AN ANALYSIS OF SOCIAL AND DEMOGRAPHIC VARIABLES AND STUDENT GRADUATION SUCCESS

by

Lisa Ann Taylor

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirement for the Degree

Doctor of Education

Liberty University

2016

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APPROVED BY:

Mark Lamport, Ph.D., Committee Chair

Ralph Marino, Jr., Ed.D., Committee Member

Jeffrey Murphy, Ed.D., Committee Member

Kurt Michael, Ph.D., Research Consultant

ABSTRACT

The dropout population does not reflect an equal representation of all student subgroups (Kena et al., 2015). There are many negative outcomes that often coincide with the decision to drop out, such as lower overall lifetime income as well as emotional and physical fitness (Chapman, Laird, Ifill, & KewalRamani, 2011). This dissertation examines how graduation success varies by the social variables of school engagement, students' closeness to parents, and self-esteem and the demographic variable of race through the lenses of the social development model (Hawkins & Weis, 1985), the school membership theory (Wehlage, 1989), and the self-determination theory (Deci, Vallerand, Pelletier, & Ryan, 1991). Ex post facto data from the nationally representative public use data set from the National Longitudinal Study of Adolescent Health (Add Health) was used (Harris, 2009). The purpose of this correlational study was to discover the relationship between social factors and the demographic factor of race for participants of the Add Health study. Simple logistic regression analysis was used to test if there was a relationship between each factor, school engagement, self-esteem, closeness to parents, or race and graduation success. A relationship was found for school engagement and graduation success; however, all other null hypotheses were rejected. Implications for this study, limitations, and recommendations for future research were discussed.

Keywords: achievement gap, Add Health, ethnicity, school engagement, self-esteem, student connectedness scores, race, relationship with parents.

Dedication

I would like to dedicate this dissertation to my husband, MSgt Garry Taylor, our children, and my parents. First, I want to thank Garry for his unwavering support and belief in me. Garry often puts the needs of our family before his own needs and delights in our accomplishments while adhering to his own standard of excellence in his personal and professional life. I thank Garry for his commitment to me and our family. His encouragement played an important role in enabling me to pursue both my master's and doctorate degrees.

Second, I would like to also dedicate this dissertation to our children, Skylar, Michael, Trey, Trenton, and Hillary. It is my prayer that they have learned, while going through the graduate school process with me, that dependence on God, hard-work, and sacrifice for the greater good of our family was the key to our success. It certainly has not been easy and I know that they have sacrificed time with their mother. I pray this experience has sown seeds in my children's lives that will reap a harvest of accomplishments that will far exceed our accomplishments in every avenue of their long, happy, healthy, and blessed lives.

Finally, I want to dedicate this dissertation to my parents, Roy and Carol Loope and Gary and Doris Mullins. Your work ethic, perseverance, "go get it" attitudes, and belief in God made me the wife, mother, and educator that I am today. Witnessing your grit and resilience made me tough. Each of you has experienced and overcome many challenges and instilled in me pride and a drive to educate students to become real-world problem solvers to impact the future.

Acknowledgements

I acknowledge and give glory to God for His blessing on my personal and professional life. Through every obstacle, both in life and throughout the dissertation process, I acknowledge and give thanks for God's grace. Praise Jesus!

I would like to thank Dr. Mark Lamport for agreeing to serve as my committee chair. Thank you for your encouraging and positive emails, for helping to cast a positive vision for this process, and remaining patient with me when I fell off-course with the demands of my professional and family life.

I would like to thank Dr. Ralph Marino for agreeing to serve as part of my dissertation committee. Thank you for your valuable, targeted, quick and efficient feedback that assisted me in creating a better product.

Finally, I would like to thank Dr. Jeffrey Murphy for agreeing to serve as part of my dissertation committee and for serving as my professional mentor. Observing your leadership processes and procedures as well as your administrative guidance has been a Godsend to me. Thank you for investing time in building me professionally and sharing your wealth of leadership wisdom.

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List of Abbreviations

Achieving a College Education (ACE)

Advancement via Individual Determination (AVID)

Common Core of Data (CCD)

Data Sharing for Demographic Research (DSDR)

General Education Development (GED)

High school graduation status (HSG)

Individuals with Disabilities Education Act (IDEA)

Institute for Education Statistics (IES)

Internal Review Board (IRB)

Inter-University Consortium for Political and Social Research (ICPSR)

Limited English proficiency (LEP)

No Child Left Behind Act of 2001 (NCLB)

North Carolina Department of Public Instruction (NCDPI)

Odds ratio (OD)

Parental closeness score (PCS)

School success profile (SSP)

School Success Profile (SSP)

Self-esteem (SE)

Socio-economic status (SES)

Statistical package for the Social Sciences (SPSS)

Student closeness to father (SCF)

Student closeness to mother (SCM)

Student connectedness score (SCS)

The Education for All handicapped Children Act of 1975 (EAHCA)

The National Longitudinal Study of Adolescent to Adult Health (Add Health)

Zero-tolerance policies (ZTPs)

CHAPTER ONE: INTRODUCTION

Background

American students who do not graduate high school are less likely to enjoy the same financial, health, and emotional benefits as high school graduates. Public education educates the majority and, many times, focuses goals down the middle instead of equitably serving the diverse needs of all students through culturally relevant curricula. Educational leaders have the privilege and responsibility to promote and ensure social justice to impact the future for the benefit of all students to attempt to address the overrepresentation of minority dropouts (Kena et al., 2015).

Despite the steady decline in dropout rates over the past century, public education has yet to meet the college or career readiness needs of all students to produce a racially equal representation of graduates (Barnes & Slate, 2014). Educators, parents, business theorists, and lawmakers continue to postulate causes of America's achievement inequity. Educators have been trained and have increasingly calibrated their evaluation and identification of at-risk factors with laser-like precision over the past decades (Soland, 2013). Unfortunately, many at-risk factors are beyond the school's locus of control, which contributes to teacher apathy and lower expectations for at-risk students (Hancock & Scherff, 2010). Despite challenges, schools have an incredible opportunity to impact student success through authentic relationships and culturally respectful practices (Kiefer, Ellerbrock, & Alley, 2014).

Historical Overview

From the birth of America through the early 1900s, schools were predominantly designed for students to receive rudimentary education with only a select few progressing on to secondary school and then only a minuscule number attending a university (Gutek, 2011). In the early colonial days, the primary purpose of education was for students to become proficient enough to

read their bible and to generate a society educated enough to participate in democratic processes. Approximately 90% of students did not earn a high school diploma in the early 1900s because education was a privilege, not an expectation. Although states had requirements and expectations for school establishments, education was not compulsory and certainly not for students of all demographics (Gutek, 2011).

In the early 1900s, the public and industries noted disconnection between the purpose of education and the workforce's needs (Berkins & Kritsonis, 2007). The overwhelming majority of students during the Industrial Revolution entered the workforce upon leaving public education. The 1914 Commission on National Aid to Vocational Education attempted to address these needs by having students trained for specialized career paths (Berkins & Kritsonis, 2007).

To better provide for the needs of all students, regardless of race, ethnicity, or family income, *Brown v. Board of Education* (1954) mandated that non-Caucasian students have equal access to education. Additionally, the Elementary and Secondary Education Act (ESEA, 2013) set guidelines and expectations for performance for all students to address the inequalities in public education (Gutek, 2011). Furthermore, the re-adoption and renaming of the ESEA to the No Child Left Behind (NCLB) Act of 2001 also dictated that schools better prepare students to compete in a global economy (NCDPI, 2012a). Today's American school systems have reformed drastically from the inception of colonial schools that were dedicated to the education of privileged children of land owners; however, centuries later, America has failed to meet the goal of equal graduation success for all student subgroups.

Society-at-Large Discussion

A by-product of the NCLB Act is an increased awareness of America's education achievement gap, which has inspired research and action in an attempt to equip all students to

compete in a global market; however, awareness and accountability have yet to remedy all the issues of public education because the dropout rate is not an equal representation of America's population subgroups (Kena et al., 2015). Additionally, at-risk factors are not mutually exclusive and may actually amplify pressure for students to drop out (Lapan, Wells, Petersen, & McCann, 2014). Poverty is a significant indicator for identifying at-risk students according to trend reports from the U.S. Department of Education (Chapman, Laird, Ifill, & KewalRamani, 2011; Rumberger, 2013). Race and ethnicity correlate with poverty and the composition of the home also correlates with dropouts (Kena et al., 2015). Many predicted an increase in dropouts due to exit exams or achievement tests (Walden & Kritsonis, 2008), and the rates of high school completion are in fact lower in states with exit exams (Hemelt & Marcotte, 2013). Additionally, minority students statistically perform lower on such exams, thus the rate of graduation is even lower for minority students in states with exit exams (Hemelt & Marcotte, 2013). Socially, students at-risk for dropping out often do not identify themselves as part of the school community and do not feel connected to adults or peers at school (Stevenson & Ellsworth, 1991). Further, at-risk students often lack a strong connection to parents/guardians (Fall & Roberts, 2012). Additionally, students that drop out of school often demonstrate lower self-esteem than students who successfully graduate high school (Bachman, O'Malley, Freedman-Doan, Trzeniewski, & Donnellan, 2011).

