even to the point of challenging authority (Caskey & Anfara, 2014). Students in this age group may take on the appearance of an adult and may use the verbiage of adults, yet do not fully understand the long-range implications of their actions, as their brains are still developing (Mills, Lalonde, Clasen, Giedd, & Blakemore, 2014).

Students who may have experienced some misbehavior in elementary school are more likely to find the number and severity of consequences for their actions increase in middle school. This finding is especially true for African American students suspended at three times the rate of Caucasian students (CRDC, 2014). Kennedy-Lewis (2013) based qualitative research on the fit theory, focuses on alignment between the needs of the student and structures in place in the middle school setting. The participants included 11 African American students, four boys and seven girls, at Peninsula South Middle School, which is predominately African American (60%) and over half (55%) qualify for free or reduced meals. The researcher conducted four semi-structured interviews lasting about 40-60 minutes. During this time, students were able to share, from their perspectives, the reasons behind increases in discipline referrals. Application of the fit theory postulated that the students' developmental needs were in contrast to routines and structures in place

in the middle school. As a result, participants experienced frequent exclusion from learning opportunities in the classrooms through in-school or out-of-school suspensions. From the students' perspectives, teacher behaviors and actions, uninteresting instruction, poor teacher-student relationships, and negative peer interactions, interfered with their success in school.

Behavioral developments of adolescents involve multiple identities, including race, gender, sexuality, and factors like circumstances in the family and community, as well as the interrelation of each entity (Caskey & Anfara, 2014). Students who belong to historically and currently marginalized groups, such as children of color and second language learners, are likely to have experienced reduced academic success in schools as well as a lack of positive teacher relationships resulting in disconnection from the educational environment (Griner & Stewart, 2012). Students who disconnect from school lose interest, make little effort to learn, and can easily become drop out statistics (Baker, 2012). Educators are in the position to reach out, connect, and make a difference with these marginalized students before they exit the education system (Dover, 2009). Helping students develop resilience in facing school hardships requires a relationship with a caring adult (Walsh, 2015).

A qualitative study by Flynn (2012) of eighth grade students discussing racism with their teacher found that they *could* and *wanted* to talk about these subjects. Students see many issues occurring in their environment and having a safe environment to discuss their wonderings can help them process and make sense of their world. Therefore, while middle school behaviors and actions are often inconsistent, they usually have the intellect and maturity to handle conversations about diversity and differences (Vawter, 2010).

High School Setting

Upon completion of middle school, in many districts, students move to high school starting with ninth grade. Some scholars posit that school transitions are difficult for students and affect their academic and social achievements (Alspaugh, 1998; Waters, Lester, Wenden, & Cross, 2012). Ninth grade is considered a pivotal period for students entering high school (McCallumore & Sparapani, 2010). The decline in academics associated with middle schools continues into ninth grade as well (Alspaugh, 1998; West & Schwerdt, 2012). Some students realize late into the school year the gravity of grades, credits, and their importance in graduating high school. Helping students succeed in graduating from high school is an important aspect in the age of accountability (McCallumore & Sparapani, 2010).

Entering high school can be an arduous undertaking. The size of many high schools can be daunting and finding help may not be quick or easy. Students who are unprepared academically and socially may flounder without assistance. While some students give up and drop out, there are others who persevere and complete high school.

A qualitative study by Lessard et al., in Quebec focused on young people ages 19-22 years old (2014). The study used a semi-structured interview format to gather information from participants identified as resilient. There were 60 individuals identified as resilient and 80 additional students identified as drop outs (Lessard et al., 2014). The findings of this study revealed four factors separating resilient students and students who dropped out

- using internal motivational forces;
- seeking help from others when needed;

- forming positive relationships with peers and adults; and
- planning and being responsible

Other studies also focus on students remaining in school despite negative circumstances in their environment (Lessard et al., 2009; Williams, 2015).

Ninth grade is a major concern for school leaders as well because of discoveries indicating this group has the highest truancy from classes, failing grades, and misbehaviors compared to other grades in the high school setting (McCallumore & Sparapani, 2010). One study reveals a strategy for schools to consider in working with ninth grade students and their families (Ellerbrock, Kiefer, & Alley, 2014). Ellerbrock, Kiefer, and Alley (2014) conducted a qualitative study in a high school located in the southeastern part of the country. The school, Westshore, housed 1,800 students, of which 522 were ninth graders, included fifty percent minority, and thirty-four percent SES. A special course, titled Freshman Focus, designed to provide extra support for incoming ninth graders, was a new initiative. The course was available during the first nine weeks of school and students received a half credit upon completion. A sample from freshman lead teachers, ninth grade students, and parents of the students provided feedback and insight. Data collected for the study included interviews with individuals, focus groups, and quantitative school information about each participant. The findings shared the success of the program in creating a community of caring individuals who were committed to supporting students in making the transition to high school (Ellerbrock, Kiefer, & Alley, 2014). Implications from the study included how middle schools could join high schools in planning for implementation of such programs on more campuses to help high school students in their transitions.

Socially Related Considerations

Differently abled. Disabilities come in various forms; some visible and others invisible, yet present (Wax, 2014). Identifying an individual as disabled is a complex endeavor. Throughout history, various factors accounted for categorizing people as disabled (“People with disabilities,” 2016). In the 1800s, anyone who did not conform to what society considered normal became an object of pity and ridicule (“A brief history of the disability rights movement,” 2016). The intent of society at that time was to keep people with any type of disability hidden from sight (Coco, 2010). Coco referenced the Ugly Law, Chicago legislation dating back to 1881, which made it a crime for “unsightly” people to appear on the streets (p. 23).

The poverty rate for people with disabilities was 29% for the 18 to 64 age range (DeNavas-Walt & Proctor, 2015). Individuals in this category may have conditions of varying degrees of severity that preclude them from gainful employment and limit their income to primarily government assistance. Limited resources can present challenges in finding housing, securing adequate food, and providing stable lives for families.

Society’s treatment of disabilities continues to vacillate between the social and medical model. Disability is one condition that has the potential to affect anyone, regardless of cultural identity (Rosa, Bogart, Bonnett, Estill, & Colton, 2016). Historically, individuals with disabilities became sideshow displays or received treatment as anomalies (Memari & Hafizi, 2015). As science began to develop a better understanding of the human body, disabilities began to receive medical attention as the primary means to address differences. Health and physical disabilities were more common and lent more to the medical model, which “placed blame on the individual”

(Rosa et al., 2016, p. 61). As time progressed, a new perspective, the social model of disability, arose. The view of disabilities shifted from blaming the individuals to examining the environment. Society was responsible for creating a functional space that would accommodate individuals' differences (Memari & Hafizi, 2015). The barriers in place, whether physical or social, resulted in individuals with disabilities becoming victims of injustice (Bampi, Guillhem & Alves, 2010). People with disabilities faced restrictions that hampered a full productive life.

Equity for individuals with disabilities is a concern especially for children in schools. Disabilities include physical, emotional, cognitive, and any combination of these. To address meeting the varied needs of the disabled, Section 504, the Rehabilitation Act of 1973 and the Education for All Handicapped Children Act of 1975 were enacted (U.S. Department of Education, 2016). Any entity granted federal funds could not discriminate against any individual with disabilities (Aron & Loprest, 2012). Children with disabilities receive educational protections under Individuals with Disabilities Education Act (IDEA) of 1975 (U.S. Department of Education, 2016). Under this legislation, all children, no matter the disability, are eligible to receive a free and appropriate education (Benedict, Thomas, Kimerling, & Leko, 2013).

Providing an equitable education for children with disabilities has evolved over time. The instructional impetus has shifted from functionally based to more academically based (Spooner & Browder, 2014). Earlier programs focused on shaping behaviors based on responses; next, programs shifted their focus to functional instruction to promote independent living; and later school programs attended to academic based learning for all levels (Spooner & Browder, 2014). Reauthorization of IDEA occurred in 2004 with

additional requirements such as highly qualified teachers, performance goals and indicators, organization s' reporting criteria, development of alternate assessment, and special rules for eligibility determination (U.S. Department of Education, 2016). Schools receive additional federal dollars to ensure funding and compliance with providing an equitable education for students with disabilities.

As students transition through various levels of school, identified disabilities accompany them as well and can make them victims of unfair, marginalized treatment by individuals and school procedures. Parents and proponents of inclusion strongly advocate for students with disabilities to participate in general education classes with their non-disabled peers (Goodman, Hazelkorn, Bucholz, Duffy, & Kitta, 2011; Tkachyk, 2013).

Typically, students learn to adapt in heterogeneously mixed classrooms based on ability (Shalev, Asmus, Carter, & Moss, 2016). This process may be more accepting by young learners on the elementary level given the disposition of the children. On the secondary level, however, research has revealed that some high school students exhibit a positive attitude toward peers of inclusion. These findings do not speak for all students. In some educational environments, special needs students suffer maltreatment by peers and teachers ignored them (Tkachyk, 2013). Divisive outcomes of this nature raise questions of whether inclusion is beneficial for all students. Promoting the premise that all students belong in an inclusive setting without giving thought to individual needs creates an inequitable setting for some students.

The long-term effect of “generic inclusion” for all students can result in detrimental outcomes at graduation time. Not all students identified as special needs are able to navigate the general education curriculum without ample support to ensure

graduation. Goodman et al. (2011) conducted a six-year quantitative study involving over 67,000 students. The focus of the research was to examine students with mild disabilities, identified as "...specified learning disabilities (SLD), emotional and behavioral disorders (EBD), mild intellectual disabilities (MID), and other health impairments (OHI)" participating in inclusive classrooms and their graduation rates (p. 248). Inclusion participants for the study were in the general education setting for 80% of the day. Graduation for this group consisted of students who completed high school and achieved a standard diploma, which meant successful students met state academic standards. The results revealed that over the study period, inclusion rates had increased to 62%, while graduation rates plateaued and remained at less than 30%, compared with 79% for non-disabled peers. The idea of encouraging shared ownership of all students has merit; however, leaders should be prepared to differentiate inclusion based on the needs of each student (Eisenman, Pleet, Wandry, & McGinley, 2011).

English language learners. The census bureau reports there are over three hundred fifty languages spoken in homes across the country (U.S. Census Bureau, 2015). Individuals and families who come to America seeking safety and better opportunities, sometime lack essentials for survival in the new country. Some immigrants benefit from various forms of support affording them homes, food, clothing, and some measure of finances; while others face discrimination, harassment and exploitation (Bell, Kwesiga, & Berry, 2010). New to a foreign land with limited means to earn income can predispose families to vulnerability, abuse, and poverty. People able to secure employment may end making low wages with no benefits. Employed individuals run the risk of suffering higher numbers of workplace injuries, fatalities, and no option to recoup money through

workers' compensation (National Employment Law Project, 2011). The income for workers born outside the U.S. was five thousand dollars less annually compared to native born individuals (DeNavas-Walt & Proctor, 2015). While the ability to communicate in more than one language can be profitable in the workforce, this process involves learning effective communication in English.

Diversity is a hallmark of many public schools in the U.S. According to the NCES, between 2003 and 2013, the number of Caucasian students decreased from 28 million to 25 million, while the number of Hispanic students increased from 9 million to 13 million (The Condition of Education, 2016). The number of English Language Learners in public schools also increased during this period from 4.2 million to 4.5 million. Home languages of the top three cultural groups are Spanish, Arabic, and Chinese (The Condition of Education, 2016). The United States, metaphorically referred to as a melting pot, has the duty of educationally preparing all students, regardless of their differences, for the twenty-first century and beyond (Taylor, 2013).

U.S. policy makers have shown support for school diversity through introduction of legislation. Senator Chris Murphy from Connecticut and Representative Marcia Fudge of Ohio joined forces to propose the Stronger Together School Diversity Act of 2016 (114th Congress H.R. 5738 Stronger Together School Diversity Act, 2016). The focus of the initiative was to promote diversity in schools and communities to help address underperformance by students from segregated schools that receive fewer resources (Murphy, Fudge Introduce Stronger Together School Diversity Act, 2016). Officials have earmarked more than 120 million dollars for organizations to bolster school diversity. A

variety of options for use of the grant monies include evaluation of current practices promoting diversity, providing school choices, and training staff in diversity strategies.

Despite the concerted efforts of community and school leaders, inequities in schools have the capacity to precipitate substandard education for some students (Elfers & Stritikus, 2014). Creating avenues to increase school diversity will serve as a benefit to students, especially those in resource-challenged schools and districts. Educational organizations have limited resources for use in providing quality-learning experiences for students of various backgrounds, academic exposures, physical, and psychosocial needs. For second language learners, the complexities of learning English brings additional issues concerning such as appropriately gauging progress for students who start at different levels (Rouse, 2014).

The frustration of trying to navigate a different language and a foreign country sometimes proves daunting for students who then elect to drop out of school. Boone (2013) performed a qualitative study in an urban school in California to examine factors that contributed to second language learners leaving school before graduation. The researcher chose a heuristic methodology that afforded the opportunity to “co-construct meaning through narrative” (Boone, 2013, p. 421). The lived experiences of the participants provided more in-depth understanding of the actions that occurred and contributed to the final outcomes.

Participants’ ages ranged from 16-56 years. The inclusion criteria for the study were former or current second language learner, participated in English as a Second Language (ESL) program, and contemplating or have actually dropped out of school (Boone, 2013). The study involved interviews in various formats like face-to-face,

telephone, and journal, with eight participants, one of which was a mother of three English language learner children. It is important to note that one of the participants did graduate high school. She shared the experiences that made her almost want to quit. Findings revealed that experiences like placement in special education programs, discipline issues, failing grades, and disconnectedness from school made the process intolerable (Boone, 2013). Some participants mentioned that “technical vocabulary,” “complex concepts of English,” and lack of support by school personnel made dropping out a more appealing option. The main crux of the study was the absence of support systems attuned to the unique needs of second language learners does a disservice to these students.

English language learners who are able to remain in school and graduate learn to maneuver the system and garner the support they need to be successful. School leaders should be cognizant of the challenges facing second language learners and commit to providing adequate resources using any means necessary (Elfers & Stritikus, 2014). Making school an inviting environment designed to facilitate learning for all students should be the ultimate goal.

Teacher Related Factors

The quality of education for students in the U.S. continues to lag behind less developed countries (Program for International Student Assessment [PISA], 2012). The common factor in education is teachers. The quality of the teacher depends heavily on the educator preparation program and ongoing professional development. Historically, teachers emerged from college or university preparation programs, which included student teaching under the tutelage of a master teacher. Advances in society coupled with

the emergent need for teachers resulted in various alternative certification programs, some with no requirements for actual student teaching, online classes, and short time frames to completion (Walsh & Jacobs, 2007). To ensure all educators are prepared to provide quality instruction to all students at a minimally proficient level, accreditation standards for teacher preparation programs hold these entities accountable for individuals exiting their organizations (Worrell et al., 2014).

Teacher preparation programs. Pre-service educators and administrators attend preparation programs that may or may not include equity and diversity coursework. Sleeter and Owour (2011) stated that content knowledge, while important, is insufficient in preparing pre-service teachers and administrators to educate diverse learners. Student diversity in classrooms and societal inequities has prompted some teacher preparation programs to include diversity and social justice training for educators (Kelly & Brandes, 2010). While preparation programs may provide information to help build background knowledge and a common language, teachers bring their own personal experiences, attitudes, and beliefs about social justice and diversity, which takes time to influence. An additional drawback to creating a solid social justice educational setting is the liberty taken by each program in defining the concepts and methods to accomplish its goals (Whipp, 2013).

Whipp (2013) found, in a case study of twelve first-year teachers at a Catholic University in the Midwestern U.S. who graduated from a teacher preparation program, which educators came with varying degrees of social justice understanding. The researcher posited that the teacher preparation program needed to create the missing experiences. In addition to foundational course work about learner diversity, leaders

introduced other reading assignments, designed to challenge the pre-service educators' current belief about other cultures in tandem with after-school tutoring programs and tailored field experiences in urban communities. Pre-service educators had multiple opportunities to practice the pedagogical learning in diverse urban settings.

Another class assignment component included candidates reflecting on their community assignments by writing about their new experiences and comparing their journals with their assigned course textbook readings (Whipp, 2013). During their first year of employment, the teachers received ongoing support through various campus opportunities to continue fostering social justice in their schools. The findings from the study revealed that teachers benefited from the experiences in the urban communities and the ongoing first year support. In addition, those with cross-cultural backgrounds prior to enrollment in the program possessed a stronger commitment to advocate for social justice (Whipp, 2013).

Other experts point out that simply because a teacher preparation program includes the term social justice in the framework or course does not ensure educators are adequately prepared to meet the challenges (Hyttén & Bettez, 2011). Some new teachers, after limited training in equity issues, enter the profession underprepared. As a result, they maintain dominant culture hegemony (Murray, 2010).

Storms (2011) proposed that one way to prepare teacher educators for social justice is embedding the concept in "...an action research curriculum..." (p. 33). Candidates in the program self-selected issues dealing with social justice. There were ten participants in this qualitative study, consisting of seven Caucasians – six females and one male, one Asian female, one Hispanic female, and one female identified as other. The

goal of this teacher preparation program was to produce reflective educators to serve as social justice change agents in the schools they served. Storm (2011) conducted semi-structured interviews with the participants asking them to describe their experiences. Through self-selected assignments, students shared how this opportunity prepared them to advocate for social justice in schools. Grounded theory approach was the research design used to capture the learning experiences of the participants through action research. Findings revealed that using action research and the structured learning environments was effective in raising the awareness of social justice by helping the educators view their “lived experiences” through the perspective of broader social issues (Storms, 2011).

Attending an educator preparation program alone does not guarantee that educators are ready to fight for social justice for all students. If information shared in the courses conflicts with educators’ personal beliefs or attitudes, cognitive dissonance ensues and the individuals must find a way to bring resolution. Such was the case in a study in Mountain University involving pre-service teachers. Eleven of the fifteen Caucasian middle class pre-service teachers, hailed from a non-diverse hometown (Han, 2012). The students expressed no desire to learn about diversity since their plans were to return to their native area. Refusing to relinquish the status quo of their non-diverse upbringing and avoiding the opportunity to immerse in a diverse environment, these pre-service teachers exemplified cognitive dissonance since this new information would have conflicted with their beliefs and attitudes. Their actions stifled their growth in a world that is growing in diversity.

Contrary to the educators in Han's (2012) study, there are others with an authentic aptitude for working with children of diverse backgrounds. Johnson's (2002) autobiographical narrative explored this phenomenon in six Caucasian females in the Pacific Northwest. The participants, nominated by well-versed experts in the area of diversity and racial awareness, taught in diverse schools. Each participant maintained an autobiographical narrative, observed instructors during classroom visits, and received questions about his or her educational philosophy. Three major themes that emerged from the study included personal experiences in the world of minorities, participation in social justice organizations, and an empathy with marginalized groups based on childhood experiences. These experiences helped shape their understanding of racism.

Even if educators lack formal pre-service training, it is possible for them to take an active role in advocating for equity in schools. Collaborating with colleagues can help garner support and decrease the workload. Schools inundated with varying regulations and requirements geared toward student academic performance have little time for extra initiatives. For some individuals who value equity in schools, finding ways to integrate social justice into regular school practices and the curriculum will make it more relevant and less obtrusive for teachers (Dover, 2009). Networking with fellow educators, new and experienced, to draft strategies fostering practices for social equity in K-12 schools will promote a better outcome for all students (Ritchie, 2012).

Administrators, as school instructional leaders and managers, should have high expectations for all students and staff (Murray, 2011). A national qualitative study performed with campus and district leaders revealed varying positions regarding administrators' experiences and perceptions about social justice in schools (Place,

Ballenger, Wasonga, Piveral, & Edmonds, 2010). Participants in the study included top district leaders, superintendents, and building principals, from various regions of the United States. Discussion points focused on leaders' perceptions about local practices, federal mandates, and each leader's influence on students' success (Place et al., 2010). Three primary themes emerged, Leadership experiences, No Child Left Behind (NCLB), and a children-first mindset and actions. Several of the highlighted points included

- the need to help staff recognize discriminatory comments;
- making difficult decisions in the best interest of students;
- building relationships with students; and
- the elimination of nonacademic programs that hold students' interest and could make learning more meaningful.

Leaders who embrace social justice approaches in their schools set out to provide opportunities for educators to engage in open discourse to identify and plan for addressing inequities among any group in the school (Murray, 2010). Unless educational leaders are adequately prepared, they will be unable to carry out the duties necessary to serve as advocates for students. They will be ill prepared to educate staff regarding practices that are fair and equitable for all students. Educational leaders, who advocate for equity in schools, should be prepared to not only recognize social injustices but also take corrective action (Vogel, 2011). One paramount responsibility for leaders and policy makers is the increased awareness of opportunity gaps existing under the guise of standard practices and procedures, identifying such processes, and having the courage to take action to ensure justice (Darden & Cavendish, 2011).

Researchers Griner and Stewart (2012) speculated that lack of social justice awareness and action on campuses are contributors to the academic achievement gaps between student groups. Griner and Stewart conducted research to develop an instrument that educators could use to facilitate discourse surrounding instructional practices focused on cultural responsiveness. Selected instructional materials and practices can serve to disenfranchise oppressed groups, as the information shared may be superficial or skewed. Other observations about the performance discrepancies between student groups are different expectations between home and school. Educators unfamiliar with or unaware of inequities present in their schools take the position that students must conform to the norms of the school rather than the school accommodating the differences brought by the students. This inflexibility contributes to ostracizing student groups, thereby impeding their chances of success.

Teacher perceptions. Teachers are professionals; however, they enter education with real life experiences (Killen, 2016). Killen explained that individuals' prior life experiences influence their decisions, interactions, biases, and beliefs about stereotypes (2016). This applies in the school setting as well. Educators view students and colleagues using their personal schema to make judgments and determinations of individuals or groups based on their physical presentations and dispositions.

With increasing student diversity, educators may have students of different races, cultures, sexual orientations, genders, and abilities in the same classroom. The actions of the teacher toward the students predicate his or her beliefs about each group. Stereotypes, such as Asian students are smarter, African American students are aggressive, Caucasian students are well behaved, and Hispanic students perform poorly on academics, can limit

the potentials of many learners (Natesan, Webb-Hasan, Carter, & Walter, 2011).

Educators must be willing to reflect on their beliefs about stereotypes and prepare to dismiss deficit thinking about any student to promote an environment conducive to learning for all (Garcia & Guerra, 2004).

Teachers' perceptual bias can exist against different groups or groups of their same categorical identity, like race or gender. In an ethnographic study, Morris (2005) examined middle school teachers' perceptions about Caucasian students who attended a minority school. The setting, a middle school campus in Texas, comprised two-third African American educators and one-third Caucasian educators. Student population was predominately African American at 47%, and Caucasian students made up 4% of the population. Design of the study included semi-structured staff interviews and classroom observations focused on interactions of the Caucasian students (Morris, 2005). The outcome of the study revealed that Caucasian teachers viewed Caucasian students as lower class because of their attendance at a minority school and the surrounding neighborhood. African American teachers regarded Caucasian students as middle class and an elevated social status (Morris, 2005).

Educators have admitted hearing disparaging comments made at school about certain student groups (Dragowski, McCabe, & Robinson, 2016). Some educators admitted interacting differently with certain students based on their race or culture (Nelson & Guerra, 2014). Given the important influence teachers have on students, it is imperative they are aware of their perceptions and ensuing actions to ensure the school is a safe and equitable environment for all students (Dragowski, McCabe, & Robinson, 2016; Nelson & Guerra, 2014).

Bias, personal and private thoughts and beliefs about other groups, reside in the subconscious and may serve as an impetus for outward behaviors and actions (Grewal, Ku, Girod, Valatine, 2013). A study by Harber et al. (2012) identified positive feedback bias where Caucasian teachers provided more praise and less criticism to minority students. The study revealed Caucasian teachers felt that providing negative feedback to African American students was stressful because of the potential for confrontations. These teachers chose to use only positive praise when interacting with the African American students to avoid or minimize the associated stressful feelings (Harber et al., 2012). The debate of whether these teachers' actions are subconscious or purposeful is open for discussion. Either way, the problem with this type of feedback is that it lacks sincerity, negates constructive opportunities for improvement, and devalues praise (Harber et al., 2012). Teachers who utilize positive feedback bias are operating on stereotypical beliefs that African American students are prone to violence.

Another form of bias addressed in the literature is grading (Hardre, 2014). A qualitative study by Clark and Zygmunt (2014) illustrated that teachers' personal biases influenced their instructional decisions more than professional from other careers did. When it comes to grading, there are several factors involved in assigning a score to student work. Some parts of grading are subjective and open to scrutiny (Hardre, 2014). Even in the case of objective multiple-choice assessments, bias may exist in the format and questions of the instrument's design, which in most cases teachers create (Harber et al., 2012). When examining implicit bias in grading, teachers may take into account issues related to certain students, their families, or other matters and adjust the scores

accordingly (Hardre, 2014). While teachers are familiar with the mitigating factors, they may not be aware they are consciously generating the results to favor particular students.

Teachers' expectations for students' performance depend to some degree on the race of both parties (Gershenson, Holt, & Papageorge, 2015). African American students in classes with African American teachers are less likely to receive discipline referrals for misbehaviors (Rudd, 2014). These same actions also apply with teacher expectations for students. Gershenson et al. (2015) found that teachers of races other than African American have lower expectations for the future success of African American students. Their findings contribute to the longstanding gap in performance between student groups. To ensure an equitable learning environment, educators need to be aware of any personal biases and make adjustments to minimize creating unfair classrooms (Clark & Zygmunt, 2014).

Gaps in the literature call for strategies to prepare school leaders to address social injustices impacting achievement gaps, leadership skills essential for confronting discriminatory practices in schools, and how educators can best meet the needs of marginalized groups in the classrooms and communities (Boske, 2012; Griner & Stewart, 2012). Achievement of students in more affluent schools can give the impression that more learning is occurring or smarter children reside in that particular school. In actuality, neither may explain the outcomes. It may be attributable to the resources available to facilitate learning. Community leaders may be aware of discrepancies in students' performance but may be unaware that district, campus, or classroom practices contribute to these outcomes (Darden & Cavendish, 2011).