Conceptual Framework

Students who experience a bond with school personnel and peers are more likely to be academically engaged and experience greater school success (Hawkins & Weis, 1985). Increased engagement and school accepted behaviors are likely to contribute to higher academic and social success within school and within the family, which then perpetuates increased

acceptance of school mores (Wehlage, 1989). Additionally, experiencing success at school—academically and socially—is a satisfying component of self-identification as part of a school community (Deci et al., 1991). Finally, experiencing academic, social, and familial successes contributes to a student's self-esteem (Bachman et al., 2011). Therefore, the conceptual framework of this study is that school success serves to solidify and contribute to the individual's internal identity as well as their identity as part of a social community and self-esteem.

Problem Statement

Since NCLB (NCDPI, 2012a), there has been a significant increase in studies focusing on school reform directed toward identifying successful supports for students with social and demographic at-risk factors (Ravitch, 2011). Graduation rates have increased slightly over the past decades; however, there remains an overrepresentation of minority student dropouts from lower socio-economic-status homes (Chapman et al., 2011). Students that drop out of school earn lower wages, are not as physically or mentally healthy, are more likely to be in prison, are more likely to suffer the consequences of addiction and, most concerning, are more likely to raise their children to perpetuate their choices and consequences (Chapman et al., 2012; Martinez, DeGarmo, & Eddy, 2004; U.S. Census Bureau, 2012; Walden & Kritsonis, 2008).

Given the benefits of graduating from high school, it is important that barriers to success are identified and removed so that all students have an equal opportunity to graduate. Although there has been an increase in studies on strategies to mitigate at-risk factors, the problem is that there is a significant research gap of empirical data (Wang & Fredricks, 2014). Additional research is needed in understanding the relationship between social and demographic factors that demonstrate academic success for at-risk students to better support graduation success.

Purpose Statement

The purpose of this study is to explore the degree to which social factors vary between demographically similar at-risk students that successfully graduate from high school from those who do not graduate from high school. It is important to understand the relationship between graduation success and students' school engagement, relationship with family, self-esteem, and race to provide additional understanding for support needed for students. Academic success (the criterion variable in this study) is defined as graduating from high school. Social and demographic variables were investigated to explore to what extent they predict graduation success. The predictor variables investigated were school engagement, student self-esteem, student closeness to parents, and student race.

Significance of the Study

This study will use representative longitudinal data to attempt to dissect and explore how factors vary for at-risk students that persevere to graduation. Specifically, it is hoped that results from this study will provide a unique lens to view the extent to which the identified social and demographic variables impact students' likelihood of graduating from high school. Encouraging maximum usage of programs already in place to address school engagement and self-esteem strategies can be a cost-effective strategy in the dropout battle. Accordingly, a better comprehension of the relationship between students' graduation success and school engagement, closeness to parents, self-esteem, and race utilizing empirical data warrants additional research to increase effectiveness of the support provided for the academic success of at-risk students. Awareness of factors that help predict student graduation success may lend greater insight into factors most important for school administrators, educators, family, and policy makers should focus on to better support the graduation success of students.

Research Questions

The research questions for this study are:

RQ1: To what extent does school engagement relate to graduation success?

RQ2: To what extent does student self-esteem relate to graduation success?

RQ3: To what extent does student closeness to parents relate to graduation success?

RQ4: To what extent does student race relate to graduation success?

Null Hypotheses

The null hypotheses for this study are:

$H_0$1: There is no significant relationship between student school engagement and graduation success.

$H_0$2: There is no relationship between student self-esteem and graduation success.

$H_0$3$_i$: There is no relationship between student closeness to mother and graduation success.

$H_0$3$_{ii}$: There is no relationship between student closeness to father and graduation success.

$H_0$4: There is no relationship between student race and graduation success.

Definitions

1. *Add Health* – The National Longitudinal Study of Adolescent Health (Add Health) is a large, nationally representative sample that explores multiple social and demographic factors for students spanning over 15 years (Harris, 2009).
2. *At-Risk* - Risk factors that statistically predict a student is more likely to not finish high school (Lapan et al., 2014).

3. *Dropout* - The student leaves school early without a diploma and without the intention of returning to finish school (Cardon & Christensen, 1998).
4. *Global self-esteem* - Rosenberg's (1965) global self-esteem instrument measures students' perception of value of self (Pelham & Swann, 1989; Perrin, Boone-Heinonen, Field, Coyne-Beasley, & Gordan-Larsen, 2010).
5. *General Education Development* (GED) – Alternative diploma certifying that the student mastered the basic education requirements of high school (Pharris-Ciurej, Hirschman, & Willhoft, 2012).
6. *NCLB* – No Child Left Behind Act of 2001is a reauthorized Elementary and Secondary Education Act and focuses on closing student achievement gaps among subgroups (NCDPI, 2012a).
7. *Parental closeness* – Students' perception of the closeness of their relationship with their mother or female guardian or father or male guardian (Ream & Savin-Williams, 2005).
8. *Parental closeness score (PCS)* - Two computed scores, separated by perception of closeness to mother or female guardian and perception of closeness to father or male guardian, using identically worded survey question responses with substitution for mother or father (Ream & Savin-Williams, 2005).
9. *Self-esteem* - Self-esteem is the perception of value an individual assigns to himself or herself (Afari, Ward, & Khine, 2012).
10. *Self-determination theory* – Self-determination theory assumes that people are predisposed to seek autonomy, competence, and relatedness (Deci et al., 1991).

11. *School membership theory* – School membership theory is the student's perception of their inclusion or exclusion as part of a school community (Wehlage, 1989).
12. *Social development model* - The social development model suggests that the rewards of student success within the social constructs of school will ultimately contribute to graduation success (Hawkins & Weis, 1985).
13. *Socio-economic status* - Socio-economic status (SES) is the financial and social status of a family based on the conglomeration of parental education, income, and occupation (Benner & Wang, 2014).
14. *Student connectedness* - Students' connectedness, or school engagement, is the student's perception of the level of positive support a student feels from his/her school community (Niehaus, Rudasill, & Rakes, 2012).
15. *Student connectedness score (SCS)* – A computed score of five variables from the Add Health survey for measuring students' perception of connectedness, or engagement in school (Sieving, Beuhring, Resnick, Bearinger, Shew, Ireland, & Blum, 2001).
16. *Student engagement* – Student engagement is a common term that is interchangeable with several terms such as school attachment, school bonding, school engagement, school connection, school context, and school climate (Libbey, 2004).
17. *Zero-tolerance policies (ZTPs)* - School policies that dictate compulsory discipline consequences for student actions or behaviors (Williams, Paze, Shelby, & Yates, 2013).

CHAPTER TWO: LITERATURE REVIEW

Introduction

Equal access and equitable education for students of all backgrounds is an important growth opportunity for educators in the United States because America's dropout population is not representative of the overall population in America. This disparity of graduation success by demographic subgroups dictates continued study of the graduation gap. This study will attempt to tease out factors that overlap and convolute to create individuals that compose student subgroups and make comparisons and predictions to the greater population as a whole. Therefore, this chapter considers the theoretical framework for this study, reviews the literature of graduate success and dropout factors, explores consequences of dropping out of school and evidence-based prevention strategies, considers the impact of student engagement and social support networks at school and home, and examines the impact of self-esteem and correlating factors on student graduation success.

Theoretical Framework

The theoretical framework of this study is rooted in the social development model (Hawkins & Weis, 1985), the school membership theory (Wehlage, 1989), and the self-determination theory (Deci, Vallerand, Pelletier, & Ryan, 1991). First, the social development model assumes that students with positive school socialization experiences will bond with their school community and will demonstrate more prosocial behaviors (Hawkins & Weis, 1985). This school bond will contribute to additional positive feelings toward school and students' academic and cultural engagement in the school community. School community socialization proposes that the social and academic rewards of accepted school behaviors within the social constructs of school provide positive protective factors that assist students in remaining part of

the school community (Hawkins & Weis, 1985). This social development ultimately contributes to graduation success by rewarding students that demonstrate socially acceptable behaviors with additional school community rewards. Ultimately, students with positive social engagement will also accept and internalize the parameters and definitions of academic success (Hawkins & Weis, 1985).

Second, school membership is the student's perception of their inclusion as part of a school community (Wehlage, 1989). Identification as part of a group is an important social motivator, thus people who identify themselves as accepted, supported, valued members of a community are more invested in the community. Specifically, students who feel they have quality social supports in place at school and are accepted members within a school are more likely to demonstrate greater success within a school according to the school membership theory (Wehlage, 1989).

Finally, self-determination theory is the premise that, collectively, all students naturally seek the satisfaction of group identity, competence, and autonomy (Deci et al., 1991). Although individual students' motivation and personalities vary, self-determination theory suggests that student motivation is impacted by social and cultural influences. Therefore, for the purposes of this study, it is assumed that, at large, students are functional components of a school community and their positive or negative experiences contribute to students' academic, social, and emotional motivation to succeed.

Literature

Historical Review of Dropout Trends

America's dropout rate has fluctuated greatly over its history (Payne & Edwards, 2010). This fluctuation has leveled out over the past 30 years resulting in a more static dropout rate

(Kena et al., 2015). The purpose of education for Colonial Americans was, at minimum, to teach students to read the bible and, at most, to prepare privileged students for a university (Gutek, 2011). In the 1780s, the informed generalist Thomas Jefferson introduced the Bill for the More General Diffusion of Knowledge, which then established a state system for elementary and secondary schools (Gutek, 2011). Approximately 10 years before the Civil War, education attendance laws began to spread from Massachusetts to other states with the final state, Mississippi, adopting attendance requirement laws 66 years later. This purpose gradually shifted and expanded to, in theory, continually generate an educated republic for democratic processes (Gutek, 2011).

According to Gutek (2011), in the 1800s, education was a privilege, not an expectation. Horace Mann aided school reform through the concept of common schools that delivered the same curriculum to all students. States began to form school expectations and adopt compulsory attendance laws. Education was not differentiated to meet career or college goals, but instead, school curriculum was directed at educating and cultivating an informed citizenry (Gutek, 2011).

As late as the early 1900s, less than 10% of students earned a high school diploma, therefore the term dropout was essentially non-existent (Berkins & Kritsonis, 2007). In the early 1900s, budding industries began to accentuate the disconnect between the purpose of education and the workplace (Berkins & Kritsonis, 2007). John Dewey proposed that students must identify and build their individual skill set (Gutek, 2011). Dewey's idea of progressive education was that students' individual skill sets are their contribution to the betterment of society. Progressivism was discussed across the United States; however, most schools remained common schools (Gutek, 2011).

The National Aid to Vocational Education Commission of 1914 addressed the need for a skilled work force by refocusing training for proletariats. The desire of the Commission was to pluralize the school systems, or to "train all kinds of men, in all kinds of ways, for all kinds of things" (Berkins & Kritsonis, 2007, p. 4). The goal of this updated purpose of public education was to produce a skilled labor force with more efficient output, thus increase wages to impact the American economy as well as the individual American worker (Berkins & Kritsonis, 2007). By the mid 1900s, the graduation rate was approximately 50%, which was significantly higher than the previous century (Berkins & Kritsonis, 2007).

The civil rights movement in the 1950s and 1960s forced the integration of schools for better access to education and facilities for non-Caucasian students. *Brown v. Board of Education* (1954) mandated that segregated schools violated the rights of students by being unequal. All schools were officially integrated by the 1970s but achievement gaps among student subgroups remained substantial (Gutek, 2011). President Johnson's Elementary and Secondary Education Act (ESEA, 2013) provided federal government funding to individual states with accountability standards in an effort to boost the success of all student subgroups (Ravitch, 2011). The ESEA has been reauthorized every five years; however it was renamed the No Child Left Behind (NCLB) Act in 2001. The Education for all Handicapped Children Act of 1975 (EAHCA) (P.L. § 94-142) required public schools receiving federal funding to provide equal access for students with mental or physical disabilities. The EAHCA was renamed the Individuals with Disabilities Education Act (IDEA) in 1990 and was expanded to ensure that public schools provide free and appropriate specialized education tailored to the needs of individual students with mental or physical disabilities.

The ESEA as well as the NCLB Act's accountability requirements dictated that students' achievement scores be published for public review. The re-adoption and renaming of the ESEA to NCLB sensationalized the aggregated test data in national media. Although the reality that America's collective scores on international achievement tests has always been average to below average throughout the years, media reports had predominately lacked these relative comparisons (Ravitch, 2011). Americans worried that the nation's students were falling behind students in other nations. NCLB set higher standards and sanctions attached to the achievement and proficiency expectations for all student subgroups and ignited the nation to demand that public education reform address the gaps in achievement among student subgroups and become more competitive in international achievement scores (Ravitch, 2011). To date, equal graduation success for all subgroups has not yet been realized (Kena et al., 2015). Consequently, as recent as 2013, polls reveal that approximately 68% of the American people are dissatisfied with public education, which has doubled since the poll from the early 1970s (Kramer, 2013).

Demographics of Dropout Data

There has been improvement in the percentage of students that graduate in the United States over the past 30 years (Kena et al., 2015). There is a significant discrepancy in the U.S. Department of Education's Institute for Education Statistics (IES) reports and The Common Core of Data (CCD) reports. The CCD reported a much lower graduation rate of approximately 70% compared to the IES's estimation of approximately 91% to 93% (Pharris-Ciurej, Hirschman, & Willhoft, 2012). Pharris-Ciurej et al. (2012) suggest that the CCD's and IES's approximate 20% disparity is due to the unaccounted-for number of ninth graders who fail to show academic progress and may be one to four years older than their class peers. The CCD compares twelfth grade enrollment numbers to ninth grade enrollment numbers, which

demonstrates anywhere from 15% to 20% fewer students graduating than reported by the IES. Although approximately half of these students who fail to progress with their cohort will ultimately earn an alternative diploma or GED, this incongruity is still significant because the GED does not correlate with the same job opportunities or income potential in a global economy (Pharris-Ciurej et al., 2012).

Although there is discrepancy in graduation rate between the IES and CCD, both report similar dropout data demonstrating that the number of students dropping out of school has drastically decreased (Kena et al, 2015). As shown in Figure 1, dropout rates have predominately fallen over the past 100 years. The high rate of dropouts in the early 1900's is largely due to the fact that most students dropped out of school to enter the work force (Gutek, 2011). The dropout rate steadily decreased through the 1900's due to improving family economic conditions and increasing value of education. By the induction of NCLB act, only approximately 13% of American students dropped out of school (Payne & Edwards, 2010). This progress is not celebrated because the American dropout rate has only decreased by approximately 4% from the induction of the NCLB act and an achievement gap of racial and ethnic subgroups remains. Politicians, private organizations, and the media consistently suggest that public education students are not globally competitive and as a result call for an overhaul public education (Ravitch, 2011).