Teacher diversity. To enhance the learning for all, leaders must address diversity present in society and schools (Maxwell, 2014). The annual report, *The Condition of Education 2015*, from the NAEP reveals student demographics across the nation are increasing in diversity. The latest figures show the following racial/ethnic distribution, Caucasian 51%, African American 16%, Hispanic 24%, and Asian 5%. However, while student diversity continues to increase, growth in teacher diversity is stagnant (Maxwell, 2014). According to the 2011-2012 National Center for Educational Statistics (NCES) data, public school teachers' ethnicity composition across the nation was 82% Caucasian, 7% African American, 8% Hispanic, and 2% Asian.

A report by the National Education Agency (NEA) stated that a diverse school staff that is aware of students' various backgrounds and assimilates this information in an instructional capacity could enhance the learning of all students, especially those of color (Dilworth & Coleman, 2014). Locating teachers who are products of diverse schools would be an additional benefit as these educators can better identify with the students (Graham, 2014). Dilworth and Coleman (2014) concurred that educators who can relate to the experiences of diverse students are more likely to be supportive and hold positive perspectives of their students' potential. Teachers who are able to motivate students through building caring relationships are more likely to obtain positive outcomes.

Teacher attrition. Teacher attrition affects all races/ethnicities, genders, and ages, yet even in this area racial/ethnic patterns can be seen in those who leave the profession. According to the Teacher Attrition and Mobility report from September 2014, the number of teachers by ethnicity included African American teachers, 7%, Hispanic teachers, 8%, and Caucasian teachers, 82%. Those who left the profession by ethnicity included African

American, 10%, Hispanic, 8%, and Caucasian, 8%. According to this data, Caucasians outnumber African Americans and Hispanics combined, and less of the first group are leaving education (Goldring, Tale, & Riddles, 2014).

Allowing flexibility in the route to becoming a teacher has the potential to increase the number of educators available for classrooms. The literature reports that not every teacher is a good fit for every classroom, especially schools with challenging populations (Sleeter & Owour, 2011). Since this study includes teachers who attended the Alternative Certified Program (ACP), it is important to note their attrition in the field of education compared with traditional programs. A quantitative study by Redding and Smith (2016), using archival data from NCES, found that ACP teachers were 10% more likely than traditional teachers to leave education.

Recent data about the demographics of the teaching force stated that teachers of color more frequently work in diverse, high-needs schools (Ingersoll, Merrill, & Stuckey, 2014). While students of color benefit from seeing educators of color serving as role models, educational leaders must determine how to keep these teachers in the classrooms (Boske, 2012). Students from poverty, who need the caring relationships these adults provide to help develop resilience in their environment, lose an important support system when these educators are no longer available. Leaders must recognize it is crucial to get more educators of color into classrooms to serve as role models for students of color contemplating a career in education (Ijei & Harrison, 2010).

Student Subjective Well Being Factors

Positive psychology describes the values or traits referring to student's internal motivations (Seligman & Csikszentmihalyi, 2000). Psychologists began seeking answers

to life questions like how people endure adversity, what makes quality of life, and what gives life meaning and purpose for the average person (Seligman & Csikszentmihalyi, 2000). Positive psychology emerged from these wonderings. The impetus was to shift the focus of psychology from a healing of broken minds and emotions to identifying what things are working right in life. Society was ready to find the driving force behind persons in difficult, challenging situations still leading productive lives at work, school, and home. Leaders in the field looked for and identified strengths in character that would result in enhanced quality of life. The traits that follow have been associated with individuals who persevere in the face of social inequities. Researchers note, however, that this does not abdicate responsibilities of school leaders, community leaders, and policy makers to discontinue finding ways to maximize learning experiences for students from backgrounds with limited exposure.

Character strengths. Character strengths are desirable traits that manifest in positive attitudes and behaviors (Shoshani & Slone, 2013). The Values in Action Project (VIA) identified 24 character strengths, creativity, curiosity, open-mindedness, love of learning, perspective, bravery, perseverance, honesty, zest, love, kindness, social intelligence, teamwork, fairness, leadership, forgiveness, modesty, prudence, self-regulation, beauty, gratitude, hope, humor, and religiousness, divided into six broad headings, valued as important to healthy development and overall well-being of individuals (Park & Peterson, 2009). The traits exist in degrees and not all strengths develop equally in each person. While possession of more character strengths may be desirable, certain ones "...gratitude, hope, zest, curiosity, and love" (Park & Peterson, 2009, p. 4) help individuals lead a more fulfilled life. Park and Peterson found that

similar character strengths, love and gratitude, are essential for people working closely together. The researchers identified character strengths important for middle school students, perseverance, love, gratitude, hope, and perspective. Since research indicates the necessary character strengths for success in middle school, what does this look like in practice?

One study performed at both a primary and second level school included 199 seventh to ninth grade German speaking students in Switzerland (Wagner & Ruch, 2015). Since the focus of this research is secondary level, the summary reported is for the older group. The objective of the research was to examine character strengths, positive behavior, and achievement in school. Research proposed that students with good character have the propensity for better classroom behaviors leading to improved academic performance. In this study, students self-reported on questionnaires regarding their perceived character strengths, and rank ordered the descriptors. The findings revealed that perseverance, prudence, self-regulation, and hope were associated with positive school behavior and school achievement.

Another study, conducted in Israel, investigated character strengths and middle school students transition (Shoshani & Slone, 2013). The research, which included 417 students in seventh and eighth grades, included questionnaires for students to complete and collection of grade point average (GPA) to measure transition process. Demographic information collected also included socioeconomic status (SES); 84% of the participants reported middle income. For this inquiry, students completed self-reporting questionnaires in which they ranked their character strengths based on their own perceptions. Researchers gave students a list defining the terms. The measure of

academic performance included three dimensions, Grade Point Average (GPA), average grades in mathematics and language, and an average of elective grades (Wagner & Ruch, 2015). Experienced middle school teachers administered the questionnaire and provided feedback about students' performance as part of the study. Findings concurred with research in the U.S. regarding the decline in middle school performance, as evidenced by the significant decrease in GPAs between seventh and eighth grades (Shoshani & Slone, 2013).

Both studies support literature findings on the importance of character strengths in the school setting. For middle school, peer relationships are paramount. One paper expressed the idea of helping students learn from each other and possibly emulating the positive character strengths of their peers (Steinebach, Steinebach, & Brendtro, 2013). This concept of positive peer culture aligns with positive psychology and shifts the attention to what youth are doing right instead of wrong. Peer-to-peer interactions and engagements can be an additional support for students. Other research on character strengths examined group and classroom interventions to help teach these necessary skills to foster a productive learning environment (Fink, 2013; Park & Peterson, 2009; Suldo, Savage, & Mercer, 2014).

Subjective well-being (SWB). Under the positive psychology umbrella is another component called subjective well-being (SWB). Unlike character strengths, which identify 24 elements involved in becoming a productive individual, SWB focuses on individuals determining if they are happy with their lives (Diener, 2000). Conditions that may be suitable or tolerable for the individuals living in them may seem unbearable for others looking at their situation from the outside. Components of SWB include overall

contentment with life situations; satisfied with areas of life like home, school, work; positive affect-good feelings; and limited negative affect-bad feelings. Various instruments to measure SWB have evolved over time. One tool available, Brief Adolescents' Subjective Well-Being in School Scale (BASWBSS), measures students' perceptions on two factors, school satisfaction (6 questions) and affect in school (2 questions), using a 6-point Likert scale from (1) strongly agree to (6) strongly disagree to capture responses (Tian, Wang, & Huebner, 2015).

Some children from poverty encounter substandard living conditions, like homes without electricity or running water, not enough food to eat, or violence against self or others, which may cause outsiders to believe that, based on the environment, the children's SWB would be low. In working with diverse students from various cultures, there are life stressors commonly associated with being different from society's norms. Individuals experience discrimination in racial, cultural, gender, sexual identity, and any combination of these categories. It is conceivable that in the face of such maltreatment, affected people could reflect a depressed SWB.

Vera et al. (2011) conducted a study examining stressors related to race and culture and its effect on SWB in minority students. The seventh and eighth grade public school participants included 157 students in a Midwestern city ranging in age from 11 to 15. Demographics revealed 63% Hispanic, 10% Asian, 10% African American, and 17% other, with 87% low SES. Students completed five assessments as a group. The findings indicated that SWB and stressors related to culture are significantly related. Another finding was that ethnic identity served as a buffer between the two and may have helped explain the strength of tolerance some students displayed.

Resiliency. Resilience, described as a necessary component in youths who are able to overcome adversity, depends on having a positive, caring relationship with an adult willing to invest in the life of a child (Walsh, 2015). During interactions, the younger person can observe and learn how to address real life situations. This learning serves to support the growth and development needed to become a successful adult. The science supporting resilience notes that when developing children encounter negative life situations the results can have long lasting implications (Creating a core story of child development, 2007). One factor that can mitigate this outcome is the presence of stable, committed caregivers and adults in the child's life (Walsh, 2015).

Data collected from a longitudinal study, conducted from 1996 through 2007, and the Ministry of Education in Quebec, Canada allowed researchers to use school records to identify students deemed at risk of dropping out of high school, yet persevered and graduated (Lessard et al., 2009). Of the students in this category, 113 met criteria for resilient; however, only 60 agreed to participate in the study. Two students of the 60 eligible participants were selected for in-depth interviews because "...they are representative of the lived experiences of resilient students" (Lessard et al., 2009, p. 22). Both students' childhood experiences consisted of family separations, poverty, and high mobility; nevertheless, school was a sanctuary with caring adults to help them achieve. Making the decision to remain in school or drop out, while left up to each student, usually occurs during other circumstances (Lessard et al., 2009).

Resilience, described as a theory in an article by Zimmerman et al. (2013), examined how individuals overcome adversity from a strengths perspective. This study examined factors that promote positive choices and impede negative outcomes. Positive

ethnic identity development in children of color can serve such a purpose. Children during development identify with the race, culture, and values of the adult in their lives. As they move into adolescence, they have decisions to make regarding with whom they wish to identify. The ability to identify with a race is important for the well-being of young people (Zimmerman et al., 2013). Ethnic identity is an asset, especially for children of color, and fosters a sense of relatedness to the heritage of their racial group. This too helps promote resiliency.

Protective factors. Research reveals that some adolescents in adverse conditions exhibit a different form of expected response, and this is due to what is termed “protective factors” (Morales, 2010, p. 164). Students who succeed despite their environmental and social factors are worthy of attention. Authors have used various terms including grit, perseverance, tenacity, and resiliency to describe people who defy the odds and accomplish goals. Schools attempt to teach some of these quality traits; however, not all students, especially minority and low SES students, reap the benefits and successfully graduate from high school. Studies find that it is beneficial for schools to include character development in the educational curriculum as outcomes differ in schools that do and do not provide such instruction (Seider, Novick & Gomez, 2013).

A qualitative, longitudinal study, over the span of eight years, conducted by Morales (2010), focused on college students from similar backgrounds of adversity. Recruits for the study came through recommendations from staff and responses to flyers posted around campus. Inclusion in the study required proof of college transcripts, parental input, and identification of race. Twelve of the 50 students in the study met criteria as gifted at some point during their K-12 schooling. Factors for inclusion in the

study, termed resilience criteria, included parents with limited educational experience, low SES, and minority identification. Researchers conducted interviews in which participants reflected on factors they felt helped them succeed early in school. A group of common protective factors emerged from these responses including persistence, the desire to have a better life, high self-esteem, caring staff in school, and several others. As young adults, they could articulate the factors they felt pivotal to their academic success in the face of challenges.

Conclusion

Children, as the nation's valued assets, should have every opportunity to receive a quality education that culminates, at a minimum, with a high school diploma.

Adolescents leaving middle school and entering high school are a vulnerable group because of psychosocial factors heavily influencing their thoughts, decisions, and actions (Alspaugh, 1998; Waters et al., 2012). Complicating matters for one group of adolescents are inequities present in their environments, which results in them living in poverty and at risk of not completing high school. Against all odds, some of these students of impoverished environments find ways to persevere through the inequities and successfully complete high school. Elements such as securing a strong network of external supports and internal drives are helpful in achieving goals. Societal factors like poverty, lack of or limited school resources, discrimination, biases, or funding short falls impacting race, culture, disabilities, or second language learners, result in student disenfranchisement (CRDC, 2014). Policy makers and school leaders need to continue seeking alternatives to provide equitable education to increase graduation opportunities

for students facing challenges that impede their ability to finish high school (Ritchie, 2012).

CHAPTER III: METHODOLOGY

Longitudinal data are valuable, especially in the field of education, as the information gleaned helps paint a portrait of student performance over time (Herzog, 2006). NCES initiated the secondary school longitudinal studies programs to provide insight into the academic and psychosocial development and experiences of cohorts of high school adolescents along with contextual factors that may influence their lives and decisions (Ingels et al., 2011). There were four studies in the secondary school series beginning in 1972 and concluding with the High School Longitudinal Studies of 2009 [HLSL:2009].

Education decision makers rely on sources like these longitudinal studies to increase the chances of effective outcomes for students. Some longitudinal studies consist of national datasets; however, federal entities are advocating and providing support for states to develop their own longitudinal databases to aid in exploring student performance at a local level (Pinkus, 2016). According to Levesque, Fitzgerald, and Pfeiffer (2015), one of the benefits of analyzing secondary educational data is that it affords researchers the opportunity to explore educational trends and various factors associated with students' performance over time. An exploratory analysis, which helped identify data patterns that emerged through descriptive statistics and relationships in the archival dataset, relied more on visual inspections by the researcher and less on formulas (Yu, 2015). This study used the NCES longitudinal studies (Ingels et al., 2011) to examine personal and societal factors associated with students living in poverty, and their successful graduation from high school.

Population and Sample

Population. The base year survey identified schools from all fifty states using two national databases, Common Core of Data (CCD), used to select public and public charter schools, and Private School Universe Survey (PSS), used to select private schools (*NCES Handbook of Survey Methods*, 2014). The resulting HSLS:09 base year study included over 940 eligible schools from ten states, California, Florida, Georgia, Michigan, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, and Washington (Ingels & Dalton, 2013). The first strata of the data included school type, public or private; regions of the country, boundaries established by the United States Census Bureau; and municipalities, city, suburban, town, and rural (Ingels et al., 2011). The base year study consisted of 944 eligible, participating schools. This number decreased to 939 after five schools closed or became ineligible to participate (*NCES Handbook of Survey Methods*, 2014).

Sample.

Students. Students in the HSLS:09 base year were incoming ninth graders in the fall semester of eligible campuses. The total number of students eligible for inclusion was 25,206, which equated to an average of 27 students per school. The researchers selected students randomly from each school for inclusion in the study. Racial strata groups included Hispanic, Asian, African American, and other (*NCES Handbook of Survey Methods*, 2014).

The researcher used a purposive sampling technique for this study to explore factors associated with adolescents living in poverty who graduate high school. Purposive sampling is a non-probability technique that allowed collecting data from a

group that does not represent the larger population, which was appropriate since the study called for a targeted group (Daniel, 2012). The use of purposive sampling permitted the researcher to focus specifically on students living in poverty and enabled answering the study research questions (What family, school, teacher-related and subjective wellbeing factors help incoming ninth grade students identified as living in poverty remain in school and graduate high school?). Since poverty has the potential to interfere with education, the researcher selected variables associated with economically challenged conditions or environments for inclusion in this study.

The variable used to identify students living in poverty for this study was the poverty indicator, which was collected through student level composites, and correlated with required reporting accountability data by government agencies (Dickinson & Adelson, 2014). The U.S. Census Bureau calculates poverty based on the family's annual income compared with a pre-established poverty threshold dollar amount (Bishaw & Fontenot, 2014). This value changes depending on the number of family members, number of children, and age of the head of household. Students whose family incomes fell below 185% qualify for free school meals (National School Lunch Program, 2016). Poverty index indicator variable, X1POVERTY, reflected a combination of family income and number of members in the household. The number of participants identified at or above the poverty threshold totaled 14,062; the number of participants below the poverty threshold totaled 2,671.

Additional variables examined for possible correlational relationships between the primary unit, students, and graduating from high school (Ingels et al., 2011) included school SES, student/family SES, students with disabilities, students identified as second

language learners, access to advanced level courses, school diversity, teacher preparation programs, and teacher diversity. In addition, student and staff demographic data was available and requested from the organization to help provide a well-rounded perspective of the participants. While the elements may not have direct links to social inequities, it is possible there may be associations with conditions that result in educational disparity.

The content focus of the HSLS:09 student was math and science. These subjects align with societal pushes for advancements in the subjects of science, technology, engineering, and math (STEM), by students exiting high school (HSLS:09). Researchers provided data centered on factors that potentially identified ninth graders likely to pursue courses in math and science upon entry into college.

Math and science teachers. Preparing students for the 21st century require educators who are highly skilled at teaching creative thinking and effective communication in the contents of science, technology, engineering, and mathematics, also referred to as STEM (Vilorio, 2014). Since its inception, educators committed to the STEM program must assure an environment in which students are engaged in learning the various nuances of integrating sciences, technology, and mathematics without foregoing each contents unique principle (Flores, Knaupp, Middleton, & Staley, 2002). Learner engagement hinges on the teacher-student relationship (Kelly & Zhang, 2016). Helping students value the importance of STEM can be a challenge if they lack motivation and interest. Educator participants for the HSLS:09 study taught mathematics and science. This study will examine educator perceptions about students and students' beliefs about their teachers from the mathematics and science classrooms. The foci of the study were to identify which courses students selected and what motivated them to do so

in regards to postsecondary opportunities (High School Longitudinal Study of 2009 overview, 2017).

Base year 2009. Data was collected, focused on incoming ninth grade students, examining family, school context, academic performance, and perspectives of the adolescents (Ingles et al., 2011). Questionnaires, developed after rigorous testing, were administered to students, parents, teachers, administrators, and counselor. Participants had the option of completing the surveys on the computer or a telephone interview. The number of eligible, participating students from the base year to the first follow up decreased from 24,658 students available for independent administration to 21,444. The variance in numbers includes students who completed the questionnaire and those who completed the mathematical assessment. HSLS:09 used base weight data for the analysis to make it representative of the national population.

Update 2013. An update occurred in the late summer of 2013 when the incoming freshman class of 2009 should have graduated (Ingels et al., 2011). In addition to surveys completed by participants and families, high school transcript information was collected in the 2013-2014 school year. Drop out, GED, and completion of high school results provided insight into the decisions of the former adolescents and their influencing factors.

Operational Definitions and Measurement of Variables

Constructs used in the study covered four areas, home and family factors, school factors, teacher factors, and student subjective wellbeing factors.

Students from poverty. Because of various adverse personal or life circumstances, students from poverty are less likely to graduate from high school. The

construct to determine qualifiers included X1POVERTY. Responses were coded as 0 or 1, so the variable was dichotomous.

Family variables. Several factors were measured to identify influences of home and family on students' perseverance and successful graduation outcome. Table 1 details the variables and associated questions.

Table 1

Family Variables

| Variable name | Variable labels | Question wording from surveys | Measurement |
|---------------|---|--|-------------|
| X1POVERTY | X1 Poverty indicator (relative to 100% of census poverty threshold) | Indicates whether the sample member's family was at, above, or below the 2008 poverty threshold, as set forth by the U.S. Census Bureau. 0=at or above poverty 1=below poverty | dichotomous |
| P1HHPARENT | P1 A03 9th grader has parent(s) living in household | Does (your ninth grader) have biological, adoptive, step- or foster parents who live in your household? <input type="checkbox"/> Yes, one parent in household <input type="checkbox"/> Yes, two parents in household <input type="checkbox"/> No parents in household (A-58) | nominal |
| P1MARSTAT | P1 A07 Parent 1's marital status | What is (your/this parent's) marital status? What is the marital relationship of these parents? <input type="checkbox"/> Married <input type="checkbox"/> Divorced <input type="checkbox"/> Separated <input type="checkbox"/> Never Married <input type="checkbox"/> Widowed (A-59) | ordinal |

| | | | |
|--------------|---|--|-------------|
| P1HOMELANG | P1 B21 Language other than English regularly spoken in home | Is any language other than English regularly spoken in your home? <input type="checkbox"/> Yes <input type="checkbox"/> No (A-65) | dichotomous |
| P1SPANISH | P1 B22A Spanish regularly spoken in home | What languages other than English are regularly spoken in your home? (Check all that apply.) <input type="checkbox"/> Spanish <input type="checkbox"/> Another language (A-65) | ordinal |
| P1EUROLANG | P1 B22B Other European language regularly spoken in home | A European language other than Spanish such as French, German, or Russian (A-65) | ordinal |
| P1CHINESE | P1 B22C Chinese language regularly spoken in home | A Chinese language (A-65) | ordinal |
| P1FILIPINO | P1 B22D Filipino language regularly spoken in home | A Filipino language (A-65) | ordinal |
| P1SEASIAN | P1 B22E Southeast Asian language regularly spoken in home | A Southeast Asian language such as Vietnamese, Thai, or Cambodian (A-65) | ordinal |
| P1SASIAN | P1 B22F South Asian language regularly spoken in home | A South Asian language such as Hindi or Tamil (A-65) | ordinal |
| P1OTHERASIAN | P1 B22G Other Asian language regularly spoken in home | Another Asian language such as Japanese or Korean (A-65) | ordinal |
| P1MIDEAST | P1 B22H Middle Eastern language regularly spoken in home | A Middle Eastern language such as Arabic or Farsi (A-65) | ordinal |

| | | | |
|------------|---|---|-------------|
| P1OTHRLANG | P1 B22I Other language regularly spoken in home | <p>What languages other than English are regularly spoken in your home? (Check all that apply.)</p> <p><input type="checkbox"/> Spanish</p> <p><input type="checkbox"/> A European language other than Spanish such as French, German, or Russian</p> <p><input type="checkbox"/> A Chinese language</p> <p><input type="checkbox"/> A Filipino language</p> <p><input type="checkbox"/> A Southeast Asian language such as Vietnamese, Thai, or Cambodian</p> <p><input type="checkbox"/> A South Asian language such as Hindi or Tamil</p> <p><input type="checkbox"/> Another Asian language such as Japanese or Korean</p> <p><input type="checkbox"/> A Middle Eastern language such as Arabic or Farsi</p> <p><input type="checkbox"/> Another language</p> <p>(A-66)</p> | ordinal |
| P1ENGLISH | P1 B23 English regularly spoken in home | <p>Is English also regularly spoken in your home?</p> <p>Yes</p> <p>No</p> <p>(A-66)</p> | dichotomous |
| P1RSPLANG | P1 B24 Language respondent usually speaks to 9 th grader in home | <p>What language do you usually speak to [your 9th-grader] in your home?</p> <p><input type="checkbox"/> English</p> <p><input type="checkbox"/> Spanish</p> <p><input type="checkbox"/> A European language other than Spanish (such as French, German, or Russian)</p> <p><input type="checkbox"/> A Chinese language</p> <p><input type="checkbox"/> A Filipino language</p> <p><input type="checkbox"/> A Southeast Asian language (such as Vietnamese, Thai, or Cambodian)</p> <p><input type="checkbox"/> A South Asian language (such as Hindi or Tamil)</p> <p><input type="checkbox"/> An Asian language (such as</p> | ordinal |

| | | | |
|-------------|---|--|---------|
| | | Japanese or Korean) <input type="checkbox"/> A Middle Eastern language (such as Arabic or Farsi) <input type="checkbox"/> Another language (A-66) | |
| P1LANG9 | P1 B25 Language 9 th grader usually speaks to respondent in home | What language does [he/she] usually speak to you in your home? <input type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> A European language other than Spanish (such as French, German, or Russian) <input type="checkbox"/> A Chinese language <input type="checkbox"/> A Filipino language <input type="checkbox"/> A Southeast Asian language (such as Vietnamese, Thai, or Cambodian) <input type="checkbox"/> A South Asian language (such as Hindi or Tamil) <input type="checkbox"/> An Asian language (such as Japanese or Korean) <input type="checkbox"/> A Middle Eastern language (such as Arabic or Farsi) <input type="checkbox"/> Another language (A-67) | ordinal |
| P1DIFSCHLNG | P1 B26 Difficulty joining in school events because speaks non-English language | How difficult is it for you to participate in activities at [your 9th-grader]'s school because you or members of your family speak a language other than English? Would you say... <input type="checkbox"/> Very difficult <input type="checkbox"/> Somewhat difficult or <input type="checkbox"/> Not at all difficult? (A-67) | ordinal |
| P1ELLEVER | P1 B27 Whether 9 th grader ever in English Language Learner Program | Has [your 9th-grader] ever been enrolled in a program for English language learners (ELLs) such as English as a Second Language (ESL), | ordinal |

| | | | |
|-----------|--|--|-------------|
| | | English immersion, or bilingual education? | |
| | | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know (A-67) | |
| P1ELLNOW | P1 B28 Whether 9 th grader currently in English Language Learner Program | Is [he/she] currently enrolled in an English as a Second Language (ESL), English immersion, or bilingual education program? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know (A-67) | ordinal |
| P1HIDEG1 | P1 C01 Parent 1's highest degree earned | What is the highest level of education [you have/parent #1 has] completed? <input type="checkbox"/> Less than high school <input type="checkbox"/> High school diploma or GED <input type="checkbox"/> Associate's degree <input type="checkbox"/> Bachelor's degree <input type="checkbox"/> Master's degree <input type="checkbox"/> Educational Specialist diploma <input type="checkbox"/> Ph.D., M.D., law degree, or other high-level professional degree (A-68) | ordinal |
| P1JOBNOW1 | P1 C05 Parent 1 currently holds a job | During the past week, did [you/parent #1] work for pay or income? (If [you/parent #1] held a job but [was/were] not working because of temporary illness, vacation, strike, or jury duty answer "yes.") <input type="checkbox"/> Yes <input type="checkbox"/> No (A-69) | dichotomous |

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|-------------|--|---|-------------|
| P1HIDEG2 | P1 C09 Parent 2's highest degree earned | <p>What is the highest level of education [parent #2] has completed?</p> <p><input type="checkbox"/> Less than high school</p> <p><input type="checkbox"/> High school diploma or GED</p> <p><input type="checkbox"/> Associate's degree</p> <p><input type="checkbox"/> Bachelor's degree</p> <p><input type="checkbox"/> Master's degree</p> <p><input type="checkbox"/> Educational Specialist diploma</p> <p><input type="checkbox"/> PhD, MD, law degree, or other high level professional degree</p> <p>(A-70)</p> | ordinal |
| P1JOBNOW2 | P1 C13 Parent 2 currently holds a job | <p>During the past week, did [parent #2] work for pay or income? (If [he/she] held a job but was not working because of temporary illness, vacation, strike, or jury duty answer "yes.")</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p>(A-71)</p> | dichotomous |
| P1INCOMECAT | P1 C18 Household income in 2008-categorical form | <p>We understand you may not be able to provide an exact number for your family's income. However, it would be extremely helpful if you would indicate which of the following ranges best estimates your total household income from all sources prior to taxes and deductions in calendar year 2008. Please include all income such as income from work, investments and alimony.</p> <p><input type="checkbox"/> \$15,000 or less</p> <p><input type="checkbox"/> \$15,001 - \$35,000</p> <p><input type="checkbox"/> \$35,001 - \$55,000</p> | ordinal |

| | | | |
|-------------|--|--|-------------|
| | | <input type="checkbox"/> \$55,001 - \$75,000 <input type="checkbox"/> \$75,001 - \$95,000 <input type="checkbox"/> \$95,001 - \$115,000 <input type="checkbox"/> \$115,001 - \$135,000 <input type="checkbox"/> \$135,001 - \$155,000 <input type="checkbox"/> \$155,001 - \$175,000 (A-72) | |
| P1CHANGESCH | P1 D10 Number of times 9th grader has changed schools since kindergarten | How many times has [your 9th-grader] changed schools since [he/she] entered kindergarten? Do not count changes that occurred because of promotion to the next grade or level, for instance, a move from an elementary school to a middle school or from a middle school to a high school in the same district. (Please enter 0 if [your 9th-grader] has not changed schools except for promotion to the next grade or level.) (A-77) | ordinal |
| P1Suspend | P1 D12 Whether 9th grader has ever been suspended or expelled | Since starting kindergarten, has [he/she] ever been suspended or expelled from school? Do not count detentions. 1=Yes 0=No | dichotomous |

Note. Information source HSLs:09 survey in the Education Data Analysis Tool (EDAT)

School variables. The researcher measured constructs to identify influences of school factors on students' perseverance and successful graduation outcome. Table 2 details the variables and associated questions.

Table 2

School Variables

| Variable name | Variable labels | Question wording from surveys | Measurement |
|---------------|--|--|---|
| A1SCHTYPE | A1A06 School type | <p>Which of the following best describes your high school?</p> <p><input type="checkbox"/> a regular school [– not including magnet or charter schools]</p> <p><input type="checkbox"/> a charter school (a school that in accordance with an enabling state statute, has been granted a charter exempting it from selected state or local rules and regulations)</p> <p><input type="checkbox"/> a special program school [or magnet school] –such as a science or math school, performing arts school, talented or gifted school, or a foreign language immersion school</p> <p><input type="checkbox"/> a vocational or technical school or</p> <p><input type="checkbox"/> an alternative school (a school that offers a curriculum designed to provide nontraditional education to students – for example, to students at risk of school failure or dropout in a traditional setting)?</p> <p>(A-101)</p> | <p>Nominal</p> <p>1=regular 0=other</p> |
| A1MADEAYP | A1 A24 Whether school made AYP at the end of the 2008-2009 school year | <p>At the end of the 2008-2009 school year, did [your school] make AYP?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p>(A-105)</p> | dichotomous |
| A1G9OVERAGE | A1 A26B Offers learning communities for over-age student lacking HS prerequisite | <p>Does your high school offer any of the following programs to assist 9th graders who are struggling academically?</p> | Ordinal |

| | | | |
|-------------|---|--|---------|
| | | <input type="checkbox"/> Summer Program <input type="checkbox"/> Small Learning Communities <input type="checkbox"/> Small 9 th grade learning communities <input type="checkbox"/> Block scheduling <input type="checkbox"/> Catch up course <input type="checkbox"/> 9 th grade seminar <input type="checkbox"/> Specific professional development for teachers working with 9 th graders <input type="checkbox"/> Tutoring <input type="checkbox"/> Another program <input type="checkbox"/> There are no programs (A-107) | |
| A1FREELUNCH | A1 B03A % of student body receiving free or reduced-price lunch | What percentage of the total student body in [your school] receive free or reduced lunch? (A-109) | ordinal |
| A1ELL | A1 B03B % of student body who are English language learners | What percentage of the total student body in [your school] are English Language Learners? (A-109) | ordinal |
| A1SPECIALED | A1 B03C % of student body receiving Special Education services for disabilities | What percentage of the total student body in [your school] receive Special Education services? (A-110) | ordinal |
| A1AP | A1 B03F % of student body enrolled in Advanced Placement courses | What percentage of the total student body in [your school] are enrolled in Advanced Placement courses? (A-110) | ordinal |
| A1RESOURCES | A1 E17J Lack of teacher resources and materials is a problem at this school | To what degree is each of the following matters (lack of resources) a problem at [your school]? <input type="checkbox"/> Not a problem <input type="checkbox"/> Minor problem | ordinal |

| | | | |
|--------------|---|--|-------------|
| | | <input type="checkbox"/> Moderate problem <input type="checkbox"/> Serious problem (A-128) | |
| A1TENSION | A1 E18I Frequency of student racial tensions at this school | To the best of your knowledge how often do student racial tensions occur at your high school? <input type="checkbox"/> Daily <input type="checkbox"/> At least once a week <input type="checkbox"/> At least once a month <input type="checkbox"/> On occasion <input type="checkbox"/> Never happens (A-128) | ordinal |
| A1FILLMTH | A1 C05 Ease of filling high school mathematics teaching vacancies | How easy or difficult was it to fill the high school teaching vacancies in the mathematics department in your school? Would you say... <input type="checkbox"/> Easy <input type="checkbox"/> Somewhat difficult <input type="checkbox"/> Very difficult or <input type="checkbox"/> You could not fill the vacancies in the math department? (A-112) | ordinal |
| A1FILLSCI | A1 C06 Ease of filling high school science teaching vacancies | How easy or difficult was it to fill the high school teaching vacancies in the science department in your school? Would you say... <input type="checkbox"/> Easy <input type="checkbox"/> Somewhat difficult <input type="checkbox"/> Very difficult or <input type="checkbox"/> You could not fill the vacancies in the science department? (A-113) | ordinal |
| A1MTNORETURN | A1 C09 # of 2008-2009 full-time math teachers | How many full-time high school math teachers who taught in your school last year | dichotomous |

| | | | |
|--------------|--|--|---------|
| | who did not return in 2009-2010 | (2008-2009), did not return to teach at your school this year (2009-2010)? 0 if all returned (A-113) | |
| A1STNORETURN | A1 C10 # of 2008-2009 full-time science teachers who did not return in 2009-2010 | How many full-time high school science teachers who taught in your school last year (2008-2009), did not return to teach at your school this year (2009-2010)? 0 if all returned (A-113) | Ordinal |
| A1MISBEHAVE | A1 E18L Frequency of student in-class misbehavior at this school | To the best of your knowledge how often do the following types of problems occur at your high school? Student in-class misbehavior Daily At least once a week At least once a month On occasion Never happens (A-113) | Ordinal |
| A1DISRESPECT | A1 E18M Frequency of student acts of disrespect for teachers at this school | To the best of your knowledge how often do the following types of problems occur at your high school? Student acts of disrespect for teachers Daily At least once a week At least once a month On occasion Never happens | Ordinal |

Note. Information source HSLS:09 survey in the Education Data Analysis Tool (EDAT)

Teacher variables. The importance of teachers to student success in schools is well documented in literature. This study examined factors associated with teachers that may be influential to students' perseverance and successful graduation as observed, perceived, and reported by the colleagues in their department. Table three details the variables and associated questions.

Table 3

Teacher Variables

| Variable name | Variable labels | Question wording from surveys | Measurement |
|---------------|---|---|-------------|
| M1HISP | M1 A02 Math teacher is Hispanic/Latino/Latina | Are you of Hispanic or [Latino/Latina] origin? <input type="checkbox"/> Yes <input type="checkbox"/> No (A-176) | dichotomous |
| M1WHITE | M1 A03A Math teacher is White | [In addition to learning about your Hispanic background, we would also like to know about your racial background.] Which of the following choices describe your race? You may choose more than one. (Check all that apply.) <input type="checkbox"/> White <input type="checkbox"/> Black/African American <input type="checkbox"/> Asian <input type="checkbox"/> Native Hawaiian or Other Pacific Islander <input type="checkbox"/> American Indian or Alaska Native (A-176) | nominal |
| M1BLACK | M1 A03B Math teacher is Black | [In addition to learning about your Hispanic background, we would also like to know about your racial background.] Which of the following choices describe your race? You may choose more than one. (Check all that apply.) <input type="checkbox"/> White <input type="checkbox"/> Black/African American <input type="checkbox"/> Asian <input type="checkbox"/> Native Hawaiian or Other Pacific Islander | nominal |

| | | | |
|------------|--|--|-------------|
| M1ASIAN | M1 A03C Math teacher is Asian | <input type="checkbox"/> American Indian or Alaska Native (A-176) [In addition to learning about your Hispanic background, we would also like to know about your racial background.] Which of the following choices describe your race? You may choose more than one. (Check all that apply.) | nominal |
| M1ALTCERT | M1 A16 Math teacher entered profession via alternative certification program | <input type="checkbox"/> White <input type="checkbox"/> Black/African American <input type="checkbox"/> Asian <input type="checkbox"/> Native Hawaiian or Other Pacific Islander <input type="checkbox"/> American Indian or Alaska Native (A-176) Did you enter teaching through an alternative certification program? <input type="checkbox"/> Yes <input type="checkbox"/> No | dichotomous |
| M1TEACHING | M1 B01A Math teachers in this school set high standards for teaching | (A-179) Indicate the extent to which you agree or disagree with each of the following statements about high school math teachers at your school. High school math teachers at your school set high standards for teaching. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree | ordinal |
| M1LEARNING | M1 B01B Math teachers in this school set high | (A-181) Indicate the extent to which you agree or disagree with each of the following | ordinal |

| | | | |
|--------------|---|---|---------|
| | standards for students' learning | statements about high school math teachers at your school. High school math teachers at your school set high standards for students' learning. | |
| | | <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-181) | |
| M1BELIEVE | M1 B01C Math teachers in this school believe all students can do well | Indicate the extent to which you agree or disagree with each of the following statements about high school math teachers at your school. High school math teachers at your school believe all students can do well. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-181) | nominal |
| M1CLEARGOALS | M1 B01D Math teachers in this school make goals clear to students | Indicate the extent to which you agree or disagree with each of the following statements about high school math teachers at your school. High school math teachers at your school make expectations for instructional goals clear to students. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-181) | ordinal |
| M1WORKHARD | M1B01H Math teachers in this school work hard to make sure all students learn | Indicate the extent to which you agree or disagree with each of the following statements about high school math teachers at your school. | ordinal |

| | | | |
|--------------|--|---|---------|
| | | Math teachers at your school work hard to make sure all students learn. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-182) | |
| M1FAMILY | M1 D04A Amount a student can learn is primarily related to family background | To what extent do you agree or disagree with each of the following statements as it applies to your instruction? The amount a student can learn is primarily related to family background. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-194) | ordinal |
| M1DISCIPLINE | M1 D04B Students not disciplined at home not likely to accept school discipline | To what extent do you agree or disagree with each of the following statements as it applies to your instruction? If students are not disciplined at home, they are not likely to accept any discipline at school. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-194) | ordinal |
| M1STUACHIEVE | M1 D04C Teachers are limited because home environment influences student achievement | To what extent do you agree or disagree with each of the following statements as it applies to your instruction? You are very limited in what you can achieve because a student's home environment is a large influence on his/her achievement. | ordinal |

| | | | |
|----------|--|---|-------------|
| | | <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-194) | |
| M1PARENT | M1 D04D If parents would do more for children teacher could do more for students | To what extent do you agree or disagree with each of the following statements as it applies to your instruction? If parents would do more for their children, you could do more for your students. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-194) | Ordinal |
| M1HOMEFX | M1 D04H Cannot do much because student motivation/performance depends on home | To what extent do you agree or disagree with each of the following statements as it applies to your instruction? When it comes right down to it, you cannot do much because most of a student's motivation and performance depends on his/her home environment. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-195) | ordinal |
| N1HISP | N1 A02 Science teacher is Hispanic / Latino / Latina | Are you of Hispanic or [Latino/Latina] origin? <input type="checkbox"/> Yes <input type="checkbox"/> No (A-205) | dichotomous |
| N1WHITE | N1 A03A Science teacher is White | [In addition to learning about your Hispanic background, we would also like to know about your racial | ordinal |

| | | | |
|---------|----------------------------------|---|---------|
| | | background.] Which of the following choices describe your race? You may choose more than one. (Check all that apply.) | |
| | | <input type="checkbox"/> White <input type="checkbox"/> Black/African American <input type="checkbox"/> Asian <input type="checkbox"/> Native Hawaiian or Other Pacific Islander <input type="checkbox"/> American Indian or Alaska Native (A-205) | |
| N1BLACK | N1 A03B Science teacher is Black | [In addition to learning about your Hispanic background, we would also like to know about your racial background.] Which of the following choices describe your race? You may choose more than one. (Check all that apply.) | ordinal |
| | | <input type="checkbox"/> White <input type="checkbox"/> Black/African American <input type="checkbox"/> Asian <input type="checkbox"/> Native Hawaiian or Other Pacific Islander <input type="checkbox"/> American Indian or Alaska Native (A-205) | |
| N1ASIAN | N1 A03C Science teacher is Asian | [In addition to learning about your Hispanic background, we would also like to know about your racial background.] Which of the following choices describe your race? You may choose more than one. (Check all that apply.) | ordinal |
| | | <input type="checkbox"/> White <input type="checkbox"/> Black/African American <input type="checkbox"/> Asian <input type="checkbox"/> Native Hawaiian or Other | |

| | | | |
|------------|--|--|-------------|
| | | Pacific Islander <input type="checkbox"/> American Indian or Alaska Native (A-205) | |
| N1ALTCERT | N1 A20 Science teacher entered profession via alternative certification program | Did you enter teaching through an alternative certification program? <input type="checkbox"/> Yes <input type="checkbox"/> No (A-212) | dichotomous |
| N1TEACHING | N1 C01A Science teachers in this school set high standards for teaching | Indicate the extent to which you agree or disagree with each of the following statements about high school science teachers at your school. Science teachers in this school set high standards for teaching. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-214) | ordinal |
| N1LEARNING | N1 C01B Science teachers in the school set high standards for students' learning | Indicate the extent to which you agree or disagree with each of the following statements about high school science teachers at your school. Science teachers in the school set high standards for students' learning. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-214) | ordinal |
| N1BELIEVE | N1 C01C Science teachers in this school believe all students can do well | Indicate the extent to which you agree or disagree with each of the following statements about high school science teachers at your | ordinal |

| | | | |
|--------------|--|---|---------|
| | | <p>school. Science teachers in this school believe all students can do well.</p> <p><input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree</p> | |
| N1CLEARGOALS | N1 C01D Science teachers in this school make goals clear to students | <p>(A-214)</p> <p>Indicate the extent to which you agree or disagree with each of the following statements about high school science teachers at your school. Science teachers in this school make goals clear to students.</p> <p><input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree</p> | ordinal |
| N1WORKHARD | N1 C01H Science teachers in the school work hard to make sure all students learn | <p>(A-214)</p> <p>Indicate the extent to which you agree or disagree with each of the following statements about high school science teachers at your school. Science teachers in the school work hard to make sure all students learn.</p> <p><input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree</p> | ordinal |
| N1FAMILY | N1 D04A Amount a student can learn is primarily related to family background | <p>(A-214)</p> <p>To what extent do you agree or disagree with each of the following statements as it applies to your instruction? The amount a student can learn is primarily related to family background.</p> | ordinal |

| | | | |
|--------------|--|---|---------|
| | | <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-226) | |
| N1DISCIPLINE | N1 D04B Students not disciplined at home not likely to accept school discipline | To what extent do you agree or disagree with each of the following statements as it applies to your instruction? If students are not disciplined at home, they are not likely to accept any discipline at school. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-226) | ordinal |
| N1STUACHIEVE | N1 D04C Teachers are limited b/c home environment influences student achievement | To what extent do you agree or disagree with each of the following statements as it applies to your instruction? You are very limited in what you can achieve because a student's home environment is a large influence on their achievement. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-226) | ordinal |
| N1PARENT | N1 D04D If parents would do more for children teacher could do more for students | To what extent do you agree or disagree with each of the following statements as it applies to your instruction? If parents would do more for their children, you could do more for your students. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree | ordinal |

| | | | |
|----------|---|--|---------|
| N1HOMEFX | N1 D04H Cannot do much b/c student motivation/performance depends on home | <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-226) | ordinal |
| | | To what extent do you agree or disagree with each of the following statements as it applies to your instruction? When it comes right down to it, you cannot do much because most of a student's motivation and performance depends on their home environment. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-227) | |

Note. Information source HSLS:09 survey in the Education Data Analysis Tool (EDAT)

Student variables. Students with subjective wellbeing seem to accomplish feats that overwhelm others. The researcher examined and measured factors that support students living in poverty through various constructs. Table 4 details the variables and associated questions.

Table 4

Student Variables

| Variable name | Variable labels | Question wording from surveys | Measurement |
|---------------|--|---|-------------|
| X1RACE | X1 Student's race/ethnicity-composite | A summary of the six race/ethnicity composites | dichotomous |
| S1LANG1ST | S1A07 First language 9 th grader learned to speak is English, Spanish, or other | What was the first language you learned to speak when you were a child? Was it... <input type="checkbox"/> English <input type="checkbox"/> Spanish | ordinal |

| | | | |
|--------------|--|---|---------|
| | | <input type="checkbox"/> Another language <input type="checkbox"/> English and Spanish equally or <input type="checkbox"/> English and another language equally? (A-7) | |
| S1LANG1STOS | S1A08 Non-English language 9 th grader first learned to speak as a child | What is the [other] language you first learned to speak? <input type="checkbox"/> A European language, such as French, German, or Russian <input type="checkbox"/> A Chinese language <input type="checkbox"/> A Filipino language <input type="checkbox"/> A Southeast Asian language such as Vietnamese or Thai <input type="checkbox"/> A South Asian language such as Hindi or Tamil <input type="checkbox"/> Another Asian language such as Japanese or Korean <input type="checkbox"/> A Middle Eastern language such as Arabic or Farsi, or <input type="checkbox"/> Another language (A-7) | ordinal |
| S1MTCHVALUES | S1C11A 9 TH grader's fall 2009 math teacher values/listens to students' ideas | How much do you agree or disagree with the following statements about [your math teacher]? Remember, none of your teachers or your principal will see any of the answers you provide. Your math teacher values and listens to students' ideas. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-7) | ordinal |
| S1MTCHRESPCT | S1C11B 9 th grader's fall 2009 math teacher treats students with respect | How much do you agree or disagree with the following statements about [your math teacher]? Remember, none of your teachers or your | ordinal |

| | | | |
|-------------|---|---|---------|
| | | principal will see any of the answers you provide. Your math teacher treats students with respect. | |
| | | <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-19) | |
| S1MTCHFAIR | S1C11C 9 th grader's fall 2009 math teacher treats every student fairly | How much do you agree or disagree with the following statements about [your math teacher]? Remember, none of your teachers or your principal will see any of the answers you provide. Your math teacher treats every student fairly. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-19) | ordinal |
| S1MTCHCONF | S1C11D 9 th grader's fall 2009 math teacher thinks all student can be successful | How much do you agree or disagree with the following statements about [your math teacher]? Remember, none of your teachers or your principal will see any of the answers you provide. Your math teacher thinks every student can be successful. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-19) | ordinal |
| S1MTCHTREAT | S1C11F 9 th grade's fall 2009 math teacher treats some kids better than others | How much do you agree or disagree with the following statements about [your math teacher]? Remember, none of your teachers or your | ordinal |

| | | | |
|--------------|---|---|---------|
| | | principal will see any of the answers you provide. Your math teacher treats some kids better than other kids. | |
| | | <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-19) | |
| S1MTCHMFDIFF | S1C11H 9 th grader's fall 2009 math teacher treats males/females differently | How much do you agree or disagree with the following statements about [your math teacher]? Remember, none of your teachers or your principal will see any of the answers you provide. Your math teacher treats males and females differently. | ordinal |
| | | <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-19) | |
| S1STCHVALUES | S1D11A 9 TH grader's fall 2009 science teacher values/listens to students' ideas | How much do you agree or disagree with the following statements about [your math teacher]? Remember, none of your teachers or your principal will see any of the answers you provide. Your science teacher values and listens to students' ideas. | ordinal |
| | | <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-26) | |
| S1STCHRESPCT | S1D11B 9 th grader's fall 2009 science teacher treats students with respect | How much do you agree or disagree with the following statements about [your math teacher]? Remember, none of your teachers or your | ordinal |

| | | | |
|-------------|--|--|---------|
| | | principal will see any of the answers you provide. Your science teacher treats students with respect. | |
| | | <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-26) | |
| S1STCHFAIR | S1D11C 9 th grader's fall 2009 science teacher treats every student fairly | How much do you agree or disagree with the following statements about [your math teacher]? Remember, none of your teachers or your principal will see any of the answers you provide. Your science teacher treats every student fairly. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-26) | ordinal |
| S1STCHCONF | S1D11D 9 th grader's fall 2009 science teacher thinks all student can be successful | How much do you agree or disagree with the following statements about [your math teacher]? Remember, none of your teachers or your principal will see any of the answers you provide. Your science teacher thinks every student can be successful. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-26) | ordinal |
| S1STCHTREAT | S1D11F 9 th grade's fall 2009 science teacher treats some kids better than others | How much do you agree or disagree with the following statements about [your math teacher]? Remember, none of your teachers or your | ordinal |

| | | | |
|--------------|--|--|---------|
| | | principal will see any of the answers you provide. Your science teacher treats some kids better than other kids. | |
| | | <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-26) | |
| S1STCHMFDIFF | S1D11H 9 th grader's fall 2009 science teacher treats males/females differently | How much do you agree or disagree with the following statements about [your math teacher]? Remember, none of your teachers or your principal will see any of the answers you provide. Your science teacher treats males and females differently. | ordinal |
| | | <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-26) | |
| S1SAFE | S1 E01A 9th grader feels safe at school | How much do you agree or disagree with the following statements about your current school? You feel safe at this school. | ordinal |
| | | <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-27) | |
| S1PROUD | S1 E01B 9th grader is proud to be part of his/her school | How much do you agree or disagree with the following statements about your current school? You feel proud being part of this school. | ordinal |
| | | <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree | |

| | | | |
|--------------|--|---|-------------|
| | | <input type="checkbox"/> Strongly disagree (A-27) | |
| S1TALKPROB | S1 E01C 9th grader has teacher/adult in school he/she can talk to about problems | How much do you agree or disagree with the following statements about your current school? There are always teachers or other adults in your school that you can talk to if you have a problem. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-28) | ordinal |
| S1GOODGRADES | S1 E01E Getting good grades is important to 9th grader | How much do you agree or disagree with the following statements about your current school? Getting good grades in school is important to you. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree (A-28) | ordinal |
| S1MOMTALKCLG | S1 E09A 9th grader talked to mother about going to college | Since the beginning of the last school year (2008-2009), which of the following people have you talked with about going to college? (Check all that apply.) Talked to mother about going to college. <input type="checkbox"/> Yes <input type="checkbox"/> No (A-31) | dichotomous |
| S1DADTALKCLG | S1 E09B 9th grader talked to father about going to college | Since the beginning of the last school year (2008-2009), which of the following people have you talked with about going to college? (Check all | dichotomous |

| | | | |
|--------------|--|--|-------------|
| | | that apply.) Talked to father about going to college. | |
| | | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | | (A-32) | |
| S1FRNDTLKCLG | S1 E09C 9th grader talked to friends about going to college | Since the beginning of the last school year (2008-2009), which of the following people have you talked with about going to college? (Check all that apply.) Talked to friends about going to college. | dichotomous |
| | | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | | (A-32) | |
| S1TCHTALKCLG | S1 E09D 9th grader talked to teacher about going to college | Since the beginning of the last school year (2008-2009), which of the following people have you talked with about going to college? (Check all that apply.) Talked to teacher about going to college. | dichotomous |
| | | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | | (A-32) | |
| S1CNSLTLKCLG | S1 E09E 9th grader talked to school counselor about going to college | Since the beginning of the last school year (2008-2009), which of the following people have you talked with about going to college? (Check all that apply.) Talked to school counselor about going to college. | dichotomous |
| | | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| | | (A-32) | |
| S1FRNDGRADES | S1 E12A 9th grader's closest friend gets good grades | As far as you know, are the following statements true or false for your closest | dichotomous |

| | | | |
|--------------|---|--|-------------|
| | | friend? Your closest friend gets good grades. <input type="checkbox"/> True <input type="checkbox"/> False (A-33) | |
| S1FRNDSCHOOL | S1 E12B 9th grader's closest friend is interested in school | As far as you know, are the following statements true or false for your closest friend? Your closest friend is interested in school. <input type="checkbox"/> True <input type="checkbox"/> False (A-33) | dichotomous |
| S1FRNDCLASS | S1 E12C 9th grader's closest friend attends classes regularly | As far as you know, are the following statements true or false for your closest friend? Your closest friend attends classes regularly. <input type="checkbox"/> True <input type="checkbox"/> False (A-33) | dichotomous |
| S1FRNDCLG | S1 E12D 9th grader's closest friend plans to go to college | As far as you know, are the following statements true or false for your closest friend? Your closest friend plans to go to college. <input type="checkbox"/> True <input type="checkbox"/> False (A-33) | dichotomous |
| S1HRWORK | S1E15E Hours spent working for pay on typical school day | During a typical weekday during the school year how many hours do you spend working for pay not including chores or jobs you do around your house? <input type="checkbox"/> Less than 1 hour <input type="checkbox"/> 1 to 2 hours <input type="checkbox"/> 2 to 3 hours <input type="checkbox"/> 3 to 4 hours | ordinal |

| | | | |
|--------------|---|--|---------|
| | | <input type="checkbox"/> 4 to 5 hours <input type="checkbox"/> 5 or more hours (A-35) | |
| S1MREASENJOY | S1F02H Plans to take more math courses because they enjoy studying math | What are the reasons you plan to take more math courses during high school? (Check all that apply.) <input type="checkbox"/> Taking more math courses is required to graduate <input type="checkbox"/> Your parents will want you to <input type="checkbox"/> Your teachers will want you to <input type="checkbox"/> Your school counselor will want you to <input type="checkbox"/> You are good at math <input type="checkbox"/> You will need a lot of math courses for the type of career you want <input type="checkbox"/> Most students who are like you take a lot of math courses <input type="checkbox"/> You enjoy studying math <input type="checkbox"/> Taking more math courses will be useful for getting into college <input type="checkbox"/> Taking more math courses will be useful in college <input type="checkbox"/> Your friends are going to take more math courses <input type="checkbox"/> Some other reason (A-37) | ordinal |
| S1SREASENJOY | S1F05H Plans to take more science courses because they enjoy studying science | What are the reasons you plan to take more science courses during high school? (Check all that apply.) <input type="checkbox"/> Taking more science courses is required to graduate <input type="checkbox"/> Your parents will want you to <input type="checkbox"/> Your teachers will want you to <input type="checkbox"/> Your school counselor will | ordinal |

- want you to
- ☐ You are good at science
 - ☐ You will need a lot of science courses for the type of career you want
 - ☐ Most students who are like you take a lot of science courses
 - ☐ You enjoy studying science
 - ☐ Taking more science courses will be useful for getting into college
 - ☐ Taking more science courses will be useful in college
 - ☐ Your friends are going to take more science courses
 - ☐ Some other reason
- (A-39)

Note. Information source HSLS:09 survey in the Education Data Analysis Tool (EDAT)

The first follow up occurred in 2012 when most participants should have been in the spring semester of their eleventh-grade year. Determination of the students identified as living in poverty who graduate high school was collected in the update of 2013 and included the variable in table 5.