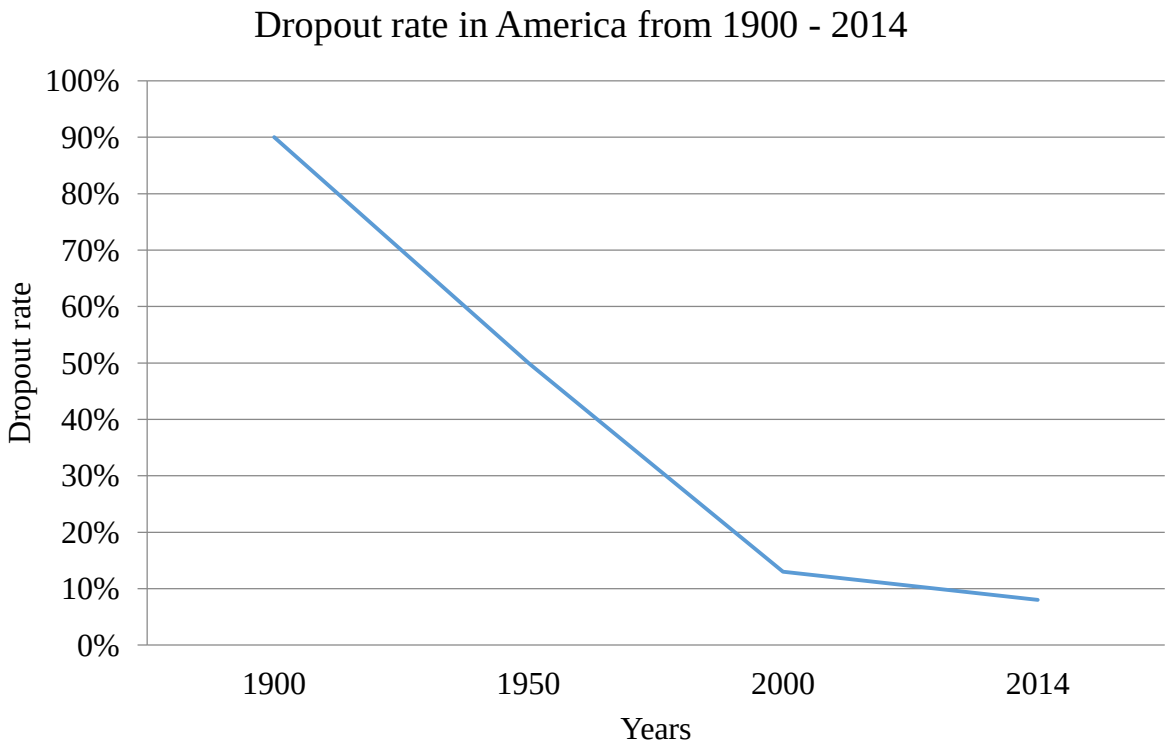

Figure 1. The average dropout rate in America from 1900 through 2014.

There are multiple common demographic factors of students who fail to progress with their cohort and eventually leave school without a diploma or receive an alternate diploma. Demographic factors found to correlate with students that attrite are race or ethnicity, family unit composition, family income, parental education level, and language proficiency (Benner & Wang, 2014; Nowicki, Duke, Sisney, Sticker, & Tyler, 2004). Students of all racial or ethnic backgrounds from economically disadvantaged homes are represented in the dropout population over five times more than students from homes with average or higher income (Chapman, Laird, Ifill, & KewalRamani, 2012). Student gender also has a slight impact on graduation success with male students about 2% less likely than female students to graduate from high school (Kena et al., 2015). Also, students who have been retained are approximately 16% more likely to drop out than students who are the same age of classmates (Chapman et al., 2012).

Demographic factors such as race and socio-economic status (SES) continue to have a statistically significant inverse relationship with graduation success (Benner & Wang, 2014). Although SES does not have a causal relationship with student academic achievement, low SES has been shown to be a significant predictor variable for academic motivation, thus academic achievement (Cooper & Tom, 1984; Koutsoulis & Campbell, 2001; Wharton, 1986 as cited by Young, Johnson, Hawthorne, & Pugh, 2011). Even more concerning, Hispanic and African American students from low SES groups are statistically less likely to graduate than Caucasian students of equal low SES groups (Benner & Wang, 2014).

The cycle of dropping out of school often persists through generations (Terry, 2008). Positive and negative educational experiences impact parenting values, thereby impacting parenting practices. Parental values are reflected in their parenting practices, therefore parents who have experienced positive financial gains produced from their chosen educational path are more likely to have a higher regard for education. Parents with lower SES are more likely to not have graduated from high school than parents of a higher SES. Similarly, parents that dropped out of high school and did not receive positive payoffs from education are generally more receptive to their students dropping out of school.

Learning ability and disabilities. Although increased or decreased learning ability would appear to be a natural assumption for graduation rate, the impact on graduation success is not as simple. Students who are identified as academically gifted are only slightly more likely to graduate than average learning-abled students (Landis & Reschly, 2013). Instead, academically or intellectually gifted students that are not involved in a challenging and engaging curriculum are slightly more likely to dropout than regular education students (Landis & Reschly, 2013).

On the contrary, students identified as learning disabled are actually slightly more likely to graduate than non-disabled peers largely due to supports required by IDEA (Zablocki & Krezmien, 2012; McGee, 2011). Similarly, although low grade point average is a significant factor for some dropouts, students identified with a mild learning disability or more severe physical disability are not more likely to drop out than non-disabled peers (Chapman et al., 2012; Suh & Suh, 2007). Presently, students with mild disabilities are almost 10% more likely to graduate than non-disabled peers. This is a stark difference compared to 40 years ago when students with mild disabilities were almost 10% less likely to graduate than non-disabled peers (McGee, 2007). This 20% improvement in graduation rate for students with disabilities is due to federal and state laws geared toward providing equitable education accessibility (McGee, 2007).

Students with mental or emotional disabilities do not experience the same graduation success benefits from IDEA (Zablocki & Krezmien, 2012). Students identified with an emotional disability are still 18% more likely to drop out of high school than non-disabled peers and 28% less likely than mildly disabled peers (Zablocki & Krezmien, 2012). Although there are protections afforded by the Individuals with Disabilities Education Improvement Act of 2004 (IDEA), one out of four students who are expelled from school suffers from a diagnosed learning or emotional disability (Williams, Paze, Shelby, & Yates, 2013). In fact, results from Williams et al.'s (2013) meta-analysis suggest that school administrators perceive that students with emotional disabilities pose dangers to their school community. Additionally, school crises such as the Virginia Tech shootings of 2007 have resulted in greater awareness of signs or identification triggers for emotionally disabled students. The wide publication of students in emotional crisis and their victimization of their school and community has contributed to better

school crisis response readiness but the influx of zero tolerance policies (ZTPs) have contributed to higher dropout rates for emotionally disabled students (Williams et al., 2013).

ZTPs are hotly debated, but beyond the emotional, ethical, and moral argument that beset the ZTP debate, higher rates of expulsions for emotionally disabled students continue to correlate with ZTPs (Williams et al., 2013). The average classroom teachers and administrators are not equipped with the training or resources to manage the dynamic needs of emotionally disturbed students. Additionally, there is a lack of funding for an adequate number of school psychologists, counselors, social workers, or alternative school options in most school districts to support students who may need emotional or social intervention.

Although the number of support professionals is limited, law makers in North Carolina have instructed that licensed school counselors devote 80% of their school day to face-to-face time with students in North Carolina (G.S. § 115C-316.1). This mandate's purpose is to provide additional emotional and educational support to help administrators and teachers identify students in crisis as well as to positively impact individual student success and school safety. Nonetheless, school counselors are not guaranteed for every school. The financial strains of school districts continue to press school boards to locate cost cutting options. North Carolina does not require school counselors for every school and counselor positions are at-risk of elimination during tough budget negotiations. Removal of school counselors from schools would further erode the emotional supports for students needing additional emotional and mental supports and could contribute to increased dropout rates for emotionally or mentally challenged students.

Language proficiency and achievement gap. As the gold standard for Hispanic dropout research, *No More Excuses: The Final Report on the Hispanic Dropout Project* (Secada

et al., 1998) demonstrates that even when controlling for language, or limited English proficiency (LEP), SES, and immigration status, there remains a significantly higher percentage of Hispanic students that do not finish high school compared with their non-Hispanic student counterparts. Additionally, there are significantly greater gaps in achievement within the Hispanic subgroup when comparing English proficiency (Chapman et al., 2012; Montecel, Cortez, & Cortez, 2004). For example, in 1998 over 70% of Caucasian students were able to recognize alphabet letters at kindergarten entry while only 51% of Hispanic students from English-speaking homes were able to identify letters (Schneider, Martinez, & Owens, 2006). This academic proficiency gap widens by 13% for Hispanic students from homes that do not speak English. This breach in kindergarten readiness is a limiting factor that requires herculean efforts by all stakeholders to mitigate the later consequences for students.

Even more concerning, Anderson (2011) demonstrates that this gap in proficiency remains fairly consistent as students progress through elementary school. Hispanic fourth grade students that are not English proficient score 26% below their cohorts in both language arts and math across America (Anderson, 2011). The gap widens by eighth grade, with Hispanic students without English proficiency scoring 28% lower in math comprehension than classmates and scoring 26% below classmates in language arts comprehension. Students with limited English proficiency are more likely to be classified as English proficient within three years and the vast majority become classified proficient by seventh grade (74%, *n*= 5,354) (Slama, 2014). Although students that are exited from the program are monitored for two additional years, these same students are more likely to continue to demonstrate academic deficiencies in middle school and high school. These deficiencies are particularly prevalent in schools featuring a highly diverse and needy student population and a preponderance of students with limited English

proficiency. Likewise, these gaps are demonstrated later as a higher-than-average likelihood to drop out, be incarcerated, occupy a lower SES, and incur other consequences that impact students well into adulthood as well as potentially continuing to impact future generations.