Table 5

High school graduates

| Variable name | Variable labels | Question wording from surveys | Measurement |
|---------------|--|---|-------------|
| X3HSCOMPSTAT | X3 High school completion status (transcript and GED source updated) | HS completion status using 2013 update, transcript, and GED testing data. | ordinal |

Note. Information source HSLS:09 survey in the Education Data Analysis Tool (EDAT)

Research Design

This correlation research study used non-experimental, longitudinal design. The researcher examined student, staff, and school data collected at the national level from various districts across multiple states to address the four questions guiding this archival research. The researcher selected longitudinal design to capture and identify long-term trends in education involving the same cohort of students through multiple life checkpoints. The intent was to explore socially inequitable conditions, including racial and cultural implications, which may have effects on adolescents from poverty while in high school.

Data Collection

Once the researcher's dissertation committee approved the proposal, the researcher requested permission from the University of Houston Clear Lake Committee for the Protection of Human Subjects (CPHS). The researcher completed appropriate documents online and forwarded them to the dissertation chair for review and submission to CPHS. All data used in the study was from the HSLS:09 database, which was archival; therefore, subject risk should be minimal (Ingels et al., 2011). The researcher retrieved data available for public use from the website. The research questions (What family, school, teacher-related and subjective wellbeing factors help incoming ninth grade students identified as living in poverty remain in school and graduate high school?) required student and school information viewed as sensitive, therefore, the researcher needed access to restricted data to complete a more in-depth analysis.

After the researcher obtained CPHS approval, online permission was submitted to the Institute of Education Science (IES) for access to the restricted-use data file. Permission to use restricted data required completion of a security plan and associated

forms to protect the privacy of study participants (Accessing and Using Restricted Data, 2016). Since the University of Houston Clear Lake was legally responsible for maintaining the data on campus in a secure project room, the dissertation chair completed necessary forms for HSLS:09 data license. Terms of the license allowed seven users, which included all dissertation committee members and the researcher. Detailed stipulations for use of the restricted data was available in both the requested paperwork and the NCES web site information about the topic.

Instrumentation

Researchers charged with developing the instrument for the HSLS:09 study centered the focus around students and factors that influenced their decisions and outcomes (Ingels, Dalton, Holder, Lauff, & Burns, 2011). Children do not grow up in a vacuum; they are influenced and molded by people and elements in their environment. Various resources, including literature reviews, consultations with other agencies, and technical review panels, were used to provide accuracy and insight into the complexities of adolescents in the school system (Ingels et al., 2011). The instruments developed were field tested with appropriate audiences to ensure they captured the essence of the intent of the study, and understood high school students, influences, and their “education-related choices” (Ingels et al., 2011, p. A-3). Test-retest reliability, instrument, and content validities were reviewed by the Office of Management and Budget (OMB) and mathematicians and mathematics educators.

Questionnaires. Electronic administration of the instrument for participants was available, which was not an option in previous studies (Ingels et al., 2011). Five groups of individuals including students, parents, teachers, school administrators, and counselors

were enlisted to complete questionnaires. Counselors' questionnaires were excluded from this study. While counselors are essential staff in providing services, and assisting students with course selections, the voice of school leadership responsible for addressing inequities occurring on campus will be that of administrators.

Students. Student questionnaires were collected via computer and completed during the school day. Students unable to participate during the school day received a phone interview with the same survey. The tool consisted of nine subsections, labeled A-I, covering topics such as current and future contact information, overall school experiences, interest and perceived abilities in math and science, educational expectations, and future educational plans. The sections were presented in one of two formats, alphabetical and mixed order. Random assignment of respondents to one of two groups for completing the surveys occurred.

Parents. Surveys for the parent or guardian required identification of primary responsible care giver in completing the form, which was available in both English and Spanish. Similarly, to the process with students, computer or telephone interviews were available to parents and the document consisted of seven subsections. The questionnaire inquired about the household, including demographics, languages spoken, socioeconomic status, student's educational history, parental involvement in student's education, future aspirations for the student's education, and current and future contact information. In consideration of parent availability and hesitancy to complete study forms, modified versions asking only essential questions were available.

Teachers. Data were collected from teachers of math and science. The survey, consisting of three subsections, asked teachers to identify the courses they taught at the

current school. Respondents provided basic demographic information; professional experience; and opinions about their own departments, campus staff and administration, general school issues, and teaching and learning at their school. Teacher instruments were used to provide data about students and not designed to reflect information about educators (Ingels et al., 2011). Due to the early timing of the survey in fall of 2009, teachers did not provide academic feedback about students.

School administrators. Information from school administrators comprised two main sections divided across five topics. The first four sections include overall information about the school and the last section is specific to the principal. Some of this information may already be a part of what campuses are required to collect and report to governing agencies. School data including academic performance, student demographics, teachers, and courses were requested. Principal data asked for professional background information and explored personal beliefs ambitions (Ingels et al., 2011).

Imputed values. Data collection is an arduous process, which becomes more complicated with missing information. Researchers are responsible for determining how to address this issue to meet the needs of their studies. Missing data usually fall into one of two categories, individual non-response or item non-response (Data Editing and Imputation, 2016). Individual non-responses occur when participants are omitted, for whatever reason, from providing input to the study. Item non-response happens when respondents fail to answer a question or part of a question. The former was handled through weighting. Missed survey responses were addressed through imputation, which allowed all participants' data to be used in the study (Ingels et al., 2011). The process of imputation allowed values to be used in place of the missing data. Information for the

values was gathered from other related questions in the survey. If completed appropriately, imputation can be helpful with completing datasets.

Data Analysis Procedures

This study explored adolescents living in poverty, entering and graduating high school despite social inequities in their environment. Data used in the analysis was archival and obtained from the HSL:09 dataset, including public and restricted data files. While academic performance is important, it is not the focus of this study. Selected variables for each research question were entered into Statistical Package for the Social Science (SPSS) for analysis using correlations and multiple regressions.

Variables in the relationship study were separated into two categories, predictor variables and criterion variables (Green & Salkind, 2014). For each research question, one set of predictors were identified. Since there is only one set of predictors, the variables were treated as a single set. The criterion variable was adolescents from poverty who graduated high school. This analysis technique examined validity within the set of predictors, compared one set of predictors to another, and integrated all predictors together (Green & Salkind, 2014). Assumptions were reviewed and met prior to analysis.

Multiple regression analysis was used to predict one value when provided a second value, or what variances in the analysis model for the dependent variable were attributable to one or more of the independent variables (Larson & Farber, 2012). The criterion variable for living in poverty was dichotomous as there are two possible responses for the students in the study, living at or below poverty or those living above poverty. In this study, the data for students living below poverty was examined. Adolescents in impoverished conditions that graduate high school was examined based

on four sets of different influencing factors. Two multiple regressions methods were used, enter and stepwise.

Enter method is the default setting when analyzing variables for multiple regressions. With this setting, all independent variables are entered simultaneously into SPSS to generate the equation for prediction of the dependent variable. If the values in the Analysis of Variance (ANOVA) in the output table is significant, $p < .001$, it indicates that the regression equation model is a better predictor of the dependent variables than the mean value of the dependent variable (Field, 2009). Field (2009) states that discretion must be used when selecting and entering variables for multiple regressions as the resulting coefficients can be affected.

The stepwise method differs in that the order the variables are entered for the model is “based on a purely mathematical criterion” (Field, 2009, p. 212). As each predictor variable was entered, a removal process occurs to ensure this variable is a better fit than the others in the model. This process continues until the final regression model includes the fewest variables to predict the dependent variable. Stepwise is an acceptable method to use to create a parsimonious model for each research question. The number of variables for each research question ranges from 14 to 40. Using stepwise narrows the number of variables that interact to develop the equation and are significant to the final model.

While both methods have advantages and disadvantages, determining which to use is based on the purpose of the analysis. According to Field (2009), the “main consideration is whether you are testing a theory or merely carrying out exploratory

work” (p. 272). Since this study is exploratory in nature and covering areas with limited prior research, stepwise was performed in addition to the enter method.

Checking for multicollinearity, used in multiple regressions, was used to determine if the multiple variables were correlated, which can affect the regressions analysis (Field, 2009). Since the research questions had over 13 variables each, chances for correlation among the factors existed. Some variables, like languages, may appear as redundant variables since they were measuring similar topics. If the variables were too closely correlated, the outcome can be skewed such as displaying a large R^2 value with non-significant Beta weights in the table of coefficients.

All four research questions examined the influences of predictor variables on the criterion variable, students’ high school graduation, and used multiple regression analysis. The predictor variables were ordinal and dichotomous. RQ1, which examined how home or family-related factors shaped the target student groups’ decision to remain in high school and graduate, was the focus. The relationships, whether positive or negative, did not imply that the home or family factors led to the student’s decision to continue in school. Any correlation between the variables explained that a relationship existed (Jackson, 2010). Family predictor variables included

- family’s living arrangements, P1HGPARENT, P1MARSTAT;
- parents’ education level, P1HIDEG1, P1HIDEG2;
- parents’ employment status, P1JOBNOW1, P1JOBNOW2;
- languages spoken in the home, P1HOMELANG, P1SPANISH,
P1EUROLANG, P1CHINESE, P1FILIPINO, P1SEASIAN, P1OTHRASIAN,

P1MIDEAST, P1OTHRLANG, P1ENGLISH, P1RSLANG, P1LANG9,
P1DIFSCHLNG, P1ELLEVER, P1ELLNOW;

- income, X1POVERTY, P1INCOMECAT; and
- mobility, P1CHANGESCH.
- suspension from school, P1SUSPEND

The criterion variable was the students of poverty graduation status, X3HSCOMPSTAT. Multiple regression analysis determined the relationship between the predictor and criterion variables, and the dependent variance attributable to each independent variable

RQ 2 viewed school-related factors that influenced the target student population's decision to persevere through high school and graduate. The predictor variables focused on

- school type, performance, assistance with high school preparation, and advance placement courses, A1SCHTYPE, A1MADEAYP, A1G9OVERAGE, A1AP;
- school demographic make-up, A1FREELUNCH, A1ELL, A1SPECIALED, A1TENSION;
- teacher vacancies, A1FILLMTH, A1FILLSCI, A1MTNORETURN, A1STNORETURN; and
- teacher resources, A1RESOURCES.
- Students behaviors at school, A1MISBEHAVE, A1DISRESPECT

The criterion variable, high school graduation of students of poverty, was X3HSCOMPSTAT. The analysis identified which, if any, of the selected school factors shares a relationship with high school graduation.

Since the importance of teachers is well documented in literature, RQ3 will examine how teacher variables influenced the outcome of graduation for students from impoverished backgrounds (Daniels, 2011). The predictor variables analyzed the influence of teacher related factors. HSLS:09 includes surveys from both math and science teachers. The researcher analyzed teachers' data that included

- route of certification, M1ALTCERT, N1ALTCERT; and
- teachers' perceptions about students and learning, M1TEACHING, M1LEARNING, M1BELIEVE, M1CLEARGOALS, M1FAMILY, M1DISCIPLINE, M1STUACHIEVE, M1PARENT, M1HOMEFX, M1WORKHARD, N1TEACHING, N1LEARNING, N1BELIEVE, N1CLEARGOALS, N1FAMILY, N1DISCIPLINE, N1STUACHIEVE, N1PARENT, N1HOMEFX and N1WORKHARD.

The researcher analyzed these factors with the criterion high school graduation, X3HSCOMPSTAT, for the targeted student group.

The last question, RQ4, reviewed how self-beliefs, intrinsic motivations, or thought processes of incoming ninth grade students from poverty learned to overcome challenging adversities and complete high school. Research revealed there are strengths exhibited by certain individuals that help them overcome obstacles (Seligman & Csikszentmihalyi, 2000). This study examined

- school safety and pride, X1SAFE, S1PROUD;

- language spoken during developmental years, S1LANG1ST, S1LANG1STOS;
- students' perceptions about their teachers, S1MTCHVALUES, S1MTCHRESPCT, S1MTCHFAIR, S1MTCHCONF, S1MTCHMISTKE, S1MTCHTREAT, S1MTCHTREAT, S1MTCHMFDIFF; S1STCHVALUES, S1STCHRESPCT, S1STCHFAIR, S1STCHCONF, S1STCHTREAT, S1STCHMFDIFF;
- students having someone to talk to, S1TALKPROB, S1MOMTALKCLG, S1DADTALKCLG, S1FRNDTALKCLG, S1TCHTALKCLG, S1CNSLTALKCLG;
- the importance of grades, S1GOODGRADES, S1FRNDGRADES;
- student employment, S1HRWORK;
- taking additional math or science courses because of enjoyment, S1MREASENJOY, S1REASENJOY; and
- friends who are positive influences, S1FRNDSCHOOL, S1FRNDCLASS, and S1FRNDCLG.

Children who encounter positive, caring adults have the potential to overcome difficult conditions in their environment (Walsh, 2015). The researcher included the high school graduation variable, X3HSCompStat, in the analysis.

The researcher analyzed data to see the effect of the four sets of predictors on high school graduation of students from poverty. Multiple regressions determined the variance within each set of predictors, compared one set of predictors to another, and then combined the effects of all sets on the criterion (Green & Salkind, 2014). Each research

question addressed a different set of predictors, family, schools, teacher, and self. The researcher entered information extracted from the HSLs:09 dataset into SPSS for analysis of the relationships between each predictor set and the criterion.

SPSS produced three indices in the model summary, multiple correlation (R), squared multiple correlation (R^2), and adjusted squared multiple correlation (R^2_{adj}), which identified the predictors' effects on the criterion and significance of any tests (Green & Salkind, 2014). The researcher used the Pearson product-moment correlation coefficient (r) to identify the linear relationship and strength between the quantifiable variables (Green & Salkind, 2014). Analysis provided specified contributions to the criterion by the various predictors.

Ethical Issues

Ensuring the safety of all participants was paramount in this study. To maintain the safety of all participants the researcher

- obtained prior approval from the university and followed data security protocol explicitly;
- coded all data collected using pseudonyms to protect the respondents;
- provided any written documents using the HSLs:09 dataset to NCES for review prior to distribution
- stored SPSS data manipulated from the IES CD on a stand-alone computer with no Internet connection;
- ensured that materials were stored in a locked room on the campus of UHCL and that all data is destroyed three years after completion of the study.

CHAPTER IV: RESULTS

This quantitative study, using longitudinal data, examined factors associated with students living in poverty and its effects on high school completion rates. HSLs:09 collected base year information through surveys from students, parents, teachers, and administrators, describing the educational and social environment of the adolescents. The dependent variable, high school completion for adolescents living in poverty, was based on the 2008 U.S. Census Bureau standards. Four guiding research questions explored the influences of home, school, teachers, and adolescents' innate abilities on the students achieving high school completion.

Data Preparation for Analysis

The HSLs:09 restricted dataset consisted of over 66,000 variables representing home, school, and student responses. For the four research questions in this study, 130 variables, including the criterion for adolescents of poverty and predictors for associated home and school contexts, were required. A list of the variables and their descriptions are included in appendix A. Answer choices on the surveys were multiple choices including dichotomous, yes-no, nominal, like gender and parents in the household, and ordinal, like the Likert scale, and reserve codes for items legitimately skipped because they did not apply and participants did not respond. For this study, recoding some variables facilitated use of the SPSS program analysis.

Recoding. Variables like race and home language information had several responses that presented challenges in the statistical analysis. Dummy coding was used for race and language to make each variable have a dichotomous response of 1=affirmative to designated variable and 0=not applicable. The number of participants in

the areas of language, P1EUROLANG, P1CHINESE, P1FILIPINO, P1SEASIAN, P1SASIAN, P1OTHRASIAN, P1MIDEAST, and P1OTHLANG, had several variables with less than 50 responses. Due to the small numbers of respondents in various languages, these variables were combined to create a new variable titled OTHERLANG. The resulting languages were recoded into the following categories: P1HOMELANG, P1SPANISH, OTHERLANG, and P1ENGLISH.

Descriptive statistics. Large datasets require accuracy determinable using SPSS output tables. SPSS, on demand, created a matrix of all the variables used in the analysis and displayed the requested information in different formats, like charts, graphs, and histograms (Field, 2009). The descriptive and frequency tables reported values like the mean, median, mode, minimum, maximum, and standard deviation. Checking the entered values created a visual and total count of the data. Reviewing information entry errors increased data accuracy by presenting recoded variables, labels, frequencies of each variable, and the percentages of variable totals.

Missing values. During the recoding process, some variables that were not critical to the data analysis were changed to system missing and identified with a dot. HSLS:09 surveys had questions that were either missed, skipped, or not applicable to the respondent. The dots, which carried no value and were identified as missing in the frequency counts, affected the overall statistical calculations. When variables were analyzed and dots included, SPSS tallied and reported them as missing responses. In some instances, the missing values were greater than the actual number of responses. Van der Heijden, Donders, Stijnen, and Moons (2006) noted high probabilities of missing data in all studies regardless of researcher efforts and intentions.

Various methods are practiced to address missing values and decrease biases of studies. One method, Expectation Maximization imputation (EM), can be used to address missing values and aid analysis; however, the values had to be randomly missing (Janssen, Spronck, Dibbets, & Arntz, 2015; Little, 1988). Data for this study were preliminarily analyzed to determine if values were missing completely at random (MCAR) using Little's MCAR test. The output, which reflected missing data percentages ranging from five to over 50 for certain variables, was statistically significant indicating the data was randomly missing and possibly a result of systematic bias. EM imputation was used for research questions two through four since their data was missing at random evidenced by insignificant results.

Another technique for handling missing values providing a complete dataset is multiple imputations (MI) (Ingles et al., 2011). Due to the large amount of missing values, multiple imputations using SPSS were performed. Literature supporting the use of multiple imputations (MI) exists (Ingles et al., 2011; Manly & Wells, 2015; van der Heijden et al., 2006). MI is a process in which SPSS analyzed data patterns, generated several estimates for the missing values using "valid statistical inferences" to produce pooled results with fair accuracy (Manly & Wells, 2015, p. 399). MI is an acceptable tool to use when data is missing at random. The NCES dataset use reserve codes of -7, legitimate skip based on questionnaire responses, and -8, the participant did not respond or the question did not apply, which may contribute to incomplete responses (2014). Research question 1, family variables associated with high school completion by adolescents of poverty, consisted of several missing values; therefore, MI was used to formulate a complete dataset for analysis.

Demographic Data

The archival data from the HSLS:09 study included 940 eligible schools from ten states across the country, including Texas. The number of students eligible for the study was 25,210. The study included students randomly selected from eligible campuses and included adolescents' races (*NCES Handbook of Survey Methods*, 2014). Table six contains racial information, table seven contains gender information, and table eight contains poverty information about all 25,000 eligible participants across the United States for the HSLS:09 dataset.

Table 6

X1 Student's Race/ethnicity Composite

| Ethnicity | Frequency | Percent |
|------------------------|-----------|---------|
| American Indian | 170 | <10 |
| Asian | 2100 | 10 |
| African American | 2650 | 11 |
| Hispanic | 600 | <10 |
| Hispanic race specific | 3400 | 14 |
| More than one race | 1950 | 10 |
| Pacific Islander | 110 | <10 |
| White | 12260 | 50 |
| Missing responses | 1970 | 10 |
| Total | 25210 | 100 |

Note: Data source HSLS:09

Table 7
X1 Students' Gender Composite

| Gender | Frequency | Percent |
|-------------------|-----------|---------|
| Male | 10860 | 40 |
| Female | 10560 | 40 |
| Missing responses | 3790 | 15 |
| Total | 25210 | 100 |

Table 8
Students Identified by Poverty Levels

| Poverty level | Frequency | Percent |
|-------------------------------|-----------|---------|
| At or above poverty threshold | 14180 | 60 |
| Below poverty | 2720 | 10 |
| Missing responses | 8300 | 30 |
| Total | 25210 | 100 |

Since the focus of this study was students living in poverty, Tables nine and ten display ethnicities and genders for the 2,720 eligible participants. Eligibility criterion for this study was adolescents identified as living in poverty who completed high school, either by GED or high school diploma. Poverty indicates whether the student's family was below the 2008 poverty threshold, as set forth by the U.S. Census Bureau (HSLs:09 U13 Codebook). The study excluded adolescents living at or above poverty. The race with the most students completing high school was Caucasians with 930, while the number of males completing high school exceeded females by 30 students. Table 11 includes data collected for high completion status, variable X3HSCOMPSTAT, and totaled 2,230 students of which 2,050 obtained either a high school diploma or GED. X3 refers to year three of the study when incoming ninth graders started the study and should have been eligible for graduation.

Table 9

Students Living in Poverty by Ethnicity

| Ethnicity | Frequency | Percent |
|------------------------|-----------|---------|
| American Indian | 30 | <10 |
| Asian | 200 | 10 |
| African American | 460 | 20 |
| Hispanic | 80 | <10 |
| Hispanic race specific | 770 | 30 |
| More than one race | 240 | 10 |
| Pacific Islander | 20 | <10 |
| White | 930 | 30 |
| Missing responses | <10 | <10 |
| Total | 2730 | 100 |

Table 10

Students Living in Poverty by Gender

| Gender | Frequency | Percent |
|-------------------|-----------|---------|
| Male | 1310 | 50 |
| Female | 1280 | 50 |
| Missing responses | 130 | <10 |
| Total | 2720 | 100 |

Table 11

Students' High School Completion Status as of the 2013 Follow up Survey

| High school status | Frequency | Percent |
|---------------------|-----------|---------|
| Dropped out | 180 | 10 |
| GED | 140 | <10 |
| High school diploma | 1910 | 70 |
| Missing responses | 500 | 20 |
| Total | 2720 | 100 |

Frequency demographic data present parents' marital status in Table 12 and the education level of parent one and two in Tables 13 and 14. Over half of parent one and over 30% of parent two reported having a GED or high school diploma. Table 15 and 16, reporting parents' employment status, indicated that more parents reported employment than those reporting unemployment. Table 17 displays household income based on 2008 reported earnings. Greater than half the respondents earned \$15,000 or less annually.

Table 12

Parents' Marital Status

| Status | Frequency | Percent |
|-------------------|-----------|---------|
| Married | 1360 | 50 |
| Other | 1220 | 40 |
| Missing responses | 140 | <10 |
| Total | 2720 | 100 |

Table 13

Parent 1's Educational Attainment

| Education level | Frequency | Percent |
|---------------------------------|-----------|---------|
| Less than high school | 790 | 30 |
| High school or GED | 1380 | 50 |
| Associate's degree | 280 | 10 |
| Bachelor's degree | 180 | <10 |
| Master's degree | 40 | <10 |
| Educational specialists diploma | <10 | <10 |
| Doctoral degree | 10 | <10 |
| Missing responses | 40 | <10 |
| Total | 2720 | 100 |

Table 14
Parent 2's Educational Attainment

| Education level | Frequency | Percent |
|---------------------------------|-----------|---------|
| Less than high school | 550 | 20 |
| High school or GED | 710 | 30 |
| Associate's degree | 120 | <10 |
| Bachelor's degree | 110 | <10 |
| Master's degree | 30 | <10 |
| Educational specialists diploma | <10 | <10 |
| Doctoral degree | 10 | <10 |
| Missing responses | 1200 | 40 |
| Total | 2720 | 100 |

Table 15
Parent 1's Employment Status

| Employed | Frequency | Percent |
|-------------------|-----------|---------|
| No job | 1340 | 49 |
| Has a job | 1240 | 45 |
| Missing responses | 150 | <10 |
| Total | 2720 | 100 |

Table 16
Parent 2's Employment Status

| Employed | Frequency | Percent |
|-------------------|-----------|---------|
| No job | 660 | 20 |
| Has a job | 830 | 30 |
| Missing responses | 1230 | 45 |
| Total | 2720 | 100 |

Table 17
Household Income in 2008 Categorical Form

| Household income categories | Frequency | Percent |
|-----------------------------|-----------|---------|
| 15000 or less | 1470 | 50 |
| 15001 to 35000 | 1050 | 40 |
| 35001 to 55000 | 20 | <10 |
| Missing responses | 190 | <10 |
| Total | 2720 | 100 |

Research Question One – Family Related Factors

Research reveals the importance of a home life to children (Shonoff & Phillips, 2000). The first research question examined some variables included in the home and their effects on adolescents in school – what family related variables influenced incoming ninth grade students, identified as living in poverty, to persevere and graduate high school? “OTHERLANG” grouped the eight of the 12 languages together which resulted in a larger participant total for analysis since individually the language counts were less than 50. Resulting variables totaled 14. Visual inspection of the graphs of the variables addressed the normality assumption and the Shapiro-Wilk, which reflected $p > .05$, meant the sample distribution was normal (Field, 2009). Pearson’s Correlation determined the strength and direction of the linear relationship between parent variables and adolescents of poverty completing high school using the SPSS Bivariate Analysis. Since this factor included 14 variable correlations, the analysis required a correction to avoid over inflation of the significance level. Holm’s Sequential Bonferroni analysis reduced inflation and minimized type I errors (Green & Salkind, 2014). Calculations for the correlation coefficients among the 14 correlations resulted in a p value of less than .002

(5/20=.002). Using this calculated value, five of the 14 variables were statistically significant as indicated in Table 18.