Graduation rate and race/ethnicity. There have been improvements in the graduation rate for all races and ethnicities; however, an inequitable percentage of non-Caucasian Americans do not graduate (Kena et al. 2015). Asian and Caucasian students represent the highest percentage in the successful graduates in America's graduation rate (96% Asian, 95% Caucasian, 92% African American, 86% Hispanic). Additionally, the Hispanic population is today's fastest-growing American population and also has the highest dropout rate (Chapman et al., 2012; Fry, 2014; Monahan, Oesterle, & Hawkins, 2010; Kena et al., 2015; Martinez et al., 2004; Suh & Suh, 2007). Notwithstanding, the Pew Research Center reports that the greatest improvement in America's graduation rate is due to the rise in the Hispanic and African American graduation rates over the past 15 years (Fry, 2014). Forty years ago, 32.4% of Hispanic students dropped out compared to the present 14% Hispanic dropout rate. This 18% improvement is notable; however Hispanic students are still over two-and-a-half times less likely to graduate than non-Hispanic whites in America (Chapman et al., 2012). The Hispanic population attributed to over 56% of the American growth rate between 2000 and 2010 (Passel, Cohn, & Lopez, 2011). Although the Hispanic student graduation rate is better than it was 15 years ago, it is concerning that America's fastest growing population subgroup also has the highest high school dropout rate.

The highest population growth rate of American-born Hispanics is in geographic areas that do not have a predominant Hispanic cultural foundation. For example, the city with the highest Hispanic population growth in the past decade was Raleigh, NC (281%). Recent

population trends show that the Hispanic population boom appears to be greatest throughout Southern states (Brown & Lopez, 2013). This shift in demographics is relatively new for many schools in southeastern states where the greatest population growth rates are recorded, and culturally relevant education supports may not be present. This gap warrants awareness, analysis, preparedness, and action to continue to close the graduation gap for Hispanic students.

Amplification of at-risk factors. Risk factors amplify one another for students, or more specifically, students that have more than one risk factor are at an even greater statistical risk for dropping out of high school (Lapan et al., 2014). Race or ethnicity, family unit composition, parental education level, language proficiency, gender, (Nowicki et al., 2004) and being retained in one or more grades (Suh & Suh, 2007) are significant predictors for student graduation success. Due to IDEA guidelines, students with disabilities are not as likely to be retained or drop out as students of average ability, so student retention is not as applicable to students with disabilities (Zablocki & Krezmien, 2012); however students that display more than one at-risk factor are more likely to drop out (Lapan et al., 2014). For example, Hispanic students with limited language proficiency are at a greater risk of dropping out than other Hispanic students that are English proficient. Additionally, a Hispanic student that is not English proficient may be more likely to graduate from high school than a Hispanic student that is not English proficient and from a family with a lower SES.

College readiness and ethnicity. High school graduation success does not equate to college gradation success for all races or ethnicities because African American and Hispanic high school graduates are not as prepared for the rigors of college as Caucasian and Asian high school graduates (Barnes & Slate, 2014). Barnes and Slate (2014) analyzed college readiness of African Americans, Caucasian, and Hispanic students and noted that Asian and Caucasian

students were assessed as the most prepared. Although less than half of Caucasian students demonstrated the skills necessary for college readiness in reading and math (53% reading, 59% math, 41% both), Caucasian students were significantly more prepared than African American (34% reading, 29% math, 17% both) and Hispanic (37% reading, 40% math, 22% both) students. As previously noted, African American students are about 6% more likely to graduate high school than Hispanic students; however African American graduates are not as prepared as Hispanic graduates—African American students demonstrated about 5% less college readiness compared to Hispanic students. Barnes and Slate (2014) noted that during a three-year study, all student subgroups demonstrated greater growth in college readiness; however the gap between subgroups remained mostly constant over the three years of study. Although African American and Hispanic students became more college ready over the course of three years, there remains a gap in the percentage of African American and Hispanic students equipped for college successes.

It is also noteworthy that of the Hispanic students that go on to attend college, Hispanic students are more likely than Caucasian or African American students to attend a two-year college than a four-year university (Mellander, 2013). Also, Hispanic college students are significantly less likely to complete college degree programs than non-Hispanic college students (McCarron & Inkelas, 2006). Recent data suggest that more Hispanic students than ever are applying to college and are on par with non-Hispanic counterparts for the first time in history (Mellander, 2013). Although enrollment and applications are up for Hispanic students in 2013, an important data point will be the Hispanic composition of the college graduation cohort rate for this historic 2017 college graduating class.

Post-Dropout Decision

What do dropouts say after they dropout? Students who drop out share common perceptions about their choice not to graduate. If dropout students were happy with this decision long-term, perhaps educators could feel that it would be beneficial to not interfere with a student's decision to drop out, but a vast majority of students regret their decision to drop out (Bridgeland, Dilulio, & Morison, 2006). When interviewed, 84% of dropout students acknowledge that high school graduation is important to being successful. Likewise, three out of four of these same students interviewed state that, given the opportunity to relive this decision, they would have persevered toward graduation. Interestingly, although the majority of interviewed students regret their dropout decision, dropout parents are more receptive to their own child's decision to drop out of school contributing to future generations' dropout likelihood (Terry, 2008).

Students' reasons for dropping out. Doll, Eslami, and Walters's (2013) metanalysis of 50 years of studies classify the reasons students most frequently offer for dropping out as either pushing-out, pulling-out, or falling-out factors. Pressures posed from within the school (i.e., attendance policies, grades) represent pushing-out factors. Pulling-out factors tend to be the student's internal beliefs or family pulls that result in the student being pulled out of school. The student's relationship to school and perception of the school's culture represent most of the falling-out factors.

Pushing-out factors were the most frequent causes noted by students that dropped out of school (Doll et al., 2013). The three most statistically significant push-out causes cited by students were missing too many days from school, failing grades, and their perception of their inability to keep up with assignments. Pulling-out factors were the second most-noted reason for

dropping out. The three most statistically significant pull-out causes cited by students were the perception that the GED path would be easier, the need to get a job, and student pregnancy. Family-rooted pull-out reasons were a more significant pull on female than male dropout students. For example, the birth of a child resulted in the mother being almost 19% less likely than the father to return to finish her education. Additionally, female students were 6% more likely to drop out to support immediate family. Finally, dropouts also cited falling-out causes for their reason to drop out. The three most frequent fall-out reasons were not enjoying school, not feeling socially accepted as part of the school, and the impact of moving and the failure to acclimate to a new school (Doll et al., 2013).

Consequences for dropouts. There are serious long-term consequences for students who drop out of school. As a group, students who drop out of school have lower incomes over their lifetime and are less likely to be employed (Chapman et al., 2012). The average income of a person who does not earn their high school diploma is $10,000 less than peers with a high school diploma and over $36,000 less than peers who earn a bachelor's degree (U.S. Census Bureau, 2012). When taken into consideration that at least 7% of American students do not graduate, these losses grow exponentially for the individual, community, and country with each passing year. Similarly, dropouts are more likely to require social assistance (Martinez et al., 2004), report worse health status (Chapman et al., 2012), and are more likely to endanger future health by engaging in risky behaviors such as substance abuse and tobacco use (Martinez et al., 2004). Additionally, dropouts are more likely to have children who grow up in poverty and in turn drop out of school, perpetuating the dropout cycle through generations (Walden & Kritsonis, 2008). Therefore, the dropout consequences are not only realized for the individual dropout but

are instead amplified throughout the student's life and impact their community and may later spill over into their children's lives.

Incarceration rate of dropouts Prisoners are statistically more likely to have not graduated from high school (Ewert, Sykes, & Petitte, 2014). Over half of prison inmates do not have a high school diploma (55%) (52.7% Caucasian, 62% African American, 53% Hispanic). Dropping out of school, of course, is not a causal relationship to incarceration but there is a correlation between not graduating and serving prison time. Americans who do not graduate from high school are six to ten times more likely to be convicted of a crime. Likewise, America's incarceration rate is not equally representative for each American race or ethnicity (Ewert et al., 2014). African Americans are 40% of the prison population but are only 13% of the total United States population. Caucasians are 64% of the United States population and only 39% of the prison population. Hispanics are 16% of the United States population and 19% of the prison population.