Table 18

Correlations Among Family Variables and High School Completion

| Variables | Correlation coefficient | p-value | N |
|-------------|-------------------------|---------|------|
| P1HHPARENT | .06 | .02 | 2580 |
| P1MARSTAT | .06 | .01 | 2580 |
| P1HOMELANG | .05 | .02 | 2070 |
| P1SPANISH | .13 | .04 | 940 |
| OTHERLANG | .09 | .03 | 2720 |
| P1ENGLISH | .04 | .25 | 960 |
| P1ELLEVER | -.01 | .62 | 1710 |
| P1HIDE1 | .11 | .00* | 2200 |
| P1JOB1 | .08 | .00* | 1740 |
| P1HIDE2 | .14 | .00* | 2720 |
| P1JOB2 | .06 | .04 | 1240 |
| P1INCOME | .06 | .03 | 2080 |
| P1CHANGESCH | -.09 | .00* | 2720 |
| P1SUSPEND | -.22 | .00* | 2470 |

Note: * $p < .002$

A positive correlation existed between variables P1HIDE2, $r = .14$, $p < .00$, P1HIDE1, $r = .11$, $p < .000$, and P1JOB1, $r = .08$, $p < .00$, and high school completion. A negative correlation existed between P1SUSPEND, $r = -.22$, $p < .000$, P1CHANGESCH, $r = -.09$, $p < .00$, and high school completion. The effect size of the family variables was interpreted as weak with P1JOB1, $r = .08$, P1HIDE1, $r = .11$, P1HIDE2, $r = .14$, P1CHANGESCH, $r = -.09$, and P1SUSPEND, $r = -.22$ since the values are less than .25 (Holcomb, 2006).

Values under Collinearity Statistics, tolerance, and VIF addressed multicollinearity. Fields (2009) provided research based guidelines that the VIF should be less than 10, and the tolerance greater than 0.2. Table 19 reflects values for those parameters in which two variables violate the assumption, P1SPANISH and OTHERLANG using the enter method. Based on this data, the possibility of collinearity exists between these two variables. When collinearity is identified, the coefficients, signs, and significance may not be correct (Field. 2009). Field (2009) states when collinearity exist, there are few options to address the matter including eliminating the variables which would affect the overall model thereby questioning its accuracy. When the variables were analyzed using the stepwise method, both variables were removed and not included in the final model. This collinearity issues will be included in the limitation section of this study.

The regression equation with all 14 variables is: Predicted high school graduation= P1HHPARENT + P1MARSTAT + P1HOMELANG + P1SPANISH + P1ENGLISH + P1ELLEVER + P1HIDEG1 + P1HIDEG2 + P1JOBNOW1 + P1JOBNOW2 + P1INCOMECAT + P1CHANGSCH + P1SUSPEND, + OTHERLANG.

Since this study included several independent predictors, the analysis was multiple regression. Family variables analysis occurred both enter and stepwise methods. When the enter method is used, all variables are analyzed as a group. Stepwise, in comparison, examines each variable individually for inclusion or exclusion in the regression equation. In stepwise regressions, removal of variables with the weakest correlation occurred. This process continued until the model with the best fit for the equation resulted.

High school variable and the remaining 14 family variables entered in SPSS and the analysis focused on the R, R^2 , ANOVA, and the table of coefficients using the enter method. Durbin-Watson, analysis for assumption of independence, reported a value of 1.95, which is less than two, indicating an unlikely chance of serial correlations among the errors (Field, 2009). The model was significant as evidenced by the ANOVA table, $F(14,2700)=81.92, p<.00$. In the summary model, R reflected the criterion value predicted by the regression equation and the actual value of the variable. R^2 measured the proportion of variance explained by the predictor variables. R^2 has the propensity for

Table 19

RQ1 Family Variables Table of Coefficients Using the Enter Method

| Model | Unstandardized Coefficients | | Standardized Coefficients | | Sig. | 95.0% Confidence Interval for B | | Collinearity Statistics | |
|-------------|-----------------------------|------------|---------------------------|-------|------|---------------------------------|-------------|-------------------------|-------|
| | B | Std. Error | Beta | t | | Lower Bound | Upper Bound | Tolerance | VIF |
| (Constant) | 1.73 | .59 | | 2.95 | .00 | .57 | 2.89 | | |
| P1HHPARENT | 1.06 | .16 | .46 | 6.56 | .00 | .74 | 1.38 | .77 | 1.30 |
| P1MARSTAT | -.14 | .11 | -.08 | -1.30 | .20 | -.35 | .07 | .93 | 1.08 |
| P1SPANISH | .11 | .43 | .07 | .26 | .79 | -.73 | .95 | .06 | 17.00 |
| OTHERLANG | .28 | .42 | .17 | .66 | .51 | -.55 | 1.11 | .06 | 16.92 |
| P1ENGLISH | .24 | .14 | .11 | 1.77 | .08 | -.03 | .51 | .94 | 1.06 |
| P1ELLEVER | .13 | .19 | .04 | .67 | .50 | -.25 | .51 | .89 | 1.13 |
| P1HIDEG1 | -.06 | .05 | -.11 | -1.39 | .17 | -.15 | .03 | .56 | 1.78 |
| P1JOBNOW1 | .01 | .15 | .00 | .03 | .97 | -.29 | .30 | .55 | 1.82 |
| P1HIDEG2 | -.02 | .05 | -.04 | -.45 | .65 | -.12 | .07 | .55 | 1.81 |
| P1JOBNOW2 | .04 | .15 | .02 | .24 | .81 | -.26 | .33 | .58 | 1.72 |
| P1INCOMECAT | .02 | .02 | .06 | .79 | .43 | -.03 | .06 | .59 | 1.70 |
| P1CHNAGESCH | -.02 | .03 | -.04 | -.65 | .52 | -.08 | .04 | .84 | 1.20 |
| P1SUSPEND | .35 | .17 | .14 | 2.03 | .04 | .01 | .69 | .78 | 1.28 |
| P1HOMELANG | -.00 | .03 | .00 | -.11 | .92 | -.07 | .06 | .77 | 1.30 |

Note: Data source HSLS:09

higher values due to the small group size in the sample; whereas the adjusted R^2 can be generalized across the population. The coefficient $R = .48$, indicated that the predictors in the data set accounted for approximately 23% of the variance of the high school completion index reflected by the R^2 .

The table of coefficients, listed in Table 19, for the enter method, included all 14 variables for RQ1, and reflected the 95% confidence interval for B -values. The confidence interval meant there was a 95% reliability that the B coefficient existed between the upper and lower values in that column. The B values provided the coefficients and relationships between the predictors and the dependent variable while controlling the other variables.

Based on the B value results for P1HHPARENT and P1SUSPEND, the data reflected positive relationships between these variables and high school completion. For every P1HHPARENT response with one parent in the household, the chance of completing high school increased by 1 percent. Similarly, as P1SUSPEND increased by one “yes” response, the student had a .35 chance of completing high school. The remaining variables were not significant as evidenced by the Sig. values.

The final regression equation for the enter method with the B weight variable values is: High school completion = $1.06 (P1HHPARENT) - .14 (P1MARSTAT) + .11 (P1SPANISH) + .28 (OTHERLANG) + .24 (P1ENGLISH) + .13 (P1ELLEVER) - .06 (P1HIDEG1) + .01 (P1JOBNOW1) - .02 (P1HIDEG2) + .04 (P1JOBNOW2) + .02 (P1INCOMECAT) - .02 (P1CHANGESCH) + .35 (P1SUSPEND) - .00 (P1HOMELANG) + 1.731$.

The next analysis in the multiple regressions was stepwise. The goal in selecting stepwise was to compute a regression analysis to obtain a parsimonious model, which would produce the best prediction, using the fewest variables. The order of variable entry was based on “purely mathematical criterion” (Field, 2009, p. 212). The analysis indicated that the best combination for the prediction of high school completion among the family variables are P1HHPARENT, P1SUSPEND, P1CHANGESCH, P1HIDEG1, P1HIDEG2, P1INCOMECAT, and P1ENGLISH. The model was significant, evidenced by the ANOVA table, $F(7,2710)=143.43, p<.00$. The summary model for the stepwise method reflected a coefficient of .55, indicating that the predictors in the data set accounted for 30% of the variance of the high school completion index.

The table of coefficients for stepwise included the seven variables for RQ1, and reflected the 95% confidence interval for *B*-values. The confidence interval meant there was a 95% reliability that the *B* coefficient existed between the upper and lower values in that column. The *B* values, if significant, provided the value and relationship between predictors and the dependent variable while controlling the other variables.

Table 20 list the table of coefficients for stepwise analysis. Based on the results, the statistically significant data reflected a positive relationship between P1HHPARENT, P1SUSPEND, P1ENGLISH, P1HIDEG2, and high school graduation. As the *B*-values of these variables increased by one parent in the household, yes to suspension, yes to English spoken in the home, and each level of parent two’s education, the adolescent had a 1.97, .75, .15, .09 respectively chance of completing high school. Three variables, P1HIDEG1, P1INCOME, and P1CHANGESCH, reflected a negative relationship with

Table 20

ROI Family Variables Table of Coefficients Using Stepwise Method

| Model | Unstandardized Coefficients | | Standard-ized Coefficients | | Sig. | 95.0% Confidence Interval for B | | Correlations | | | Collinearity Statistics | |
|--------------|-----------------------------|------------|----------------------------|-------|------|---------------------------------|-------------|--------------|---------|-------|-------------------------|------|
| | B | Std. Error | Beta | t | | Lower Bound | Upper Bound | Zero-order | Partial | Part | Tolerance | VIF |
| | | | | | | | | | | | | |
| 1 (Constant) | 1.76 | 0.15 | | 12.17 | 0.00 | 1.48 | 2.04 | | | | | |
| P1 HHPARENT | 1.97 | 0.06 | 0.58 | 32.41 | 0.00 | 1.85 | 2.09 | 0.47 | 0.53 | 0.52 | 0.81 | 1.23 |
| P1ENGLISH | 0.15 | 0.04 | 0.07 | 4.06 | 0.00 | 0.08 | 0.22 | 0.07 | 0.08 | 0.07 | 0.98 | 1.02 |
| P1HIDE1 | -0.11 | 0.02 | -0.15 | -6.89 | 0.00 | -0.14 | -0.08 | -0.06 | -0.13 | -0.11 | 0.58 | 1.72 |
| P1HIDE2 | 0.09 | 0.02 | 0.13 | 5.71 | 0.02 | 0.06 | 0.13 | -0.02 | 0.11 | 0.09 | 0.54 | 1.84 |
| P1INCOMECAT | -0.03 | 0.01 | -0.10 | -4.38 | 0.01 | -0.05 | -0.02 | -0.02 | -0.08 | -0.07 | 0.55 | 1.82 |
| P1CHANGESCH | -0.04 | 0.01 | -0.14 | -7.48 | 0.00 | -0.05 | -0.03 | 0.02 | -0.14 | -0.12 | 0.72 | 1.39 |
| P1SUSPEND | 0.75 | 0.06 | 255.00 | 13.49 | 0.00 | 0.64 | 0.85 | 0.05 | 0.25 | 0.22 | 0.72 | 1.38 |

high school completion. This meant for each increase in the level of parent one's education, increased in one range of income, and increased in the number of times the student changed schools, the adolescent had a .11, .03, and .04 chance of not completing high school.

The final regression equation for the stepwise method using the *B* weight variable values is: Predicted high school graduation= 1.97 (P1HHPARENT) + .15 (P1ENGLISH) -.11 (P1HIDEG1)+ .09 (P1P1HIDEG2) -.03 (P1INCOMECAT) -.04 (P1CHANGESCH) + .75 (P1SUSPEND) +1.76.

Research Question Two – School related factors

What school related variables influenced incoming ninth grade students, identified as living in poverty, to persevere and graduate high school? Pearson's Correlation determined the strength and direction of the linear relationship between school variables and adolescents of poverty completing high school using the SPSS Bivariate Analysis. The analysis of RQ2 did not require the use of imputation as the number of participant responses were sufficient. Visual inspection of the graphs of the variables addressed the normality assumption and the Shapiro-Wilk, which reflected $p > .05$, meant the sample distribution was normal (Field, 2009). Since these variables included 15 correlations, Holm's Sequential Bonferroni calculations addressed over inflation of the significance level controlling for type I errors. Calculations of the 15 variables resulted in a p value of less than .003 ($.05/15 = .003$) required for statistical significance. Using this method, nine of the 15 variables were significant as indicated in Table 21.

Values under Collinearity Statistics, tolerance, and VIF addressed multicollinearity. Fields (2009) provided research based guidelines that the VIF should be less than 10, and the tolerance greater than 0.2. Table 21 reflects values within those parameters addressing multicollinearity. The regression equation for school variables with all 15 variables is: Predicted high school graduation = $A1SCHTYPE + A1G9OVERAGE + A1FREELUNCH + A1ELL + A1SPECIALED + A1AP + A1RESOURCES + A1TENSION + A1FILLMTH + A1FILLSCH + A1MTNORETURN + A1STNORETURN + A1MISBEHAVE + A1DISRESPECT + A1MADEAYP$.

Table 21
Correlations Among School Variables and High School Completion

| Family variables | Correlation coefficient | p-value | N |
|------------------|-------------------------|---------|------|
| A1SCHTYPE | -.04 | .04 | 2720 |
| AFREELUNCH | -.13 | .00* | 2720 |
| A1SPECIALED | -.09 | .00* | 2720 |
| A1FILLMTH | -.09 | .00* | 2720 |
| A1G9OVERAGE | -.08 | .00* | 2720 |
| A1MTHNORETURN | -.07 | .00* | 2720 |
| A1RESOURCES | -.06 | .00* | 2720 |
| A1MISBEHAVE | .09 | .00* | 2720 |
| A1AP | .10 | .00* | 2720 |
| A1DISRESPECT | .15 | .00* | 2720 |
| A1MADEAYP | -.02 | .55 | 1170 |
| A1ELL | -.04 | .05 | 2720 |
| A1TENSION | -.09 | .40 | 2720 |
| A1FILLSCI | -.05 | .02 | 2720 |
| A1STNORETURN | .02 | .45 | 2720 |

Note: * $p < .003$

Of the nine statistically significant, three were positive and six negative. A positive correlation was observed between variables A1MISBEHAVE, $r = .09$, $p < .00$, A1AP, $r = .10$, $p < .00$, and A1DISRESPECT, $r = .15$, $p < .00$ and high school completion. A negative correlation occurred among several variables: A1FREELUNCH, $r = -.13$, $p < .00$, A1SPECIALED, $r = -.09$, $p < .00$, A1FILLMTH, $r = -.09$, $p < .00$, A1G9OVERAGE, $r = -.08$, $p < .00$, A1MTHNORETURN, $r = -.07$, $p < .00$, and A1RESOURCES, $r = -.06$, $p < .00$ and high school completion. The effect size of the family variables were interpreted as weak with all $r < .25$ (Holcomb, 2006).

Multiple regression analysis was performed with the criterion variable, high school completion, using the enter method in SPSS with the 15 school variables focusing

on the R , R^2 , ANOVA, and the table of coefficients. The model was significant evidenced by the ANOVA table, $F(15,1140)=3.002$, $p<.00$. In the summary model, coefficient $R=.20$, indicated that the predictors in the data set accounted for approximately 4% of the variance of the high school completion index reflected by the R^2 .

The table of coefficients, listed in Table 22, for the enter method included all 15 variables for RQ2, and reflected the 95% confidence interval for B -values. The confidence interval meant there was a 95% reliability that the B coefficient existed between the upper and lower values in that column. The B values, if significant, provided the value and relationship between predictors and the dependent variable, while controlling for the other variables.

Based on the multiple regressions results using the enter method, the data reflected the B -values of A1MTNORETURN, $-.06$, and A1RESOURCES, $-.04$, indicating a negative relationship between these variables and high school completion. As A1MTNORETURN increased by one teacher not returning, students had a .06 chance of not completing high school; similarly, as A1RESOURCES increased by one measure on the Likert scale, the student had a .04 chance of not completing high school. A1DISRESPECT had a positive relationship with high school completion. As this variable increased by 1 frequency of occurrence, the student had a .04 chance of completing high school.

Table 22

RQ2 School Variables Table of Coefficients Using the Enter Method

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | | Correlations | | | Collinearity Statistics | |
|--------------|-----------------------------|------------|---------------------------|-------|------|---------------------------------|-------------|--------------|---------|-------|-------------------------|------|
| | B | Std. Error | Beta | | | Lower Bound | Upper Bound | Zero-order | Partial | Part | Tolerance | VIF |
| 1(Constant) | 1.92 | 0.17 | | 11.62 | 0.00 | 1.60 | 2.24 | | | | | |
| A1SCHTYPE | -0.10 | 0.06 | -0.05 | -1.69 | 0.09 | -0.22 | 0.02 | -0.04 | -0.05 | -0.05 | 0.89 | 1.13 |
| A1MADEAYP | -0.04 | 0.04 | -0.03 | -0.94 | 0.35 | -0.11 | 0.04 | -0.02 | -0.03 | -0.03 | 0.92 | 1.08 |
| A1G9OVERAGE | -0.07 | 0.04 | -0.05 | -1.70 | 0.09 | -0.15 | 0.01 | -0.06 | -0.05 | -0.05 | 0.93 | 1.08 |
| A1FREELUNCH | 0.00 | 0.00 | -0.06 | -1.71 | 0.09 | 0.00 | 0.00 | -0.07 | -0.05 | -0.05 | 0.74 | 1.35 |
| A1ELL | 0.00 | 0.00 | 0.05 | 1.60 | 0.11 | 0.00 | 0.01 | 0.01 | 0.05 | 0.05 | 0.78 | 1.29 |
| A1SPECIALED | 0.00 | 0.00 | -0.03 | -0.94 | 0.35 | -0.01 | 0.00 | -0.04 | -0.03 | -0.03 | 0.85 | 1.18 |
| A1AP | 0.00 | 0.00 | 0.04 | 1.01 | 0.31 | 0.00 | 0.01 | 0.05 | 0.03 | 0.03 | 0.71 | 1.41 |
| A1RESOURCES | -0.04 | 0.02 | -0.06 | -2.06 | 0.04 | -0.08 | 0.00 | -0.07 | -0.06 | -0.06 | 0.88 | 1.13 |
| A1TENSION | 0.00 | 0.03 | 0.01 | 0.18 | 0.86 | -0.05 | 0.05 | 0.02 | 0.01 | 0.01 | 0.85 | 1.18 |
| A1FILLMTH | 0.00 | 0.04 | 0.00 | -0.01 | 0.99 | -0.08 | 0.08 | -0.06 | 0.00 | 0.00 | 0.46 | 2.18 |
| A1FILLSCI | 0.01 | 0.04 | 0.01 | 0.34 | 0.74 | -0.07 | 0.09 | -0.04 | 0.01 | 0.01 | 0.46 | 2.17 |
| A1MTNORETURN | -0.06 | 0.02 | -0.11 | -2.86 | 0.00 | -0.10 | -0.02 | -0.08 | -0.08 | -0.08 | 0.62 | 1.62 |
| A1STNORETURN | 0.05 | 0.04 | 0.05 | 1.27 | 0.20 | -0.03 | 0.12 | 0.01 | 0.04 | 0.04 | 0.62 | 1.62 |
| A1MISBEHAVE | 0.01 | 0.02 | 0.01 | 0.37 | 0.71 | -0.03 | 0.04 | 0.07 | 0.01 | 0.01 | 0.60 | 1.66 |
| A1DISRESPECT | 0.04 | 0.02 | 0.08 | 2.11 | 0.04 | 0.00 | 0.08 | 0.13 | 0.06 | 0.06 | 0.57 | 1.77 |

Note: a. Dependent Variable: X3 High school completion status (transcript and GED source updated)

The final regression equation for the enter method with the *B* weight variable values is: High school completion = $-.10 (A1SCHTYPE) - .04 (A1MADEAYP) - .07 (A1G9OVERAGE) - .00 (A1FREELUNCH) + .00 (A1ELL) - .00 (A1SPECIALED) + .00 (A1AP) - .04 (A1RESOURCES) + .00 (A1TENSION) + .00 (A1FILLMTH) + .01 (A1FILLSCI) - .06 (A1MTNORETURN) + .05 (A1STNORETURN) + .01 (A1MISBEHAVE) + .04 (A1DISRESPECT) + 1.92$.

Multiple regressions using stepwise was performed next. The analysis indicated that the best combination for the prediction of high school completion among the variables for school factors were A1DISRESPECT, A1RESOURCES, A1FREELUNCH, A1MTNORETURN, and A1ELL. The model was significant evidenced by the ANOVA table, $F(5,1150)=7.11, p<.00$. The summary table for the stepwise model reflected a coefficient of .17, indicating that the predictors in the data set accounted for 3% of the variance of the high school completion index.

The table of coefficients for the stepwise method is listed in Table 23. Based on the results, the statistically significant data reflected a positive relationship between A1DISRESPECT, A1 FREELUNCH, A1ELL, and high school graduation. The *B*-values of these variables indicated that as A1DISRESPECT, A1FREELUNCH, and A1ELL responses increased in occurrence and one percentage point for free lunch and ELL respectively, students had a .05, .00, and .01 chance of completing high school. Conversely, A1RESOURCES, and A1MTNORETURN each exhibited a negative relationship with a value of .04 with high school completion. When these variables increased one measure on the Likert scale and the number of teachers not returning increased by one, students had a .04 chance of not completing high school.

The final regression equation using the stepwise method with the *B* weight variable values is: Predicted high school graduation = .05 (A1DISRESPECT) -.04 (A1RESOURCES) -.00 (A1FREELUNCH) -.04 (A1MTNORETURN) + .01 (A1ELL) + 1.84.

Table 23

RQ2 School Variables Table of Coefficients Using the Stepwise Method

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | | Correlations | | | Collinearity Statistics | |
|---------------|-----------------------------|------------|---------------------------|-------|------|---------------------------------|-------------|--------------|---------|-------|-------------------------|------|
| | B | Std. Error | | | | Lower Bound | Upper Bound | Zero-order | Partial | Part | Tolerance | VIF |
| 5 (Constant) | 1.84 | 0.08 | | 23.74 | 0.00 | 1.69 | 1.99 | | | | | |
| A1DISRESPECT | 0.05 | 0.02 | 0.11 | 3.44 | 0.00 | 0.02 | 0.08 | 0.13 | 0.10 | 0.10 | 0.91 | 1.10 |
| A1RESOURCES | -0.04 | 0.02 | -0.07 | -2.31 | 0.02 | -0.08 | -0.01 | -0.07 | -0.07 | -0.07 | 0.98 | 1.03 |
| A1FREELUNCH | 0.00 | 0.00 | -0.07 | -2.40 | 0.02 | 0.00 | 0.00 | -0.07 | -0.07 | -0.07 | 0.94 | 1.06 |
| A1MTHNORETURN | -0.04 | 0.02 | -0.07 | -2.35 | 0.02 | -0.07 | -0.01 | -0.08 | -0.07 | -0.07 | 0.91 | 1.10 |
| A1ELL | 0.01 | 0.00 | 0.06 | 2.05 | 0.04 | 0.00 | 0.01 | 0.01 | 0.06 | 0.06 | 0.89 | 1.12 |

a. Dependent Variable: X3 High school completion status (transcript and GED source updated)

Research Question Three – Teacher Related Factors

What teacher related variables influenced incoming ninth grade students, identified as living in poverty, to persevere and graduate high school? The analysis of RQ3 did not require the use of imputation as the number of participant responses were sufficient. Normality assumption was met through visual inspection of graphs of the variables and the Shapiro-Wilk, which reflected $p > .05$, meaning the sample distribution was normal (Field, 2009). Pearson's Correlation determined the strength and direction of the linear relationship between teacher variables and adolescents of poverty completing high school using the SPSS Bivariate Analysis.

Teacher factors consisted of 30 variable correlations. Holm's Sequential Bonferroni calculations addressed over inflation of the significance level controlling for type I errors. Calculations of the 30 variables resulted in a p value of less than .003 ($.05/30 = .001$) required for statistical significance. Using this method, two of the 30 variables were significant as indicated in Table 24.

Values under Collinearity Statistics, tolerance, and VIF addressed multicollinearity. Fields (2009) provided research based guidelines that the VIF should be less than 10, and the tolerance greater than 0.2. The coefficients in Table 24 reflect values of those parameters. With the exception of M1WHITE and M1BLACK, the remaining values reflected non-multicollinearity.

A positive correlation occurred between the variable N1CLEARGOALS, $r = .09$, $p < .00$, and high school graduation; while a negative relationship occurred with N1FAMILY, $r = -.08$, $p < .000$, and high school completion. The effect size of the

significant teacher variables were interpreted as weak with r values less than .25 (Holcomb, 2006).

The regression equation for teacher variables with all 30 variables is: Predicted high school graduation rate= M1HISPANIC+ M1WHITE + M1BLACK+ M1ASIAN + M1ALTCERT + M1TEACHING + M1LEARNING + M1BELIEVE + M1CLEARGOALS + M1WORKHARD + M1FAMILY + M1DISCIPLINE + M1STUACHIEVE + M1PARENT + M1HOMEFX + N1HISPANIC+ N1WHITE + N1BLACK+ N1ASIAN + N1ALTCERT + N1TEACHING + N1LEARNING + N1BELIEVE + N1CLEARGOALS + N1WORKHARD + N1FAMILY + N1DISCIPLINE + N1STUACHIEVE + N1PARENT + N1HOMEFX.

Table 24

Correlations Among Teacher Variables and High School Completion

| Teacher variables | Correlation coefficient | p-value | N |
|-------------------|-------------------------|---------|------|
| M1HISPANIC | -.01 | .75 | 1960 |
| M1WHITE | -.01 | .79 | 1930 |
| M1BLACK | .05 | .04 | 1930 |
| M1ASIAN | -.05 | .03 | 1930 |
| M1ALTCERT | -.05 | .02 | 1950 |
| M1TEACHING | -.04 | .05 | 2720 |
| M1LEARNING | .01 | .65 | 2720 |
| M1BELIEVE | -.00 | .82 | 2720 |
| M1CLEARGOALS | .01 | .68 | 2720 |
| M1WORKHARD | .00 | .98 | 2720 |
| M1FAMILY | .01 | .65 | 2720 |
| M1DISCIPLINE | .04 | .07 | 2720 |
| M1STUACHIEVE | .02 | .41 | 2720 |
| M1PARENT | .01 | .63 | 2720 |
| M1HOMEFX | .02 | .28 | 2720 |
| N1HISPANIC | .02 | .52 | 1700 |

| | | | |
|--------------|------|------|------|
| N1WHITE | .01 | .75 | 1690 |
| N1BLACK | -.02 | .43 | 1690 |
| N1ASIAN | -.01 | .85 | 1690 |
| N1ALTCERT | -.05 | .03 | 1700 |
| N1TEACHING | .03 | .09 | 2720 |
| N1LEARNING | -.04 | .05 | 2720 |
| N1BELIEVE | .03 | .14 | 2720 |
| N1CLEARGOALS | .09 | .00* | 2720 |
| N1WORKHARD | .05 | .01 | 2720 |
| N1FAMILY | -.08 | .00* | 2720 |
| N1DISCIPLINE | .03 | .08 | 2720 |
| N1STUACHIEVE | .04 | .83 | 2720 |
| N1PARENT | -.00 | .87 | 2720 |
| N1HOMEFX | .02 | .38 | 2720 |

Note: $p < .001$

SPSS analyzed teacher variables using both enter and stepwise, the third set of predictors. Multiple regressions using the enter method analyzed the 30 teacher variables and high school completion in SPSS. The model summary was significant based on the ANOVA table, $F(30, 1340)=2.475, p < .00$. In the summary model, coefficient $R = .23$, indicated that the predictors in the data set accounted for approximately 5% of the variance of the high school completion index reflected by the R^2 .

The table of coefficients for the enter method included all 30 variables for RQ3, and reflected the 95% confidence interval for B -values. The confidence interval meant there was a 95% reliability that the B coefficient existed between the upper and lower values in that column. The B values, if significant, provided the value and relationship between predictors and the dependent variable, when the other variables are controlled. The table of coefficients calculations included an output for the data reflected in table 25.

A weak, positive relationship resulted from N1WORKHARD and M1LEARNING, therefore, as these variables increased by one Likert measure, students had a .08 and .09 chance of completing high school. The data showed the *B*-values of M1TEACHING, -.14, N1LEARNING, -.12, M1ALTCERT, -.07, and N1FAMILY, -.06, exhibited a weak, negative relationship between these variables and high school completion. Therefore, as each variable increased by one measure on the Likert scale, students had a .14, .12, .07, and .06 chance of not completing high school.

Regression equation using enter method was: Predicted high school graduation rate= -.11 (M1HISPANIC)+ .12 (M1WHITE) + .26 (M1BLACK)-.15 (M1ASIAN) - .07(M1ALTCERT) -.14 (M1TEACHING) +.09 (M1LEARNING) -.03 (M1BELIEVE) +.05(M1CLEARGOALS) +.03 (M1WORKHARD) + .004 (M1FAMILY) + .03 (M1DISCIPLINE) -.002 (M1STUACHIEVE) -.01 (M1PARENT) + .002 (M1HOMEFX) + .09 (N1HISPANIC) -.04 (N1WHITE) -.07 (N1BLACK) - .001 (N1ASIAN) -.05 (N1ALTCERT) + .05 (N1TEACHING) -.12 (N1LEARNING) + .001 (N1BELIEVE) + .06 (N1CLEARGOALS) + .08 (N1WORKHARD) -.06 (N1FAMILY) +.02 (N1DISCIPLINE) + .02 (N1STUACHIEVE) -.01 (N1PARENT) + .04 (N1HOMEFX) + 157.

The next multiple regressions analysis was the stepwise method. The results indicated that the best combination for the prediction of high school completion among the variables for teacher included M1ASIAN, N1FAMILY, M1ALTCERT, M1BLACK, N1WORKHARD, N1LEARNING, and N1CLEARGOALS. The model was significant as evidenced by the ANOVA table, $F(7,1360)=6.61$, $p<.00$. The summary table for the

stepwise model reflected a coefficient of .18, indicating that the predictors in the data set accounted for 3% of the variance of the high school completion index.

Table 26 listed the table of coefficients for the stepwise method. Based on the results, the data reflected a positive relationship between M1BLACK, N1WORKHARD, N1CLEARGOALS, and high school graduation. The *B*-values of .14, .09, and .07, indicated that as M1BLACK increased by one respondent identifying as Black, N1WORKHARD, and N1CLEARGOALS increased by one Likert measure, students had a .14, .09, and .07 chance of completing high school. A negative relationship occurred between M1ASIAN, M1ALTCERT, M1FAMILY, and N1LEARNING with values of -.25, -.08, -.04, and -.11. When these variables increased by one race response of Asian, one participant's affirmative response for alternative certification, or increase by one measure on the Likert scale, the adolescent had a high .25, .08, .04, and .11 chance of not completing high school.

The final regression equation using the stepwise method with the *B* weight variable values is: Predicted high school graduation= .14 (M1BLACK) + .09 (N1WORKHARD) + .07 (N1CLEARGOALS) - .25 (M1ASIAN) - .04 (M1FAMILY) - .08 (M1ALTCERT) - .11 (N1LEARNING) + 1.82.

Table 25

RQ3 Coefficients Using Enter Method

| Model | Unstandardized Coefficients | | Standardized Coefficients | | Sig. | 95.0% Confidence Interval for B | | Correlations | | | Collinearity Statistics | |
|--------------|-----------------------------|------------|---------------------------|-------|------|---------------------------------|-------------|--------------|---------|-------|-------------------------|------|
| | B | Std. Error | Beta | t | | Lower Bound | Upper Bound | Zero-order | Partial | Part | Tolerance | VIF |
| (Constant) | 1.57 | 0.24 | | 6.62 | 0.00 | 1.10 | 2.03 | | | | | |
| M1HISPANIC | -0.11 | 0.08 | -0.04 | -1.29 | 0.20 | -0.27 | 0.06 | -0.04 | -0.04 | -0.03 | 0.80 | 1.25 |
| M1WHITE | 0.12 | 0.15 | 0.07 | 0.83 | 0.41 | -0.17 | 0.42 | 0.01 | 0.02 | 0.02 | 0.11 | 9.54 |
| M1BLACK | 0.26 | 0.16 | 0.12 | 1.66 | 0.10 | -0.05 | 0.57 | 0.06 | 0.05 | 0.04 | 0.13 | 7.59 |
| M1ASIAN | -0.15 | 0.15 | -0.05 | -0.98 | 0.33 | -0.44 | 0.15 | -0.08 | -0.03 | -0.03 | 0.28 | 3.58 |
| M1ALTCERT | -0.07 | 0.04 | -0.06 | -2.02 | 0.04 | -0.14 | 0.00 | -0.07 | -0.06 | -0.05 | 0.90 | 1.11 |
| M1TEACHING | -0.14 | 0.05 | -0.15 | -2.96 | 0.00 | -0.23 | -0.05 | -0.03 | -0.08 | -0.08 | 0.29 | 3.41 |
| M1LEARNING | 0.09 | 0.05 | 0.10 | 2.07 | 0.04 | 0.01 | 0.18 | 0.01 | 0.06 | 0.06 | 0.29 | 3.48 |
| M1BELIEVE | -0.03 | 0.03 | -0.04 | -1.12 | 0.27 | -0.09 | 0.03 | 0.00 | -0.03 | -0.03 | 0.63 | 1.60 |
| M1CLEARGOALS | 0.05 | 0.04 | 0.05 | 1.32 | 0.19 | -0.02 | 0.11 | 0.03 | 0.04 | 0.04 | 0.55 | 1.81 |
| M1WORKHARD | 0.03 | 0.03 | 0.04 | 1.14 | 0.26 | -0.02 | 0.09 | 0.03 | 0.03 | 0.03 | 0.67 | 1.48 |
| M1FAMILY | 0.00 | 0.02 | 0.01 | 0.16 | 0.87 | -0.04 | 0.05 | 0.02 | 0.00 | 0.00 | 0.72 | 1.38 |
| M1DISCIPLINE | 0.03 | 0.02 | 0.03 | 1.05 | 0.30 | -0.02 | 0.07 | 0.04 | 0.03 | 0.03 | 0.67 | 1.49 |
| M1STUACHIEVE | 0.00 | 0.03 | 0.00 | -0.06 | 0.96 | -0.06 | 0.05 | 0.03 | 0.00 | 0.00 | 0.56 | 1.78 |
| M1PARENT | -0.01 | 0.02 | -0.01 | -0.47 | 0.64 | -0.06 | 0.04 | 0.02 | -0.01 | -0.01 | 0.76 | 1.32 |

| | | | | | | | | | | | | |
|--------------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|------|
| M1HOMEFX | 0.00 | 0.03 | 0.00 | 0.06 | 0.95 | -0.05 | 0.06 | 0.01 | 0.00 | 0.00 | 0.69 | 1.45 |
| N1HISPANIC | 0.09 | 0.08 | 0.04 | 1.23 | 0.22 | -0.06 | 0.24 | 0.03 | 0.03 | 0.03 | 0.81 | 1.24 |
| N1WHITE | -0.04 | 0.10 | -0.02 | -0.37 | 0.71 | -0.24 | 0.17 | 0.01 | -0.01 | -0.01 | 0.20 | 4.98 |
| N1BLACK | -0.07 | 0.11 | -0.04 | -0.70 | 0.49 | -0.28 | 0.13 | -0.02 | -0.02 | -0.02 | 0.26 | 3.81 |
| N1ASIAN | 0.00 | 0.11 | 0.00 | -0.01 | 0.99 | -0.21 | 0.21 | 0.00 | 0.00 | 0.00 | 0.51 | 1.95 |
| N1ALTCERT | -0.05 | 0.03 | -0.05 | -1.70 | 0.09 | -0.12 | 0.01 | -0.06 | -0.05 | -0.05 | 0.94 | 1.06 |
| N1TEACHING | 0.05 | 0.04 | 0.05 | 1.17 | 0.24 | -0.03 | 0.13 | 0.03 | 0.03 | 0.03 | 0.42 | 2.41 |
| N1LEARNING | -0.12 | 0.04 | -0.13 | -2.97 | 0.00 | -0.19 | -0.04 | -0.03 | -0.08 | -0.08 | 0.39 | 2.56 |
| N1BELIEVE | 0.00 | 0.03 | 0.00 | 0.03 | 0.98 | -0.05 | 0.06 | 0.03 | 0.00 | 0.00 | 0.63 | 1.59 |
| N1CLEARGOALS | 0.06 | 0.03 | 0.06 | 1.91 | 0.06 | 0.00 | 0.12 | 0.06 | 0.05 | 0.05 | 0.68 | 1.47 |
| N1WORKHARD | 0.08 | 0.04 | 0.08 | 2.30 | 0.02 | 0.01 | 0.15 | 0.06 | 0.06 | 0.06 | 0.53 | 1.89 |
| N1FAMILY | -0.06 | 0.02 | -0.09 | -2.73 | 0.01 | -0.11 | -0.02 | -0.08 | -0.07 | -0.07 | 0.71 | 1.42 |
| N1DISCIPLINE | 0.02 | 0.02 | 0.03 | 0.85 | 0.40 | -0.03 | 0.07 | 0.02 | 0.02 | 0.02 | 0.65 | 1.54 |
| N1STUACHIEVE | 0.02 | 0.03 | 0.02 | 0.61 | 0.54 | -0.04 | 0.07 | 0.01 | 0.02 | 0.02 | 0.57 | 1.77 |
| N1PARENT | -0.01 | 0.03 | -0.02 | -0.51 | 0.61 | -0.06 | 0.04 | -0.01 | -0.01 | -0.01 | 0.69 | 1.46 |
| N1HOMEFX | 0.04 | 0.03 | 0.05 | 1.54 | 0.12 | -0.01 | 0.09 | 0.02 | 0.04 | 0.04 | 0.70 | 1.44 |

a. Dependent Variable: X3 High school completion status (transcript and GED source updated)

Table 26
RQ3 Coefficients Using Stepwise Method

| Model | Unstandardized | | Standardized | t | Sig. | 95.0% Confidence | | Correlations | | | Collinearity | |
|--------------|----------------|--------------|----------------|-------|------|------------------|-------------|--------------|---------|-------|--------------|------|
| | Coefficients | Coefficients | Interval for B | | | Statistics | | | | | | |
| | B | Std. Error | Beta | | | Lower Bound | Upper Bound | Zero-order | Partial | Part | Tolerance | VIF |
| 7 (Constant) | 1.82 | 0.08 | | 23.66 | 0.00 | 1.67 | 1.97 | | | | | |
| M1ASIAN | -0.25 | 0.08 | -0.08 | -3.06 | 0.00 | -0.40 | -0.09 | -0.08 | -0.08 | -0.08 | 0.99 | 1.02 |
| M1FAMILY | -0.04 | 0.02 | -0.05 | -2.00 | 0.05 | -0.08 | 0.00 | -0.08 | -0.05 | -0.05 | 0.98 | 1.03 |
| M1ALTCERT | -0.08 | 0.04 | -0.06 | -2.21 | 0.03 | -0.15 | -0.01 | -0.07 | -0.06 | -0.06 | 0.95 | 1.06 |
| M1BLACK | 0.14 | 0.06 | 0.07 | 2.43 | 0.02 | 0.03 | 0.26 | 0.06 | 0.07 | 0.07 | 0.97 | 1.03 |
| N1WORKHARD | 0.09 | 0.03 | 0.10 | 2.77 | 0.01 | 0.03 | 0.16 | 0.06 | 0.08 | 0.07 | 0.60 | 1.67 |
| N1LEARNING | -0.11 | 0.03 | -0.12 | -3.37 | 0.00 | -0.17 | -0.04 | -0.03 | -0.09 | -0.09 | 0.60 | 1.67 |
| N1CLEARGOALS | 0.07 | 0.03 | 0.07 | 2.24 | 0.03 | 0.01 | 0.12 | 0.06 | 0.06 | 0.06 | 0.72 | 1.40 |

a. Dependent Variable: X3 High school completion status (transcript and GED source updated)

Research Question Four – Student Subjective Wellbeing Related Factors

What subjective wellbeing related variables influenced incoming ninth grade students, identified as living in poverty, to persevere and graduate high school? The analysis of RQ4 did not require the use of imputation as the number of participant responses were sufficient. Visual inspection of the graphs of the variables addressed the normality assumption and the Shapiro-Wilk, which reflected $p > .05$, meant the sample distribution was normal (Field, 2009). Pearson's Correlation determined the strength and direction of the linear relationship between student subjective well-being variables and adolescents of poverty completing high school using the SPSS Bivariate Analysis. Race, gender, and language were recoded using dummy variables to facilitate analysis. Race and gender provided descriptive statistics. These variables were not the focus of this study and therefore not included in the analysis.

Student innate factors consisted of 40 variable correlations. Holm's Sequential Bonferroni analysis reduced inflation and minimized type I errors of the 40 variable correlations (Green & Salkind, 2014). Calculations of the 40 variables resulted in a p value of less than .001 ($.05/40 = .001$) required for statistical significance. Using this method, eight of the 40 variables were significant as indicated in Table 27.

Table 27

RQ4 Correlation Between Student Subjective Wellbeing and High School

Graduation

| Teacher variables | Correlation coefficient | p value | N |
|-------------------|-------------------------|-----------|------|
| S1MTCHVALUES | -.04 | .14 | 1830 |
| S1MTCHRESPCT | -.04 | .07 | 1830 |
| S1MTCHFAIR | -.05 | .03 | 1820 |

| | | | |
|---------------------|------|------|------|
| S1MTCHCONF | -.04 | .11 | 1820 |
| S1MTCHTREAT | .03 | .23 | 1830 |
| S1MTCHMFDIFF | .05 | .03 | 1820 |
| S1STCHVALUES | -.03 | .23 | 1630 |
| S1STCHRESPCT | .06 | .06 | 1620 |
| S1STCHFAIR | -.06 | .02 | 1610 |
| S1STCHCONF | -.02 | .40 | 1620 |
| S1STCHTREAT | -.01 | .61 | 1620 |
| S1STCHMFDIFF | .03 | .26 | 1620 |
| S1SAFE | -.05 | .01 | 2130 |
| S1PROUD | -.09 | .00* | 2120 |
| S1GOODGRADES | -.18 | .00* | 2130 |
| S1FRDNGRADES | -.10 | .00* | 2100 |
| S1FRNDSCHOOL | -.05 | .01 | 2100 |
| S1FRNDCLASS | -.13 | .00* | 2100 |
| S1TALKPROB | -.06 | .003 | 2120 |
| S1MOMTLKCLG | .10 | .00* | 2080 |
| S1DADTLKCLG | .06 | .00 | 1790 |
| S1FRNDTLKCLG | .05 | .02 | 2100 |
| S1TCHTLKCLG | -.01 | .74 | 2100 |
| S1CNSLTLKCLG | -.03 | .19 | 2100 |
| S1FRNDCLG | -.15 | .00* | 2080 |
| S1HRWORK | -.10 | .00* | 1990 |
| S1MREASENJOY | .02 | .50 | 2030 |
| S1SREASENJOY | .00 | .84 | 1980 |
| ENGLISH | .04 | .08 | 2230 |
| SPANISH | .02 | .31 | 2230 |
| ENGLISHSPANEQUAL | .02 | .33 | 2230 |
| ENGLISHANOTHEREQUAL | .04 | .08 | 2230 |
| EUROPEAN | .01 | .81 | 2230 |
| CHINESE | .04 | .04 | 2230 |
| FILIPINO | .02 | .40 | 2230 |
| SEASIAN | .03 | .12 | 2230 |
| SEASIANHINDI | .04 | .10 | 2230 |
| OTHERJAPANESE | .03 | .16 | 2230 |
| MIDEASTARABIC | .01 | .62 | 2230 |
| ANOTHER LANG | .07 | .00* | 2230 |

Note: * $p < .001$

A positive correlation occurred in one significant variable: S1MOMTLKCLG, $r=.10, p<.001$ and high school completion. Of the significant remaining seven variables, a negative correlation occurred: S1PROUD, $r=-.09, p<.001$, S1GOODGRADES, $r=-.18, p<.001$, S1FRNDGRADES, $r=-.10, p<.001$, S1FRNDCLASS, $r=-.13, p<.001$, S1FRNDCLG, $r=-.15, p<.001$, S1HRWORK, $r=-.10, p<.001$, ANOTHERLANG, $r=-.07, p<.001$ listed in Table 22. The effect size of the student subjective wellbeing variables resulted in weak correlations with all r values presented as less than .25 (Holcomb, 2006).

Values under Collinearity Statistics, tolerance, and VIF addressed multicollinearity. Fields (2009) provided research-based guidelines that the VIF should be less than 10, and the tolerance greater than 0.2. The coefficients in Table 27 reflect values within those parameters indicating non-multicollinearity.

The regression equation for student subjective wellbeing variables with all variables is: Predicted high school graduation= S1MTCHVALUES + S1MTCHRESPCT + S1MTCHFAIR + S1MTCHCONF + S1MTCHTREAT+ S1MTCHMFDIFF + S1STCHVALUES + S1STCHRESPCT + S1STCHFAIR + S1STCHCONF + S1STCHTREAT+ S1STCHMFDIFF + S1SAFE + S1PROUD + S1TALKPROB + S1GOODGRADES + S1MOMTLKCLG + S1DADTLKCLG + S1FRNDTLKCLG + S1TCHTLKCLG + S1CNSLTLKCLG + S1FRNDGRADES + S1FRNDSCHOOL + S1FRNDCLASS + S1FRNDCLG + S1HRWORK + S1MREASENJOY + S1REASENJOY + English + Spanish + English and Spanish equally + English and another language equally + European + Chinese + Filipino + SEAsian + SAsianHindi + OtherJapanese + MidEastArabic + Another language.

Table 28

RQ 4 Coefficients Multiple Regression Using Enter Method

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | | Correlations | | | Collinearity Statistics | |
|--------------|-----------------------------|------------|---------------------------|--------|------|---------------------------------|-------------|--------------|---------|-------|-------------------------|-------|
| | B | Std. Error | Beta | | | Lower Bound | Upper Bound | Zero order | Partial | Part | Toler- ance | VIF |
| | | | | | | | | | | | | |
| (Constant) | 2.474 | .193 | | 12.805 | .000 | 2.094 | 2.853 | | | | | |
| S1MTCHVALUES | .051 | .034 | .068 | 1.498 | .134 | -.016 | .118 | .025 | .048 | .046 | .449 | 2.229 |
| S1MTCHRESPCT | .029 | .043 | .036 | .684 | .494 | -.055 | .113 | -.007 | .022 | .021 | .346 | 2.893 |
| S1MTCHFAIR | -.042 | .039 | -.058 | -1.091 | .276 | -.119 | .034 | -.029 | -.035 | -.033 | .329 | 3.035 |
| S1MTCHCONF | .012 | .037 | .014 | .317 | .751 | -.061 | .085 | .014 | .010 | .010 | .463 | 2.158 |
| S1MTCHTREAT | .012 | .029 | .018 | .405 | .686 | -.044 | .068 | .009 | .013 | .012 | .451 | 2.217 |
| S1MTCHMFDIFF | -.002 | .029 | -.003 | -.061 | .952 | -.059 | .055 | .017 | -.002 | -.002 | .509 | 1.964 |
| S1STCHVALUES | .001 | .034 | .002 | .036 | .971 | -.066 | .068 | .001 | .001 | .001 | .440 | 2.273 |
| S1STCHRESPCT | .003 | .045 | .004 | .072 | .942 | -.085 | .091 | -.020 | .002 | .002 | .307 | 3.261 |
| S1STCHFAIR | -.091 | .039 | -.127 | -2.354 | .019 | -.167 | -.015 | -.032 | -.075 | -.072 | .323 | 3.092 |
| S1STCHCONF | .087 | .036 | .110 | 2.384 | .017 | .015 | .158 | .034 | .076 | .073 | .438 | 2.285 |
| S1STCHTREAT | -.063 | .027 | -.102 | -2.365 | .018 | -.116 | -.011 | -.051 | -.076 | -.072 | .498 | 2.009 |
| S1STCHMFDIFF | .041 | .029 | .057 | 1.383 | .167 | -.017 | .098 | .021 | .044 | .042 | .560 | 1.786 |
| S1SAFE | .012 | .030 | .015 | .405 | .686 | -.046 | .070 | -.027 | .013 | .012 | .695 | 1.438 |
| S1PROUD | -.024 | .027 | -.034 | -.892 | .373 | -.077 | .029 | -.056 | -.029 | -.027 | .636 | 1.573 |
| S1TALKPROB | -.024 | .025 | -.035 | -.951 | .342 | -.072 | .025 | -.034 | -.031 | -.029 | .689 | 1.451 |
| S1GOODGRADES | -.116 | .029 | -.137 | -3.950 | .000 | -.174 | -.059 | -.154 | -.126 | -.121 | .774 | 1.292 |
| S1MOMTLKCLG | .026 | .043 | .021 | .598 | .550 | -.059 | .110 | .074 | .019 | .018 | .722 | 1.384 |
| S1DADTLKCLG | .006 | .037 | .006 | .169 | .866 | -.066 | .079 | .031 | .005 | .005 | .730 | 1.370 |
| S1FRNDTLKCLG | .016 | .035 | .015 | .445 | .656 | -.053 | .084 | .034 | .014 | .014 | .810 | 1.234 |

| | | | | | | | | | | | | |
|----------------------|-------|------|-------|--------|------|-------|-------|-------|-------|-------|------|-------|
| S1TCHTLKCLG | -.025 | .043 | -.021 | -.585 | .558 | -.111 | .060 | -.021 | -.019 | -.018 | .759 | 1.318 |
| S1CNSLTLKCLG | -.069 | .045 | -.052 | -1.539 | .124 | -.156 | .019 | -.050 | -.049 | -.047 | .824 | 1.213 |
| S1FRDNGRADES | -.003 | .055 | -.002 | -.050 | .960 | -.110 | .104 | -.071 | -.002 | -.002 | .804 | 1.243 |
| S1FRNDSCHOOL | -.015 | .039 | -.013 | -.379 | .705 | -.090 | .061 | -.076 | -.012 | -.012 | .760 | 1.315 |
| S1FRNDCLASS | -.194 | .076 | -.084 | -2.571 | .010 | -.343 | -.046 | -.131 | -.082 | -.079 | .878 | 1.139 |
| S1FRNDCLG | -.164 | .055 | -.100 | -2.961 | .003 | -.273 | -.055 | -.135 | -.095 | -.091 | .815 | 1.227 |
| S1HRWORK | -.044 | .015 | -.093 | -2.955 | .003 | -.073 | -.015 | -.113 | -.094 | -.090 | .942 | 1.062 |
| S1MREASENJOY | -.027 | .041 | -.022 | -.662 | .508 | -.107 | .053 | .013 | -.021 | -.020 | .865 | 1.156 |
| S1SREASENJOY | -.030 | .040 | -.025 | -.761 | .447 | -.109 | .048 | -.008 | -.024 | -.023 | .867 | 1.154 |
| English | .023 | .052 | .014 | .447 | .655 | -.079 | .125 | .032 | .014 | .014 | .930 | 1.075 |
| Spanish | .103 | .047 | .070 | 2.197 | .028 | .011 | .196 | .048 | .070 | .067 | .915 | 1.093 |
| Englishanother equal | .037 | .110 | .013 | .338 | .736 | -.179 | .254 | .054 | .011 | .010 | .601 | 1.663 |
| European | .081 | .180 | .015 | .446 | .656 | -.274 | .435 | .032 | .014 | .014 | .852 | 1.173 |
| Chinese | .133 | .116 | .037 | 1.152 | .250 | -.094 | .360 | .049 | .037 | .035 | .900 | 1.111 |
| Filipino | .082 | .181 | .014 | .454 | .650 | -.273 | .437 | .008 | .015 | .014 | .954 | 1.048 |
| SEAsian | .063 | .142 | .015 | .441 | .659 | -.216 | .342 | .027 | .014 | .013 | .777 | 1.287 |
| SAsianHindi | .115 | .147 | .025 | .778 | .437 | -.175 | .404 | .039 | .025 | .024 | .887 | 1.128 |
| OtherJapanese | .115 | .169 | .021 | .679 | .497 | -.217 | .446 | .032 | .022 | .021 | .973 | 1.028 |
| MidEastArabic | .004 | .159 | .001 | .028 | .978 | -.307 | .316 | -.002 | .001 | .001 | .900 | 1.111 |
| Another language | .064 | .109 | .019 | .589 | .556 | -.150 | .278 | .027 | .019 | .018 | .887 | 1.128 |

Note: Dependent Variable: X3 High school completion status (transcript and GED source updated)

Student variables and high school completion analysis occurred using SPSS for both enter and stepwise methods. The criterion variable, high school completion, was entered into SPSS with all 40 variables from the student questionnaires for multiple regression analysis first using the enter method. The model summary was significant based on the ANOVA table, $F(40, 1810)=4.127, p<.00$. The summary model, coefficient $R=.30$, indicated that the predictors in the data set accounted for approximately 9% of the variance of the high school completion index reflected by the R^2 .