The percentage of Hispanic prison inmates has increased by almost 6.5% over the past 30 years (Ewert et al., 2014). An increasing incarceration trend is not seen in non-Hispanic subgroups and Hispanics were the only subgroup representing an increase in incarcerations over that time period. In fact, non-Hispanic incarceration has decreased by an even greater amount since 1980 (-7.9%), presently making non-Hispanics 12% less likely than Hispanics to be newly incarcerated. The Hispanic subgroup has the lowest graduation rate (Kena et al., 2014) and the highest increase in incarcerations than all racial or ethnic subgroups across America (Ewert et al., 2014), contributing to significant social and societal ills for the Hispanic population and communities. The rise in number of Hispanics not graduating from high school, the significant growth in the Hispanic population, and the increasing number of Hispanics incarcerated are of

growing concern. This population trend demands awareness and action from educators and stakeholders to provide equitable education access and success for all subgroups.

Dropout Prevention

Prevention program effectiveness. The dropout crisis in America weighs heavily on the student, the school, the community, and our country. There are multiple programs that have been developed to help combat the dropout problem; however not all are proven to be effective. In *The Silent Epidemic: Perspectives of High School Dropouts*, Bridgeland et al. (2006) suggest education leaders consider these four major issues: promoting experiential learning programs, establishing smaller learning communities, using culturally relative curricula and programs, and creating effective alternative schools. A meta-analysis of dropout program reviews demonstrates that research-based programs must be student-focused to meet the individual needs of students instead of a superficial one-size-fits-all program (Montecel et al., 2004, p. 185). Montecel et al. (2004) evaluated past and current student-focused programs (e.g., Achieving a College Education [ACE], Upward Bound, and Advancement via Individual Determination [AVID]) to define common threads programs defined as successful based on student graduation success. Key strategies most effective for dropout prevention are coaching students to graduation, dedicated educators investing in individual students, the inclusiveness of families, cultural relevance, and equipping educators.

By the time students reach high school, many risk factors such as demographics and being retained in prior grades are permanently fixed. Depending on how school districts allocate funding, many secondary schools have reduced academic budgets for the same or greater student needs. Some research-supported strategies, for example such as lower teacher-to-student ratio may be impossible for already financially strapped schools (Feldman & Matjasko, 2005;

Werblow & Duesbery, 2009). There is not a silver bullet for dropout prevention therefore, educators must look within the school's locus of control for research- and evidence-based strategies to improve graduation success. Anticipating and identifying social and support needs of students is daunting in the accountability era; however providing this support is consistently more successful than programs that simply add a layer of remediation. Using research-based methods within the school to reap maximum yield from programs already in place is fiscally responsible for schools and empowers students for future success in the community.

School engagement as dropout prevention. Many teens are emotionally starved for adult interaction. At home, the average teenager has approximately five minutes of interaction with the male parent or guardian without the interruption of electronics each day (Neumark-Sztainer, Larson, Fukerson, Eisenberg, & Story, 2010, as cited by Berenstein-Yamashiro & Noam, 2013). Maslow's theory on hierarchy of needs demonstrates that students' base needs must be met before academic goals can be fully experienced (Pfeifer, 1998). If a student is experiencing deficits in basic needs, the majority of his or her energy and focus will be directed toward having physiological and safety needs met before working toward meeting his or her psychological or self-fulfillment needs. Also, students' need to feel loved and that they belong is a stronger drive than their need to feel academically or personally successful. Students that do not have these basic and psychological needs met at home come to school daily looking for peers and educators to fill them prior to moving into academic accomplishments.

Research data supports that students that identify as part of a school community, often referred to as school engagement, have a protective factor for health and increased graduation. School community is defined as "students' perception of school support and the number of adults with whom they have a positive relationship" (Niehaus, Rudasill, & Rakes, 2012, p. 443).

School engagement studies using student connectedness scores to explore myriad relationships have contributed to and continue to be quoted in multiple school engagement research publications, including the Department of Education and Centers for Disease Control publications, for graduation support (McNeely, Nonnemaker, & Blum, 2002). Libbey's (2004) review of student school engagement measures and terminology deduced that many terms may be viewed as interchangeable in school engagement research, such as: school attachment, school bonding, school connection, connectedness, connectivity, school context and even school climate. This study will predominantly uses the term "student connectedness" or "school engagement" to represent student's perception of their feeling of closeness to and within the school community.

School engagement negatively correlates with risky behaviors and positively correlates with academic success and healthy decisions (Daly, Buchanan, Dasch, & Eichen, 2010; Sieving et al., 2001). Research supports that school engagement contributes to academic success and student well-being (Brown & Evans, 2002; Daly et al, 2010; Feldman & Matjasko, 2005; Fredericks, Blumenfeld, & Paris, 2004; Grossman & Bulle, 2006; Monahan et al., 2010; Martinez et al., 2004; McNeely et al., 2002; Nowicki et al., 2004; Suh & Suh, 2007; Werblow & Duesbery, 2009). Smaller learning communities have been shown to strengthen student relationships, or increase school connectedness, which mitigate risky behaviors by promoting healthy behaviors and academic success in youth (Daly et al., 2010). Students who feel that the adults they interact with on a daily basis at school care about their learning and about them as individuals are statistically more likely to have academic success, graduate high school, have increased emotional health, and demonstrate higher resiliency (Fredericks et al., 2004). Additionally, students with higher school engagement have an increased protective factor against

risky behaviors such as gang involvement or substance abuse that negatively correlates with academic success (Sieving et al., 2001; Werblow & Duesbery, 2009).

Teacher impact on school engagement. Student survey data supports that teachers have the greatest influence on students' attitude toward school (Osterman, 2010). Additionally, structure equation modeling supports that social variables (parent, peer and teacher support, and parental education monitoring) is positively linked to student grades, behavior, and satisfaction within school (Woolley, Kol, & Bowen, 2009). Students were surveyed from the School Success Profile data (SSP, 2001) and teacher support was shown to have an effect on school satisfaction ($ß = .58$, $p < .01$) and school behavior ($ß = .20$, $p < .01$), which were both then shown to impact grades ($ß = .32$, $p < .01$) (Woolley et al., 2009). Especially in the absence of family or peers to champion for graduation, teachers can make a quantifiable impact on helping support students toward graduation.

Additional research demonstrates that positive relationships between students and teachers contribute to a student's feeling of investment in the school community (Brown & Evans, 2012). The teacher-student relationship impacts student satisfaction at school as well as academic goals that affect a student's long-term success for decades to come (McCollum & Yoder, 2011). Researchers used multiple regression analysis and the Sobel Test of longitudinal data from the Maryland Adolescent Development in Context Study regarding perception of school culture, teachers, and academic goals. Results support the premise that a student's perception of teacher-student relationships has a significant effect on students' rating of school culture and their academic goals ($ß = .48$).

Likewise, survey results from a case study of an urban high school revealed that many students credited that the relationship with their teachers, specifically that the teacher cares about

the student, as a major contributing factor to their academic success (Hazel, Pfaff, Albanes, & Gallagher, 2014). Students were placed in small learning communities (academies) within the greater school based on identified risks or deficits from eighth grade. At the end of ninth grade, successful students, who were defined as having a reduced risk thus changing academy placement, listed the relationship with a teacher as a contributing factor to their academic achievement. Student's assessment of the teachers' perception, support, and relationship to the student as an individual, specifically in the teacher's expectation in the ability and value of the individual student, is shown to be vital to the success of students of all backgrounds and abilities.

Students from lower SES place a higher value on relationships than students of middle to higher SES (Payne, 2013). Positive relationships based on supportive interactions rooted in transparency and truthfulness from caring adults are found to be even more valuable than possessions or accomplishments for students of lower SES (Payne, 2013). Although many school reformation debates cite the lack of funding as the downfall of public education, the focus on improving relationships between students and school adults may be an even greater boon to student success. On the contrary, the rigidity of many school factors reinforces negative school socialization (Nevarez & Wood, 2007). Bridging gaps in communication styles and cultural norms is important in creating a foundation for teacher-student relationships.

Effect of teacher expectations on school engagement. Like the popularized social phenomenon known as the Pygmalion Effect, students are more likely to perform well when they feel that teachers expect them to do well (Friedrich, Flunger, Nagengast, Jonkmann, & Trautwein, 2015). For individual students, teacher expectation explained as much as 26% of a students' math test score and 62% of students' overall math grade (n = 1,289) (Friedrich et al., 2015). Conversely, negative expectations can also impact students. Observation of teachers

during placement decisions for the coming year's courses suggested that teacher perception and expectation of students are impacted by generalizations of race, class, and gender (Riley & Ungerleider, 2012). For the study, teachers were given students' academic transcripts, which included demographic information, for course placement. Less than 5% of the observed teachers restricted placement decisions to academic and achievement scores. In fact, when controlling for achievement scores, non-Caucasian students were more likely to be placed in remedial classes than Caucasian students (Riley & Ungerleider, 2008, as cited by Riley & Ungerleider, 2012). Additionally, teachers were more likely to place female students in more academically demanding courses than males, citing student maturity as the criteria basis.

Teacher expectations of students have been shown to be very accurate in regards to predicting which students will drop out of high school and are, in fact, slightly more accurate than early warning system data (Soland, 2013). Conversely, teachers' prediction of which students would attend college were not accurate, especially for students of color. Most disturbing, teachers were almost twice as likely as actual results to predict non-Caucasian students (who later went on to graduate) would drop out of school. Soland (2013) noted that the most significant inaccurate predictions occurred when teachers were making predictions regarding students of a different race or gender. Teachers' prediction errors based on lower expectations of students who do not mirror their own individual demographics are significant because 84% of American teachers are Caucasian females (Feistritzer, 2011). Additionally, Caucasian females are often reluctant to work in demographically diverse schools but will accept positions until a more desirable position opens up (Nevarez & Wood, 2007). This time period when teachers are reluctant to invest in their students greatly impacts students in the class. Many students are impacted during the months to years that teachers forgo investing in their school

community but are employed until a transfer or position becomes available in a school the teacher finds more favorable. Students benefit most from teachers that demonstrate the ability to hold high expectations for all students and build relationships with all students, even students who do not mirror their own life experiences.

Not surprisingly, the mental and psychological health as well as the conflict resolution skills and tolerance of the classroom teacher contribute significantly to student success. The relationship between teacher and student is a significant contributor to a student's perception of connectedness to the school (Higgins-D'Alessandro & Sadh, 1998; Zullig, Huebner, & Patton, 2011). Not surprisingly, teachers' relationship skills significantly impact the teacher-student relationship (Goldwater & Nutt, 1999). Teacher cohesion, conflict, and expressiveness has a statistically significant impact on the relationship between the teacher-student and teacher subjectivity in grading. Researchers analyzed results comparing student and teacher self-reported scores on family inventory with teacher subjectivity, or low variance between teacher course grade and final state testing scores. Teachers appeared to identify and grade more favorably students from similar family backgrounds. For example, teachers from high-conflict home environments assign more inflated grades to students with similar high-conflict homes. Most significant to positive school culture research, teachers with favorably cohesive homes, reduced conflict, and mid-range expressiveness demonstrate the most accurate subjectivity as well as produce students with the highest state final exam scores.

Teachers' beliefs in negative stereotypes. Teachers are not able to fake authentic relationships because students are too intelligent to trust words without correlating actions. Negative teacher expectations can be a significant barrier to graduation success and students' feelings toward education. A recent case study revealed that some educators uphold negative

stereotypes (Locke, Stedrak, & Eadens, 2014). A case study of an early college high school that serves a predominately Hispanic and purportedly academically motivated population surveyed educators employed at the school. Results support that many educators at this early college high school do not hold favorable views regarding the academic skills of their female Hispanic students, citing the students as lazy, likely to become pregnant before graduating, and not motivated (Locke et al., 2014). Not surprisingly, student interview responses indicate that many of the female Hispanic students accurately perceived that teachers did not have high expectations of them.

Administrators and school engagement. Positive school culture and climate positively impact school engagement (Fredericks et al., 2004). Democratic practices, supportive teachers and classmates, and structured and effective classroom management with challenging curricula contribute to increased school engagement. Likewise, feeling safe at school contributes to students feeling connected to their school community (Daly et al., 2010). Environmental school factors such as higher student-to-teacher ratios with less personal investment by faculty (Eccles, Midgley, Wigfield, Buchanan, Reuman, Flanagan, & Mac Iver, 1993) and ZTPs negatively impact school engagement (Daly et al., 2010).

Research that seeks to share the voice of students that drop out also reports negative school engagement. As noted before, Doll et al.'s (2013) study indicated that many school engagement factors such as the perception that they could not get along with teachers (25%), feeling of not belonging (20%), not getting along with peers (19%), and not feeling safe (10%) were repeatedly cited as reasons for dropping out. Likewise, students frequently cite lack of relationship with adults at school, unfair treatment, and authoritarian rules as contributors to the decision to drop out (Stevenson & Ellsworth, 1991).

School relationships with other students. As previously noted, falling out, or not feeling socially accepted or enjoying school, was an important reason students cited for dropping out (Doll et al., 2013). Highly academically motivated students do not tend to be at a higher risk to drop out; however there may be a significant amount of pressure for many males to veil academic interest to be accepted by school peers. Multiple studies have suggested that the classic "nerd-bully" relationship does not exist (Schwartz, Kelly, & Duong, 2005; Nakamoto & Schwartz, 2010, as cited by Schwartz, Kelly, & Duong, 2013), but a recent study of ninth grade students from an urban California school suggests that academically driven students reported significantly higher negative social interactions with school peers than non-academically driven students (Schwartz et al., 2013). Students were surveyed at the end of the ninth grade and again at the end of the tenth grade year (n = 415, 70% Hispanic). Structural equation modeling demonstrated that academically motivated students, specifically males of this study, experienced significantly more negative social interactions (β = .27, p. <.005) than females. These results are contradictory to other studies (e.g., Martinez et al., 2004) but are noteworthy. These results suggest that students who are significantly more academically motivated and do not have social prowess may experience significantly less support from peers and need additional teacher support.

Attending schools that demographically mirrors the student also impacts students' feelings of school engagement. Longitudinal survey data results demonstrate that students who attend schools that are not racially diverse demonstrate the highest school connectedness (McNeely et al., 2002). For example, African American students who attend a school with a predominately African American student body are more likely to cite higher school engagement

than African American students who attend a school with a more equal percentage of students from varying races or ethnicities.

School engagement through social media. Social media can have positive effects on student's feeling of engagement in their school community. Students who interact with students from their class via social media platforms are more likely to feel closer and more engaged in their classroom than students who do not use social media to support classroom discussions and collaboration (Arnold & Paulus, 2010; Dawson, 2008; Heiberger & Harper, 2008; Hurt et al., 2012; Jones et al., 2009; Top, 2012, as cited by Tarantino, McDonough, & Hua, 2013). Therefore, when executed mindfully, social media is an important tool for educators to reach students and increase school engagement. According to Piquer (2014), socialization from virtual communities of social media supersedes socialization of family or school community by the time a student is an adolescent. Social media and students' involvement in social media is more prevalent than ever and is likely to continue to increase with time. There are relationships between students' social media activity and school engagement. For example, students that passively engage in social media are less likely to be actively engaged in school (Junco, 2012). Specifically, in order from least negative to most negative correlation with school engagement, activities such as checking-in on friends (-.088), chatting (-.098), posting photos (-.102), or playing games (-.118) on social media correlate with students' school engagement (Junco, 2012). Students' social media activities shown to predict positive school engagement are creating or responding to events (.136), commenting on friends' activities or pictures (.116), and viewing photos (.086) (Junco, 2012). Effective utilization of school social media may be an important tool in scaffolding students from passive to more active engagement in school.

After-school programs and engagement. After-school programs can be an important stand-in for students whose parents/guardians are unable to be available; however not all after-school programs are successful in building school engagement or academic success (Grossman & Bulle, 2006). The type of activities, length of activities, activity sponsors, and focus of the youth program are important components to increasing connectedness for students. Students report higher connectedness with non-parental adults in activities specific to shared interests when the adults are responsive to students' needs, model respect, and engage in light, supportive conversations with the students.

Likewise, extracurricular activities for students can be a key asset for academic achievement and boost for student well-being and prevention of substance abuse (Feldman & Matjasko, 2005). School-based extracurricular activities can play a significant role in the growth of students and school engagement can be positively impacted through engagement in extracurricular activities (Brown & Evans, 2002; Feldman & Matjasko, 2005; Grossman & Bulle, 2006). Research from leading contributors in the field of school engagement research demonstrates that engaging in extracurricular activities positively impacts school engagement and academic success. McNeely et al.'s (2002) research is quoted in multiple school engagement research publications as well as national publications for Department of Education and Centers for Disease Control and they are widely regarded as experts in school engagement research. Increased academic success due to school engagement from involvement in positive extracurricular activity is demonstrated across racial and ethnic groups (Brown & Evans, 2002). Grossman and Bulle's (2006) research further defines positive extracurricular activities as activities with responsive adults that model respect and build relationships through supportive and positive conversations.

Although Hispanic students' involvement in extracurricular activities is low compared to non-Hispanic students (Martinez et al., 2004), Hispanic students who participate in extracurricular activities report the highest school engagement of all ethnicities (Brown & Evans, 2002). Martinez et al. (2004) suggest that discrimination and barriers such as fees, work obligations, lack of information regarding activities, and not liking school peers inhibit participation in school-sponsored events. Despite barriers to engagement in extracurricular activities, participation builds school relationships and is analogous to Hispanic cultural values.