The table of coefficients for the enter method included all 40 variables for RQ4, and reflected the 95% confidence interval for B -values. The confidence interval meant there was a 95% reliability that the B coefficient existed between the upper and lower values in that column. The B values provided the value and relationship between predictors and the dependent variable, while controlling for the other variables. The table of coefficients calculations included an output for the data reflected in Table 28. Based on the results, the data indicated two significant variables, S1STCHCONF and SPANISH, had a positive relationship with high school completion. For every increased measure of one on the Likert scale, students' perception that the science teacher thought all students could be successful and a positive response to Spanish spoken in the home, the adolescent had a .09 and .10 chance of completing high school.

The significant coefficients B -values that reflected a negative relationship were S1STCHFAIR, S1STCHTREAT, S1 GOODGRADES, S1FRNDCLASS, S1FRNDCLG S1HRWORK which meant as the student efficacy variables increased by 1 measure on the Likert scale, students had a .09, .06, .12, .19, .16, .04 respectively, chance of not completing high school.

The regression equation using the enter method was predicted high school graduation= .05 (S1MTCHVALUES) + .03 (S1MTCHRESPCT) -.04 (S1MTCHFAIR) + .01 (S1MTCHCONF) + .01 (S1MTCHTREAT) -.00 (S1MTCHMFDIFF) + .00 (S1STCHVALUES) + .00 (S1STCHRESPCT) -.09 (S1STCHFAIR) + .09 (S1STCHCONF) -.06 (S1STCHTREAT)+.04 (S1STCHMFDIFF) + .01 (S1SAFE) - .02 (S1PROUD) - .02 (S1TALKPROB) -.12 (S1GOODGRADES) + .03 (S1MOMTLKCLG) + .01 (S1DADTLKCLG) + .02 (S1FRNDTLKCLG) - .03 (S1TCHTLKCLG) -.07 (S1CNSLTLKCLG) -.00 (S1FRNDGRADES) - .02 (S1FRNDSCHOOL) -.19 (S1FRNDCLASS) -.16 (S1FRNDCLG) -.04 (S1HRWORK) + -.03 (S1MREASENJOY) + -.03 (S1REASENJOY) + .02 (English) + .10 (Spanish) -.08 (Another language)[(S1LANG1ST] -.08 (English and Spanish equally) + .04 (English and another language equally) + .08 (European) + .13 (Chinese) + .08 (Filipino) + .06 (SEAsian) + .12 (SAsian) + .12 (SEAsianHindi) + .12 (OtherJapanese) +.00 (MidEastArabic) + .06 (Another language) + 2.47.

The next multiple regressions analysis used the stepwise method. The analysis indicated that the best combination for the prediction of high school completion among the variables for student subjective wellbeing included S1GOODGRADES, S1HRWORK, S1FRNDCLG, S1CNSLTLKCLG, S1STCHFAIR, S1STCHCONF, S1STCHTREAT, and 1STCHMFDIFF. The model was significant evidenced by the ANOVA table, $F(7,1000)=11.147, p<.00$. The summary model, coefficient $R= .27$, indicated that the predictors in the data set accounted for approximately 7% of the variance of the high school completion index reflected by the R^2 .

The table of coefficients calculations for stepwise included an output for the data reflected in Table 29. The *B* weights were reviewed for variable contributions. A positive relationship happened between SPANISH and S1STCHCONF, meaning for each response of Spanish spoken in the home and an increase of one measure on the Likert scale, students had a .10 and .09 chance of completing high school. A negative relationship existed between the remaining five variables: S1GOODGRADES, S1FRNDCLG, S1HRWORK, S1FRNDCLASS, S1STCHFAIR, and high school completion. These results meant an inverse relationship between those variables and high school completion. For each increase of one measure on the Likert scale and an increase in the number of hours the adolescent worked, students had a -.13, -.18, -.05, -.22, and -.07 respectively, chance of not completing high school.

The final regression equation using the stepwise method with the *B* weight variable values is: Predicted high school graduation= .10 (Spanish) + .09 (S1STCHCONF) -.13 (S1GOODGRADES) -.18 (S1FRNDCLG) - .05 (S1HRWORK) - .22 (S1FRNDCLASS) -.07 (S1STCHFAIR) +2.47.

Table 29

RQ4 Table of Coefficients Using Stepwise Method

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | | Correlations | | | Collinearity Statistics | |
|-------------------------|-----------------------------|------------|---------------------------|--------|------|---------------------------------|-------------|--------------|---------|-------|-------------------------|-------|
| | B | Std. Error | Beta | | | Lower Bound | Upper Bound | Zero-order | Partial | Part | Tolerance | VIF |
| ⁷ (Constant) | 2.466 | .100 | | 24.736 | .000 | 2.271 | 2.662 | | | | | |
| S1GOODGRADES | -.127 | .027 | -.150 | -4.785 | .000 | -.180 | -.075 | -.154 | -.149 | -.146 | .941 | 1.063 |
| S1FRNDCLG | -.181 | .051 | -.111 | -3.540 | .000 | -.282 | -.081 | -.135 | -.111 | -.108 | .947 | 1.056 |
| S1 HRWORK | -.048 | .014 | -.103 | -3.365 | .001 | -.076 | -.020 | -.113 | -.106 | -.102 | .986 | 1.014 |
| S1 FRNDCLASS | -.219 | .073 | -.095 | -3.009 | .003 | -.362 | -.076 | -.131 | -.095 | -.092 | .937 | 1.067 |
| Spanish | .099 | .045 | .067 | 2.180 | .030 | .010 | .187 | .048 | .069 | .066 | .981 | 1.019 |
| S1 STCHCONF | .094 | .031 | .120 | 3.008 | .003 | .033 | .155 | .034 | .095 | .092 | .586 | 1.707 |
| S1 STCHFAIR | -.065 | .028 | -.090 | -2.315 | .021 | -.120 | -.010 | -.032 | -.073 | -.070 | .610 | 1.638 |

a. Dependent Variable: X3 High school completion status (transcript and GED source updated)

CHAPTER V: SUMMARY, IMPLICATIONS, AND CONCLUSIONS

The purpose of this study was to examine factors, including home, school, teacher, and students' subjective wellbeing, that contribute to adolescents persevering to complete high school, despite the inequities in their environment. Inequities in society are also present in the education system (Balfanz, 2009; Collopy, Bowman, & Taylor, 2012; Klees & Qargha, 2014). Schools identified as high poverty reflect increased diversity, high SES, limited resources, and less qualified teachers (NCES, 2010). Factors such as these can negatively influence students' educational outcomes. Research indicates that children of poverty are academically behind their peers when they enter school, a disparity from which some never recover (Duncan & Magnuson, 2013).

Summary of the Study

The former governor of Louisiana, Kathleen Blanco, made a powerful statement about education as a basic solution to poverty, "Think about it: Every educated person is not rich, but almost every educated person has a job and a way out of poverty. So education is a fundamental solution to poverty" (Louisiana's Governor's Summit, 2005). Families in poverty struggle with economic and societal inequities that interfere with stability and opportunities to make education a priority (Ratcliff, 2015). The literature states that higher levels of education is one way to increase families' earning potential (Douglas-Hall & Chau, 2007). Therefore, it is plausible that adolescents who complete high school before entering adulthood will increase their chances for an enhanced quality of life. Since children of poverty often live in communities and attend schools plagued by impoverishment, it is plausible there are associated factors, like under qualified

teachers, lack of resources, and unsafe communities, that may help or hinder high school completion (Douglas-Hall & Chau, 2007).

The following questions guided this research to ascertain which factors may be associated with adolescents living in poverty and completing high school:

RQ1. What family-related factors help incoming ninth grade students identified as living in poverty remain in school and graduate high school?

RQ2. What school-related factors help incoming ninth grade students identified as living in poverty remain in school and graduate high school?

RQ3. What teacher-related factors help incoming ninth grade students identified as living in poverty remain in school and graduate high school?

RQ4. What subjective wellbeing factors help incoming ninth grade students identified as living in poverty remain in school and graduate high school?

Archival data, restricted dataset, for this study was collected from NCES-High School Longitudinal Study of 2009 (HSL:09). The national dataset included information from over 25,000 participants from ten states across the country. The criterion variable for this study focused on adolescents living in poverty who successfully complete high school. After removal of students identified as living at or above poverty, the remaining total was 2700, of which 2050 either completed a GED or received a high school diploma. The predictor variables selected are from home, school, teacher, and student subjective wellbeing factors available in the HSL:09 questionnaire.

Research Question One

What family-related factors help incoming ninth grade students identified as living in poverty remain in school and graduate high school?

Research question one, which included 14 variables in the surveys, was analyzed using Pearson product moment correlation and multiple regressions, including entry and stepwise methods. Since the study examined the strength of the relationships of the variables together and how the independent variables for home predicted the dependent variable, high school completion, correlation and multiple regressions were the analysis of choice. The variables, parents' education level and presence in the household, along with mobility and suspensions, were consistently statistically significant in the correlation and multiple regressions analyses. Table 30 displays a summary of the significant variables' coefficient values. Significant findings are discussed in the following sections.

Table 30

RQ1 Significant Variables Coefficient Summary

| Variable description | Correlation Coefficient | Multiple regressions | |
|------------------------------------|----------------------------|----------------------|-------------------|
| | | Enter <i>B</i> | Stepwise <i>B</i> |
| Parents living in the home | .06 | 1.06 | 1.97 |
| Parent 1's highest education level | .11 | -.06 | -.11 |
| Parent 2's highest education level | .14 | -.02 | .09 |
| Family mobility | -.09 | -.02 | -.04 |
| Suspensions | -.22 | .35 | .75 |

Source: HSLs:09

Parents. The literature review discussed home variables mentioned in the first research question. Family does make a difference in the lives of the children (Shonoff & Phillips, 2000). Decisions and actions of the parent or guardian, in matters such as marital status, employment, and education, affects the adolescents (Acharya & Joshi, 2009; Wilcox & Zill, 2016). In this study, parents in the home reflected a positive

association with high school graduation since their presence adds stability and guidance to the lives of the adolescents.

The outcome of this finding indirectly underpins work by Leme et al., (2015) which posited that family configuration did not affect the psychological well-being of adolescents. Therefore, when a parent resides in the household, students fare better in completing high school. As children mature, some begin to distance themselves from their parents in their search for independence. These behaviors do not change the importance of parents and a stable home environment (Cavendish, Montague, Enders, & Dietz, 2014). Parents matter to the development and overall well-being of their children. Based on findings from this study and current research, it behooves governing agencies to explore options focused on keeping children and parents together in a healthy home environment.

Children's first teachers are their parents. Many parents spend quality time imparting their values, beliefs, and working to provide a good life for their offspring. Some parents did not have the opportunity to receive an education that culminated with a high school diploma; yet studies show that many aspire for their children to achieve more education. The present study reflected a positive relationship between parents' education level and adolescents completing high school which supports research by Acharya and Joshi (2009), which found parents' education level was an indicator of students' future success in school. Lacour and Tissington (2011), Kirk et al., (2015), and Eaglite (2016) also found that parents' education level, particularly the mother, made a difference in the academic success of their children. This study finding was significant as parents serve as role models for their children. When they complete at least a high school diploma, their

children can emulate their achievement. Even for those parents who were unable to complete high school, they still had high expectations for their children to complete high school (Kirk et al., 2015).

Mobility. Mobility was another variable shown to be statistically significant to high school completion. The literature indicated that mobility disrupts the learning of children (Herbers et al., 2013). In this study, mobility reflected a negative relationship with high school completion. Therefore, as the number of times a family moved increased, completing high school decreased. This finding is significant since mobility disrupts the learning and social environment of adolescents. Voigt et al. (2012) found that children of poverty suffer adverse effects from mobility, especially in the areas of reading and math. The findings from this study supported work by Metzger et al. (2015), who noted that when families move even one time per year outside of grade changes, high school completion decreased by 50%.

Suspension. In this study, the suspension variable exhibited a negative association with high school graduation, which further supported current research (CRDC, 2014; Wilcox & Zill, 2016). The more times a student is suspended from school, the less likely he or she would graduate. Exclusions from school sends the message that the student is not welcome because of their actions and it contributes to missed learning opportunities (Wilson, 2014). Both reasons make these findings relevant to this research.

The CRDC (2014) reported that suspensions for African American students were three times the number for Caucasian students. The suspension variable was also statistically significant in both multiple regression methods, enter and stepwise. The

negative correlation of suspension and high school completion support work performed by Wilson (2014), who revealed that school systems with zero tolerance for discipline infractions contribute to lost learning opportunities due to exclusions from school. Exclusionary practices such as these can impede students' abilities to learn and decrease progress in school. Therefore, it is plausible that an increase in the occurrence of suspensions would equate with a decrease in high school graduation numbers.

Mobility and school suspensions reflected a negative association with high school graduation. These results concurred with findings from CRDC (2014) and Wilcox and Zill (2016), which identified that suspensions for students of color occur at three times the rate of Caucasian students and suspensions negatively affect high school completion. The findings also support work by Herbers, Reynolds, and Chen (2013) indicating that mobility negative affect schooling for children. The findings of the significance of mobility and suspensions are noteworthy as both contribute to inequity in students' learning opportunities.

Family variables, consistently significant in this study and supported by literature, included parents in the home, parents' education level, mobility, and suspensions. Other variables associated with the home and family including parents' marital status, parents' employment status, household income, languages spoken in the home, and students' involvement in a second language program were not significant in the analysis.

Marital status in this study divided parent participants into two categories, married or not. The findings about parents' marital status as not significant in this study, which contradict works by Wilcox and Zill (2016), which states that family structure rated second only to parents' education level in their multiple regression analysis. Parke, on

the other hand, studied various types of family structures including parents who were divorced, widowed, step, living together without benefit of marriage, and same sex. Those findings, which would support the outcome of this study, revealed married households are not the determinant of the family's well-being as much as whether the relationship between the parents are functional and a positive model for the children (2003).

Parents' employment status, which can affect household income, was also not significant in the analysis and was an unexpected outcome. If either or both parents are unemployed, less financial resources are available for the family. While not significant in the correlation, parents' employment status was significant in the multiple regressions analysis using the stepwise method. In addition, the variable was statistically significant and included as a predictor for high school completion.

Financial resources are important to sustaining family households. Such essentials as food, housing, and transportation cost money; therefore, this variable was selected for inclusion in the analysis. While not statistically significant throughout the analysis, diminished finances to the point of poverty is important due to the overarching effect on the family unit, especially the children (Garcia & Weiss, 2015). Young people, who grow up in poverty, start school at a disadvantage from their non-economically challenged peers (Garcia & Weiss, 2015). The educational gap rarely narrows as students traverse through school. For families of poverty, the pathway to obtaining an education can have insurmountable challenges without support systems in the communities and schools to help bridge the way.

Languages spoken in the home and students' inclusion in a second language program was not consistently significant throughout the analysis. During a ten-year period from 2003 to 2013, the number of second language learners has increased from 4.2 million to 4.5 million. Due to increased cultural and linguistic diversity, lawmakers invest resources in providing programs to bolster second language acquisition skills for students in public schools (114th Congress H.R. 5738 Stronger Together School Diversity Act, 2016). This study did not support findings by Boone (2013) that languages and language spoken in the home were statistically significant. One attributing factor could be the numbers used for research question one. Several of the languages had responses of less than 50; therefore, multiple imputation was used to increase the quantity for analysis. According to Boone, the absence of support for second language learners puts these learners at a disadvantage (2013). Other literature akin to the results of this study regarding ELL programs was work by Rouse (2014), which discussed issues in determining progress when students start at such varied levels of language acquisition.

Research Question Two

What school-related factors help incoming ninth grade students identified as living in poverty remain in school and graduate high school?

Research question two, which included 15 variables in the surveys, was analyzed using Pearson product moment correlation and multiple regressions, including entry and stepwise methods. Since the study examined the strength of the relationships of the variables together and how the independent variables for school predicted the dependent variable, high school completion, correlation and multiple regressions were the analysis

of choice. Table 31 identify a summary of the school variables coefficients. Significant findings are reviewed in the following sections.

Table 31

RQ2 Significant Variables Coefficient Summary

| Variable description | Correlation Coefficient | Multiple regressions | |
|--------------------------------------|-------------------------|----------------------|-------------------|
| | | Enter | Stepwise <i>B</i> |
| Students' disrespect for the teacher | .15 | .04 | .05 |
| Availability of resources | -.06 | -.04 | -.04 |
| Number of math teacher not returning | -.07 | -.06 | -.04 |

Source: HSLs:09

Lack of resources. Disparities exist between affluent and poorer schools in which the former has ample, modern resources and the later limited, antiquated resources (NCES (2011). North (2007) placed the responsibility for this outcome at the door step of school and community leaders. The findings from the current study, reflecting a negative relationship between lack of resources and high school completion, indicates that as the severity of insufficient materials increased, students completing high school decreased. This outcome lends support to literature discussions about inequities in schools and its impact on students' success (CRDC, 2014; Morris, Selmer, Martucci, White, & Goodykoontz, 2011). Given that lack of resources promotes inequity and provides a disservice to students living in poverty makes this finding pertinent.

Discipline. Cushman and Rogers (2008) noted that children who were once eager to please their teachers and other adults began to challenge authority and instead seek out peer approval. Given the environmental configurations associated with middle and high school settings, such as multiple class transitions throughout the day, several teachers

with different expectations and demands, large buildings, and a multitude of peers, coupled with the psychosocial developmental changes in the adolescents, behaviors that interfere with learning can manifest in different ways (Meyer, 2011). Multiple interactions such as these can result in varying personality clashes and negative encounters that may be problematic for students and teachers.

The variable students' disrespect for the teacher showed a positive relationship with high school graduation. This result meant that as frequency of incidents of disrespects increased, high school completion status also increased. The finding, while unexpected, is understandable. By the time students enter middle and high schools, their perceptions and attitudes toward teachers and teacher behaviors change as they have developed the vocabulary to express their thoughts (Caskey & Anfara, 2014). Even though teachers are the adults in the schools, some students' behaviors may be viewed as challenging and unacceptable by others (Wilson, 2014). Educators perceive and address these situations in various ways.

Perceived misbehaviors, which may interfere with the teachers' ability to provide instruction, may be a reason for educators to move students ahead to the next grade as a means to eliminate the problem. This perspective could account for a positive relationship between disrespect toward the teacher and high school completion. Two studies presented findings about teacher bias, which may be a factor. Gershenson, Holt, and Papageorge (2015) postulated that teachers' responses to student behaviors may be related to the race of either party; while Grewal, Ku, Girod, and Valatine (2013) discussed how educator responses are based in teacher biases.

Using this research as a foundation, one could surmise those teachers' responses or the motivations behind their actions in dealing with perceived inappropriate behaviors by students could be a secondary factor rooted in personal bias. In the school system, there are a variety of factors that determine students' advancements through the grades; special programs, age, prior retentions, and parental input to name a few. Therefore, even with perceived inappropriate behaviors toward teachers, this sole variable does not directly affect high school completion.

Teacher attrition. Literature details the importance of teachers to the educational system (Daniels, 2011). Of the over three million public school teachers, only eight percent left the field of education (Goldring, Taie, & Riddles, 2014). For teachers in high poverty schools, over 20% have less than three years of teaching experience compared with 16% in low poverty schools (NCES, 2010). When educators leave school, and fail to return the next school year, students may be disappointed and the quality of instruction suffers if qualified replacement teachers are not readily available. Data in this study identified a negative relationship between math teachers not returning and difficulty filling math vacancies, with high school completion. As the number of teachers who did not return or vacancies not filled increased by one position, chances of completing high school decreased by a -.6 per position.

This result corroborates the value of retaining qualified teachers, not only in contents such as math and science, but also to promote social justice. Griner and Stewart (2012) determined that if educators are oblivious to social injustices occurring in schools, gaps in achievements between student groups will continue to widen. Teachers are an integral component in the success of students in schools (Dover, 2009).

One unexpected finding in the results was a program designed to help struggling ninth graders transition to high school was not statistically significant in the multiple regressions analysis. It is difficult to justify this finding since the intent is to provide additional academic support during the transition to high school (Ellerbrock, Kiefer, & Alley, 2014). A possible explanation may be an interpretation of what the program entails. Various schools may have similar programs that address the same need; however, the name or description of students served may vary.

Schools in the HSLS:09 included public, charter, and private entities. Since the focus of this study was students of poverty and not school type or configuration, the data analysis did not occur. Due to declines in academic performance in middle school and the targeted student population of incoming ninth graders, including this information was relevant to the researcher as this factor, either directly or indirectly, influence high school graduation (Alexander, 1973; Cushman & Rogers, 2008; Gibson, 2014; Kennedy-Lewis, 2013).

It was also unexpected that the number of science teachers and the number of science unfilled vacancies were insignificant. This result may be attributable to the environment and educating students living in poverty included in the study. Staffing high poverty school is a challenge often because of working conditions, lack of training, and behaviors contrary to accepted norms (U.S. Department of Education, 2013). Teacher preparation for these schools include not only content knowledge, but also strategies for working with diverse learners and an understanding of equity (CRDC (2014) reported low availability of advanced level courses for minority students. Adolescents from high

poverty schools who graduate and go to college may lack the prerequisite skills needed to complete a teaching certificate for middle or high school level math.

Research Question Three

What teacher-related factors help incoming ninth grade students identified as living in poverty remain in school and graduate high school?

Research question three, which included 30 variables in the surveys, was analyzed using Pearson product moment correlation and multiple regressions, including entry and stepwise methods. Since the study examined the strength of the relationships of the variables together and how the independent variables for the teacher predicted the dependent variable, high school completion, correlation and multiple regressions were the analysis of choice.

Teachers bring knowledge and personal experience to the classroom (Killen, 2016). If they have bias against any group of students, it can make a difference in how they interact with those adolescents (Morris, 2005). Teachers may receive professional development training to address content knowledge and social interactions; however, their background and lived experiences are a part of who they are and how they react in various encounters with others (Killeen, 2016). Table 32 identify a summary of the school variables coefficients. Significant findings are shared in the following sections.

Table 32

RQ3 Significant Variables Coefficient Summary

| Variable description | Correlation Coefficient | Multiple regressions | |
|---|-------------------------|----------------------|-------------------|
| | | Enter <i>B</i> | Stepwise <i>B</i> |
| Math teacher entered education through an alternative certification program | Not significant | -.07 | -.08 |
| Science teacher sets high standards for students learning | Not significant | -.12 | -.12 |

Teacher preparation program. Due to the need for educators to fill vacant classroom positions, organizations offered alternative certification programs as a fast track to obtaining a teaching certification (Walsh & Jacobs, 2007). Are these individuals qualified to teach challenging contents like math and science without pedagogical training? The findings in this study revealed a negative relationship between math and science teachers from alternative certification programs and high school completion; however, the only statistically significant variable was for math. This outcome meant an increase in the number of math teachers from ACP were associated with a decrease in adolescents' chances of graduating high school. There is a possibility that this finding could be related to teachers' lack of content knowledge. High poverty schools are typically staffed with less qualified and less experienced teachers (NCES, 2010; Rich, 2014). North (2008) notes practices and procedures in certain establishments favor dominant groups in society, which puts other marginalized groups at a disadvantage.

Teacher diversity. This study revealed a significant relationship between math teacher is African American and Asian. This outcome of significance for both variables supports research about diversity in education (Boske, 2012; Ingersoll, Merrill, & Stuckey, 2014). Ingersoll et al., (2014) revealed that high poverty schools tend to be highly diverse and Boske (2012) found that teachers of color serving as role models for students of colors are a benefit for the school.

Student diversity is a common finding in education; however, teacher diversity fails to keep pace (Maxwell, 2014). The findings in this study, in which math and science Caucasian teachers were not statistically significant, support Maxwell's position about

changes in teacher diversity. In this study, Hispanic teachers were also not significant in any analyses, which was surprising. This may be attributable to Hispanic students who experience lower high school graduation and higher unemployment rates, both of which interfere with entering the teaching profession (Reidenbach & Weller, 2010).

Teacher perceptions. The teacher questionnaires were completed by educators reflecting on their observations and perceptions about their departmental colleagues' instruction and interaction with students. Variables of significance in this research question were science teachers set high standards for student learning showed a positive relationship and science teachers' beliefs about the amount a student can learn is related to their family background reflected a negative relationship. If educators set high standards, hold students accountable, and help them believe they can do the task, it is conceivable that adolescents' chances of successful schooling can occur. This finding is supported by Murray (2011) which relates that teachers should have high expectations for all their students.

The second outcome regarding teachers' beliefs about students' learning related to family background is associated with decrease high school completion. Responses of this type align with teacher bias. In real world settings, teachers come with life experiences and beliefs about individuals or groups that may affect how they interact with others, including students (Killeen, 2016). Responses to the questions about teachers' behaviors like setting goals, setting high expectations, believing all students can succeed, and working hard for student success, may be subjective and look different to each person. Teacher bias against certain student groups and lack of belief in the students' academic abilities impede progress toward equity for all learners.

Research Question Four

What subjective wellbeing factors help incoming ninth grade students identified as living in poverty remain in school and graduate high school?

Research question four consisted of 40 student-related variables, after recoding using dummy variables for languages. Variables for student race and gender serve for descriptive purposes only as they are not the focus of this study. Correlation and multiple regressions were the analysis of choice. The summary of the statistically significant variables are listed in table 33.

Table 33

RQ4 Significant Variables Coefficient Summary

| Variable description | Correlation Coefficient | Multiple regressions | |
|---|-------------------------|----------------------|-------------------|
| | | Enter <i>B</i> | Stepwise <i>B</i> |
| Getting good grades is important to the student | -.18 | -.12 | -.13 |
| Science teacher treats all students fairly | -.06 | -.09 | -.07 |
| Number of hours the student works for wages | -.10 | -.04 | -.05 |
| Student's closest friend plans to go to college | -.15 | -.16 | -.18 |

Source: HSLS:09

Friends and grades. Adolescents customarily deal with developmental issues such as seeking peer approval, experimenting with various factors, and identifying who they want to be in life (Cushman & Rogers, 2008). For students living in poverty, these matters when compounded with meeting basic needs like food and shelter, can overshadow the importance of school. Friends are important to adolescents and can influence decisions made in life. Steinebach, Steinebach, and Brendtro (2013) found that positive peer cultures and students learning positive character traits from others, can serve as a valuable resource for the school system. The results of this research reflected a

negative relationship between adolescents' closest friend plans to go to college and high school completion, which contradicts research (Steinebach, Steinebach, & Brendtro, 2013). One overarching reason could be that adolescents, in general, are in a state of flux during their pubescent development (Cushman & Rogers, 2008). Today's friends may be tomorrow's enemies. Another reason could be mobility. Some students of poverty experience frequent moves, which can interfere with peer relationships (Herbers et al., 2013).

Individuals viewed as studious present the image of valuing education and academic performance. This is not always the case with all adolescents. The notorious decline in middle school performance can be seen in many students especially if their attention is diverted by matters they feel are more important (Shoshani & Slone, 2013). Grades will suffer if the student does not see value in working to achieve stellar marks. The variable identified for the importance of grades revealed a weak, negative association with high school completion. This result supports the work by Wagner and Ruch (2015) who found a decline in G.P.A. during the transition to middle school.

Students' perceptions about teachers. The relationship between students and teachers changes as children mature (Caskey & Anfara, 2014). The adults in the elementary school setting, who were once admired and adored, can become a foe to the adolescents in the middle school environment. Students' perception of the science teacher treating all students fairly showed a weak, negative association with high school completion. This finding adds to research on teacher bias, which can affect instructional performance with students (Clark & Zygmunt, 2014; Harber et al., 2012).

Student employment. One finding in this category that seemed appropriate for the outcome was the negative association between students' working for pay and high school completion. Students who worked more hours had a decreased chance of completing high school. It is common for adolescents in families living in poverty to secure employment to help with the household expenses. Mortimer (2010) reported that adolescents who take on employment have different outcomes. Some can work and are able to balance school and a job, yet others find doing both too challenging and let go of one to focus on the other. The results in this study supports prior research by Scott, Zhang, and Koball (2015) that found that adolescents who work to help support their families are less likely to finish high school.

There are several individual variables that were not significant in this study. Since this questionnaire involved getting input directly from the adolescents, the lack of significance could be due to a few reasons. Students leaving middle school and entering high school deal with a variety of physical and social changes (Cushman & Rogers, 2008). By the time of adolescence, the value of safety and school pride are secondary to peers and self-image (Caskey & Anfara, 2014). Many single parent households in poverty are frequently headed by women; therefore, talking primarily to mom about going to college being significant was an expected outcome (Parke, 2003).

The number of Hispanic students in schools has shown a growth of four million children over a ten-year period (The Condition of Education, 2016). What was surprising about this group of variables was Spanish spoken in the home, which was not significant in the correlation, showed a positive relationship with high school completion. The

positive association in this study concurs with data from national studies reflecting the number of second language learners who graduate high school is increasing (CCD, 2013).

In the secondary school setting, adolescents are keenly aware of their teachers' behaviors and form their own perceptions that may erupt into defiance if the student feels disliked by the educator (Caskey & Anfar, 2014). Fortunately, not all students elect to react in this manner when circumstances seem out of kilter. Adolescents accustomed to living in poverty develop survival skill sets (Goski, 2008). Necessities, such as food and shelter, take priority over obtaining an education for some adolescents. There are also social skills that some students develop to help them survive emotionally. Research determined that character strengths, subjective well-being, protective factors, and resilience contribute to helping some adolescents adopt the correct mindset to forge ahead despite the outward circumstances (Shoshani & Sloan, 2013; Vera et al., 2011; Walsh, 2015). Helping students, especially those living in poverty, remain in school is a priority deserving exploration of all options.

Limitations

Archival data offers a plethora of information; however, it comes with limitations. While the study is based on a national dataset, only 10 states participated in the study. Depending on the locations and of each state, school populations, and demographics, results of the study may not be generalizable to other areas of the country with varying percentages of diversity.

Another limitation involves the use of imputed values. The researchers collecting data for the original study made every effort to include as many participants as possible in both the base year, update, and follow up; however, not all individuals were available

(Ingels et al., 2011). After recoding several variables, additional missing values ensued; therefore, multiple imputations statistics addressed the missing values. The values, while statistically matched, were not actual responses from the participants.

Stepwise regression is an analysis method with varying perspectives regarding advantages of use. The process does have merit in that it statistically identifies which variables are the best predictors for the dependent variable. Field (2009) stated the selection of variables is based on mathematical criteria. More experienced statisticians and researchers may prefer more decision making in which variables they include and exclude from the final regression model. From that perspective, a note of caution is due noting the use of stepwise regression in this study.

A fourth limitation is the existence of multicollinearity in research question one. When collinearity exists, the accuracy of the model is questionable. Due to the importance of family to the overall well-being of adolescents, this research question is valuable to the study (Cavendish, Montague, Enders, & Dietz, 2014). Both variables that produced multicollinearity were other languages spoken in the home and Spanish spoken in the home. It is important to note that multicollinearity was not present in the stepwise method which may conclude that languages were the distracting issues and not all the other variables. Interpreting the data with an awareness of this discrepancy warrants caution.

A fifth limitation concerns the individuals participating in the surveys; the researchers expected participants to exercise integrity in completing the forms; however, truthfulness can be subjective as well as can be how the reader interprets the survey questions. Internal validity issues that may impact the results of the proposed study are

noteworthy. Using archival data requires that the researcher tailor research questions to fit the available information. Additionally, other researchers may misconstrue or misunderstand the questions guiding the research. Another internal validity issue may relate to balancing the number of participants across various races, genders, and poverty status in the number of respondents.

While quantitative data affords the researcher basic information for exploration and statistics, another limitation would be the limited ability to fully capture the complexities of the lived experiences of the actual participants. The questions in the surveys are designed to ascertain students' plans for college courses in the STEM domain with a forward-looking approach. Inequities endured by the students to get where they currently are lack attention and discussion.

Implications

High school completion is a significant accomplishment that carries long term benefits both for the student and society. The research questions used in this study covered four domains of relevance to adolescents – family, school, teacher, and subjective wellbeing. The target population of this study focused on students living in poverty. The economic gap between the wealthy and poor is every present. Social inequities, the crux of this research, permeate many areas of society and impede progress on many fronts. Adolescents, who endure inequities and persevere to complete high school, have unique features that make this feat possible. Many studies have identified factors that hinder adolescents from graduating; this study assumed a different perspective and sought out factors that promote high school completion by children living in poverty.

Family factors significantly associated with high school completion include the education level of the parents, mobility, parents' employment, and suspension to name a few. Failing to address vital components such as these can perpetuate the disparity between student groups. Community leaders seeking to make a difference for their constituents can address these areas through various outreach programs focused on family education and housing options to minimize mobility of families with children (Herbers et al, 2013). One community in southwest Texas has created a partnership with area apartment complexes to help decrease student mobility. Funding for such ventures is always an issue; however, exploring philanthropic sources and government grants are starting places. This is not a simple process; yet the need exists for more action.

Teacher and school variables significant in this study included availability of adequate resources, disrespect perceived by teachers, math teacher not returning, math teacher entered education through alternative certification, and the science teacher sets high standards for student learning. Hiring qualified teachers and equalizing school funding are important factors in education. Children of poverty attend schools with few resources and under qualified teachers (Jensen, 2009). Schools with poorly maintained facilities, limited resources, and high diversity tend to be in poorer neighborhoods riddled with crime. New teachers, lacking experience, seek employment opportunities in schools such as these, with available jobs due to high teacher turnover from challenging work assignments. Failure to seek targeted professional development will continue to contribute to the ever-present gap between affluent and high poverty schools (U.S. Department of Education, 2013).

Teachers hired into high poverty schools require ongoing support, both in acquiring content knowledge and learning strategies for working with diverse learners. Since about 20% of teachers in high poverty school have less than three years of education experience, it behooves school leaders to explore mentoring programs for first year teachers (NCES, 2010). The support of an experienced colleague during the challenging first year of teaching can serve as a buffer against despair, especially if they teach the same or similar content. Mentor teachers in the same school can also share their experiences that helped them remain in the profession.

Children who grow up in poverty often present with below grade level academic skills and social behaviors that may be unacceptable to the school setting (Jensen, 2009). Teaching children of poverty requires a broader skill set and patience. Training requires finances and time. Districts claim limited funding is available to provide more resources for schools in need. Educational leaders must explore options to address staffing and resource issues when assigned to poor schools. One consideration is facilitating a grant writing committee on the campus; however, some districts have limitations on how campuses can secure and utilize outside funding. Another avenue to consider for helping with training and retaining qualified teachers and resources would be review of the school funding process.

The last research question focused on students' subjective wellbeing. Variables shown to be statistically significant included students' feelings about the importance of getting good grades, their perceptions of fair and respectful treatment by the science teacher, the student working for wages, and closest friend plans to go to college. While these qualities are noteworthy, they are not present in all adolescents. What can schools

implement with fidelity to bring about positive change for all students? Literature supports students learning positive character strengths from their peers (Steinebach, Steinebach, & Brendtro, 2013). Since adolescents are social beings, they could serve as role models for their peers. One problem is the stigma that can be associated with making wise, unpopular choices versus being cool and accepted by their peers.

A study by Morales (2010) identified common protective factors reported by participants that helped them achieve success in school: persistence, the desire to have a better life, high self-esteem, and caring staff in school. Learning such skill sets can be accomplished through a positive relationship with a caring adult (Sandstrom & Huerta, 2013). These individuals can be teachers, family members, or people in the neighborhood. As these adults have lived through various situations, they can provide support for adolescents just beginning the process (Walsh, 2015). Coaching students to obtain protective factors can be beneficial; however, this option is not available to all adolescents. The responsibility for eliciting change in the school environment focuses on the bigger issue at the root of the problem which is social inequities. If families had adequate income and resources, the parents would be able to serve as the model to help instill protective factors in their children instead of worrying about food and housing.

Future Research

The outcome of this study addressed several factors associated with adolescents living in poverty completing high school. Exploration of home, school, teacher, and student factors associated with high school completion, occurred using archival data and identified variables significant to each research question. Findings support current literature in the areas of suspensions and the value of parents and teachers to students’

overall wellbeing and potential for completing high school. Given the prevalence of poverty in society, another focus could be students identified as living at the poverty level, which is different than the students in this study which are living below the poverty level. Students, classified as receiving reduced lunch in the school system, live in a household reporting an annual income falling between 130 and 185 percent of the poverty threshold (National School Lunch Program, 2016). These families have at least one person employed full-time; however, the annual income, between 30,000 and 40,000 dollars a year for a family of four, falls between 130 and 185 percent (DeNavas-Walt & Proctor, 2015; National School Lunch Program, 2016).

Another area to research could be children in poverty separated by race, gender, or ethnicity to determine if the responses would differ. Poverty is common across various demographics; yet, certain populations may have privileges because of certain features that provide a small advantage or disadvantage. This study did not include students' race or gender in the analysis since the overriding focus was poverty. In the Maryland study, Bottiani et al. (2016), recognized that race made a difference in students' perception of support received at school. Race, gender, and poverty would be important issues to explore in future research.

In future studies, narrowing the focus of factors influencing high school completion, may present a more targeted viewpoint. Four domains (home, school, teacher, and student) shared a rounded frame of reference examining over 130 variables. Future research could focus on one of the domains and delve deeper to determine influencing factors for high school completion. The survey questions cover a wide variety of responses, and if attending to one area, more questions providing greater

insight into that area would be beneficial. Research identifies the importance of families; additional research could focus more on family configuration, parents' marital status, parents' educational level, and high school completion (Lacour & Tissington, 2011; Leme et al., 2015; Shonoff & Phillips, 2000).

Qualitative studies in which the researcher can develop instruments with open ended questions, interview the participants, and identify themes in responses would be another consideration. This type of study affords a different perspective that could address various aspects of inequities from the viewpoint of each participant. While research exists about children living in poverty and high school completion; different viewpoints can delve deeper into this field of research (Ellerbrock, Kiefer, & Alley, 2014; Suldo, Savage, & Mercer, 2014; Weber & Ruch, 2012).

Conclusion

Education has the potential to level the societal playing field regarding poverty. Adolescents who complete high school can increase their earning potential by \$9,000 annually. Students living in poverty enter schools at a disadvantage that follows them through their academic career. Those who forgo completing high school for other venues increase their chances of becoming a negative statistic in society. Children do not grow up in a vacuum without someone to take care of them. Adults, be it parents, relatives, or paid custodial individuals, are present in the environment of adolescents and they can make a difference in their life choices.

This study used correlation and multiple regression analysis to identify variables associated with adolescents, identified as living in poverty, who successfully complete high school. Completion of high school includes both GED and a high school diploma.

Remaining in school and completing required coursework would be the traditional method for obtaining a high school diploma. There are circumstances in which some adolescents leave school and immediately realize the challenges they face without having completed high school. GED requirements are state specific and designed to discourage students from dropping out of school to take the test (McDaniel & Kuehn, 2013). For students who did not feel successful in school or had to deal with life issues, taking and passing the GED qualifies those students as completing high school and included them in this study.

Findings of the study revealed that there are certain variables in each research question topic that are significant either by correlation, multiple regression, or both. Suggestions to address those variables exists under implications. As adolescents are developing individuals, they need guidance on life decisions, especially those as important as completing high school. Caring individuals, who can positively influence children's' lives, exist in the home, community, and school. Communities and officials must identify and remove stumbling blocks that preclude children from succeeding in school.

Leaders, both community and school, must work to create equity in both settings. It is admirable that some students can develop and exhibit psychosocial virtues that serve them well in the school setting. Is it plausible that if the school environments had adequate resources, well trained, experienced teachers, and the home environments offered proper nutrition and stable housing, that more students would come to school prepared to learn and display appropriate social interactions? It is the responsibility of advocates for social justice to continue promoting and exposing the hidden agenda of

inequities. The process includes awareness and action to bring about meaningful, long term solutions.

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APPENDIX A: VARIABLE NAMES AND DESCRIPTIONS

| VARIABLE | Description | Restricted | Public |
|------------------|--|------------|--------|
| Parent variables | | | |
| P1HHPARENT | P1 A03 9th grader has parent(s) living in household | | P |
| P1MARSTAT | P1 A07 Parent 1's marital status | | P |
| P1HOMELANG | P1 B21 Language other than English is regularly spoken in home | | P |
| P1SPANISH | P1 B22A Spanish is regularly spoken in home | R | |
| P1EUROLANG | P1 B22B Other European language is regularly spoken in home | R | |
| P1CHINESE | P1 B22C Chinese language regularly spoken in home | R | |
| P1FILIPINO | P1 B22D Filipino language regularly spoken in home | R | |
| P1SEASIAN | P1 B22E Southeast Asian language regularly spoken in home | R | |
| P1SASIAN | P1 B22F South Asian language regularly spoken in home | R | |
| P1OTHRASIAN | P1 B22G Other Asian language regularly spoken in home | R | |
| P1MIDEAST | P1 B22H Middle Eastern language regularly spoken in home | R | |
| P1OTHRLANG | P1 B22I Other language regularly spoken in home | R | |
| P1ENGLISH | P1 B23 English is regularly spoken in home | | P |
| P1RSPLANG | P1 B24 Language respondent usually speaks to 9th grader in home | R | |
| P1LANG9 | P1 B25 Language 9th grader usually speaks to respondent in home | R | |
| P1DIFSCHLNG | P1 B26 Difficulty joining in school events because speaks non-English language | | P |
| P1ELLEVER | P1 B27 Whether 9th grader ever in English Language Learners program | | P |
| P1ELLNOW | P1 B28 Whether 9th grader currently in English Language Learners program | | P |

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|------------------|--|---|---|
| P1HIDEG1 | P1 C01 Parent 1's highest degree earned | | P |
| P1JOBNOW1 | P1 C05 Parent 1 currently holds a job | | P |
| P1HIDEG2 | P1 C09 Parent 2's highest degree earned | | P |
| P1JOBNOW2 | P1 C13 Parent 2 currently holds a job | | P |
| P1INCOMECAT | P1 C18 Household income in 2008-categorical form | | P |
| P1CHANGESCH | P1 D10 Number of times 9th grader has changed schools since kindergarten | | P |
| P1SUSPEND | P1 D12 Whether 9th grader has ever been suspended or expelled | | P |
| School variables | | | |
| A1SCHTYPE | A1 A06 School type | R | |
| A1MADEAYP | A1 A24 Whether school made AYP at the end of the 2008-2009 school year | R | |
| A1G9SUMMER | A1 A26A Offers pre-HS summer reading/math instruction for struggling 9th graders | | P |
| A1FREELUNCH | A1 B03A % of student body receiving free or reduced-price lunch | R | |
| A1ELL | A1 B03B % of student body who are English language learners | R | |
| A1SPECIALED | A1 B03C % of student body receiving Special Education services for disabilities | R | |
| A1AP | A1 B03F % of student body enrolled in Advanced Placement courses | R | |
| A1RESOURCES | A1 E17J Lack of teacher resources and materials is a problem at this school | | P |
| A1TENSION | A1 E18I Frequency of student racial tensions at this school | R | |
| A1FILLMTH | A1 C05 Ease of filling high school mathematics teaching vacancies | | P |
| A1FILLSCI | A1 C06 Ease of filling high school science teaching vacancies | | P |
| A1SINCENTIVE | A1 C08 School/district offers incentives to attract FT HS science teachers | R | |

| | | | |
|-------------------|--|---|---|
| A1MTNORETURN | A1 C09 # of 2008-2009 full-time math teachers who did not return in 2009-2010 | R | |
| Teacher Variables | | | |
| M1HISP | M1 A02 Math teacher is Hispanic/Latino/Latina | R | |
| M1WHITE | M1 A03A Math teacher is White | R | |
| M1BLACK | M1 A03B Math teacher is Black | R | |
| M1ASIAN | M1 A03C Math teacher is Asian | R | |
| M1ALTCERT | M1 A16 Math teacher entered profession via alternative certification program | | P |
| M1LEARNING | M1 B01B Math teachers in the school set high standards for students' learning | | P |
| M1BELIEVE | M1 B01C Math teachers in this school believe all students can do well | | P |
| M1CLEARGOALS | M1 B01D Math teachers in this school make goals clear to students | | P |
| M1WORKHARD | M1 B01H Math teachers in the school work hard to make sure all students learn | | P |
| M1FAMILY | M1 D04A Amount a student can learn is primarily related to family background | | P |
| M1DISCIPLINE | M1 D04B Students not disciplined at home not likely to accept school discipline | | P |
| M1STUACHIEVE | M1 D04C Teachers are limited b/c home environment influences student achievement | | P |
| M1PARENT | M1 D04D If parents would do more for children teacher could do more for students | | P |
| M1HOMEFX | M1 D04H Cannot do much b/c student motivation/performance depends on home | | P |
| N1HISP | N1 A02 Science teacher is Hispanic/Latino/Latina | R | |
| N1WHITE | N1 A03A Science teacher is White | R | |

| | | | |
|-------------------|--|---|---|
| N1BLACK | N1 A03B Science teacher is Black | R | |
| N1ASIAN | N1 A03C Science teacher is Asian | R | |
| N1ALTCERT | N1 A20 Science teacher entered profession via alternative certification program | | P |
| N1TEACHING | N1 C01A Science teachers in this school set high standards for teaching | | P |
| N1LEARNING | N1 C01B Science teachers in the school set high standards for students' learning | | P |
| N1BELIEVE | N1 C01C Science teachers in this school believe all students can do well | | P |
| N1CLEARGOALS | N1 C01D Science teachers in this school make goals clear to students | | P |
| N1WORKHARD | N1 C01H Science teachers in the school work hard to make sure all students learn | | P |
| N1FAMILY | N1 D04A Amount a student can learn is primarily related to family background | | P |
| N1DISCIPLINE | N1 D04B Students not disciplined at home not likely to accept school discipline | | P |
| N1STUACHIEVE | N1 D04C Teachers are limited b/c home environment influences student achievement | | P |
| N1PARENT | N1 D04D If parents would do more for children teacher could do more for students | | P |
| N1HOMEFX | N1 D04H Cannot do much b/c student motivation/performance depends on home | | P |
| Student variables | | | |
| X1RACE | X1 Student's race/ethnicity-composite | | P |
| S1LANG1ST | S1 A07 First language 9th grader learned to speak is English, Spanish, or other | | P |

| | | | | |
|--------------|-----------------|---|---|---|
| S1LANG1STOS | child | S1 A08 Non-English language 9th grader first learned to speak as a | R | |
| S1MTCHVALUES | ideas | S1 C11A 9th grader's fall 2009 math teacher values/listens to students' | | P |
| S1MTCHRESPCT | respect | S1 C11B 9th grader's fall 2009 math teacher treats students with | | P |
| S1MTCHFAIR | | S1 C11C 9th grader's fall 2009 math teacher treats every student fairly | | P |
| S1MTCHCONF | successful | S1 C11D 9th grader's fall 2009 math teacher thinks all student can be | | P |
| S1MTCHMFDIFF | differently | S1 C11H 9th grader's fall 2009 math teacher treats males/females | | P |
| S1STCHVALUES | students' ideas | S1 D11A 9th grader's fall 2009 science teacher values/listens to | | P |
| S1STCHRESPCT | respect | S1 D11B 9th grader's fall 2009 science teacher treats students with | | P |
| S1STCHFAIR | fairly | S1 D11C 9th grader's fall 2009 science teacher treats every student | | P |
| S1STCHCONF | successful | S1 D11D 9th grader's fall 09 science teacher thinks all student can be | | P |
| S1STCHTREAT | than others | S1 D11F 9th grader's fall 09 science teacher treats some kids better | | P |
| S1STCHMFDIFF | differently | S1 D11H 9th grader's fall 2009 science teacher treats males/females | | P |
| S1SAFE | | S1 E01A 9th grader feels safe at school | | P |
| S1PROUD | | S1 E01B 9th grader is proud to be part of his/her school | | P |
| S1TALKPROB | problems | S1 E01C 9th grader has teacher/adult in school he/she can talk to about | | P |

| | | | |
|--------------|--------|---|---|
| S1GOODGRADES | | S1 E01E Getting good grades is important to 9th grader | P |
| S1MOMTALKCLG | | S1 E09A 9th grader talked to mother about going to college | P |
| S1DADTALKCLG | | S1 E09B 9th grader talked to father about going to college | P |
| S1FRNDTLKCLG | | S1 E09C 9th grader talked to friends about going to college | P |
| S1TCHTALKCLG | | S1 E09D 9th grader talked to teacher about going to college | P |
| S1CNSLTLKCLG | | S1 E09E 9th grader talked to school counselor about going to college | P |
| S1FRNDGRADES | | S1 E12A 9th grader's closest friend gets good grades | P |
| S1FRNDSCHOOL | | S1 E12B 9th grader's closest friend is interested in school | P |
| S1FRNDCLASS | | S1 E12C 9th grader's closest friend attends classes regularly | P |
| S1FRNDCLG | | S1 E12D 9th grader's closest friend plans to go to college | P |
| S1HRWORK | | S1 E15E Hours spent working for pay on typical school day | P |
| S1MREASENJOY | math | S1 F02H Plans to take more math courses because they enjoy studying | P |
| S1SREASJOB | career | S1 F05F Plans to take more science courses because needed for desired | P |
| X3HSCOMPSTAT | | X3High school completion status (transcript and GED source updated) | P |
| X1POVERTY | | X1 Poverty indicator (relative to 100% of Census poverty threshold) | P |

Note: Source HSLS:09