Family Support

Students value the influence of family and friends in the decision process to drop out (Terry, 2008). Students that drop out of school are statistically more likely to have friends or be children of parents who dropped out of school and are more supportive of the decision to drop out. Likewise, students who drop out are less likely to have a counterbalance of positive relationships with school faculty or staff to influence the decision process. Conversely, according to a structural equation modeling study, students who credit parents with providing positive support for education goals were more likely to identify themselves as part of a school community, which in turn indirectly positively affected student academic success (β=.06) (Fall & Roberts, 2012).

Similarly, the most significant single factor for African Americans' academic motivation was the students' perception of social support (Young, Johnson, Hawthorne, & Pugh, 2011). This quantitative study with a self-determination theoretical framework set out to measure the relationship between SES status, family's prior college experience or perceived social support, and student's intrinsic or extrinsic motivation based on ethnicity. The combination of factors that had the greatest impact on African American students' motivation (41% variance) was the

students' higher perception of social support, higher SES, and having a parent who previously attended college (Young et al., 2011). Conversely, there were no relationships between factors and motivation for Caucasian students or Hispanics. Although the results suggested that there were not any significant relationships among the measured variables and motivation for Hispanic students, Hispanic students (*n*=31) differed from non-Hispanic (*n*=62) students in that Hispanic students cite their most influential social support exists outside of school (Young et al., 2011). Additionally, Hispanic students of lower SES reported their greatest supportive relationships from social networks outside of school demonstrating that the support of family is one of the most significant factors effecting Hispanic student graduation success.

Additionally, recent dropouts were surveyed in a case study and responses supported the idea that parents, siblings, and both in-school and out-of-school peers have a significant effect on students' decision to persevere through to graduation or to drop out of school (Terry, 2008). Students surrounded by family and friends who did not graduate are often inundated with negative feedback toward school and are more likely to accept dropping out as an option. Students of lower SES are statistically more likely to be surrounded by parents or family members who did not complete school, thus are more likely to receive more pro-dropout advice than students that are not surrounded by peers or family members who dropped out of school.

Family culture and school engagement. Family and individual relationships are pillars of many racial and ethnic cultures (Shetgiri, Kataoka, Ryan, Askew, Chung, & Schuster, 2009). Although relationships are of premium importance, historically many ethnic groups in America have been resistant to support or input outside of family or personal relationships. The Hispanic social support network is a powerful influence that must be factored in when considering successes and challenges for Hispanic students. Hispanic students are more likely to be

surrounded by peers as well as family members who dropped out of school, are more likely to occupy a lower SES, and perhaps are less supportive of the academic overachiever; however the reported intensity of the social support from members outside of the school are woven into the Hispanic students' ethnic tapestry and could become this subgroups' greatest factor contributing to student success. As a result, the social support factor unique to the Hispanic subgroup could also become the most significant contributing factor impacting student success in the future.

Hispanic students report lower school connectedness levels than non-Hispanic students (Daly et al., 2010; Monahan et al., 2010). Hispanic students are more likely to feel a greater sense of connection to adults outside of the academic arena (Young et al., 2011). Hispanic students are more likely to have their emotional and social needs met outside of school, but this lack of school connectedness is noteworthy because many Hispanic students are hardwired to connect (Young et al., 2011). In fact, Shetgiri et al.'s (2009) research illustrates that Hispanic youth are more receptive to community support, resources, and input that originates outside of the family than older Hispanic, likely due to Hispanics' cultural value of relationships as a whole. Additionally, multiple studies demonstrate that Hispanic graduates credit connections with caring adults within the school staff as a contributor to academic success (Martinez et al., 2004; Secada et al., 1998; Shetgiri et al., 2009). Hispanic youth are receptive to outside support, and place significant value on relationships, therefore, it would be beneficial for educators to focus on connectedness strategies for Hispanic students.

Self-Esteem

This study attempts to examine the factors that are present for students who demonstrate academic success and resiliency but have multiple demographic, academic, and social factors that generally negatively correlate with academic success. Although it is the effort of this study

to make generalizations to the greater population of students of various backgrounds and social or academic abilities, it is also vitally important to explore individual factors that contribute to student success. Self-esteem is the perception of value an individual assigns to himself or herself (Afari, Ward, & Khine, 2012; Revy, 2010). It is a trait that is largely stable and universal in that it tends to remain stable through various specific situations or stressors.

Meta-analyses of students across the United States show that there is a significant positive correlation between self-esteem and various academic factors (Bachman et al., 2011). Positive attributes that tend to accompany higher self-esteem are resiliency in frustrating circumstances, likelihood to resist negative peer pressure, reduction in co-dependent behaviors, and increased ownership of actions (Ferkany, 2008). There are also negative attributes that tend to coincide with lower self-esteem such as self-doubt and an inability to make clear, thoughtful, effective decisions. Wagner, Frieder, Franz, and Wagner's (2014) study supports that students' perception of their academic ability impacts self-esteem. Specifically, students in primary grades that report feeling a deficit in academic ability are more likely to report lower self-esteem than peers.

Self-esteem by subgroups. Self-esteem has been shown to vary by gender and race (Erol & Orth, 2011; Wagner et al., 2014). Self-esteem increases most during adolescence but continues to rise moderately through adulthood for all racial and gender subgroups (Erol & Orth, 2011). Researchers note that self-esteem data is positively skewed, or much higher than a median score, across all subgroups; however there are significant differences between racial or ethnic and gender subgroups (Bachman et al., 2011).

African Americans demonstrate the highest self-esteem scores (4.23), followed by Caucasians (4.1), Hispanics (4.05), and finally Asians (3.96) (Bachman et al., 2011). For all

races and ethnicities, female students demonstrate lower self-esteem than male students of the same race or ethnicity (Bachman et al., 2011, Erol & Orth, 2011; Chubb, Fertman, & Ross, 1997). Many studies demonstrate that self-esteem slightly decreases for students from eighth grade to tenth grade, with the lowest self-esteem registered for twelfth graders (Wagner et al., 2014). This decline may likely be due to approaching the precipice of high school and entering the unknown of college or career.

For all subgroups, students who are extroverted and emotionally stable have the highest self-esteem. Interestingly, African American youth have the highest self-esteem and Hispanic youth median scores are lower than both African American and Caucasian median scores initially; however Hispanic self-esteem grows rapidly during young adult years, surpassing Caucasians' and approaching that of African American young adults' by age 30 (Erol & Orth, 2011). Students who have a stronger grade point average and set college plans tend to have a slightly higher self-esteem score (Bachman et al., 2011; Wagner et al., 2014). When controlling for student academic achievement scores and plans to attend college, African American females have a slightly higher self-esteem score than African American males. Using the same parameters, Hispanic males score slightly higher than Caucasian males, but Hispanic females score higher than Hispanic males. Asian students, both male and female, score the lowest of all race or ethnicities, even when factoring in achievement and college plans.

Vialle, Heaven, and Ciarrochi (2002) studied populations of students identified as gifted and of average ability and hypothesized that gifted students would have an elevated sense of self, or higher self-esteem, in regards to academic success. Contrarily, this study demonstrated that there was no relationship between self-esteem and academic success between students who are gifted and those of average ability. Additionally, Chohan (2013) studied fourth-graders' self-

esteem and academic success demonstrating little to no predictability between student's academic prowess and self-esteem (R^2= .009); however of these same students who were then retained for the first time at the end of that grade, a 19% of variance (of self-esteem) was attributed to being retained (R^2=.19). This may suggest that negative academic success has a greater impact on self-esteem than positive academic success.

Gender and self-esteem. As noted previously, female students demonstrate lower self-esteem than male students of the same race/ethnicity but male and female youth have very similar self-esteem levels and trends (Bachman et al., 2011; Chubb et al., 1997; Erol & Orth, 2011). Chubb et al.'s (1997) results as well as the generally accepted notion that females have a lower self-esteem are hotly debated in both academic and educational arenas. Chubb et al. (1997) suggested that female self-esteem is negatively impacted by gender roles as students mature and point to the fact that elementary female students do not demonstrate lower self-esteem than elementary male counterparts.

Skewed self-esteem data. African Americans and males report higher perceptions of self-esteem. Studies suggest that cultural differences are demonstrated in self-esteem responses due to the comfort level of students of various races/ethnicities with the extremes of a Likert scale response (Bachman et al., 2011). African Americans demonstrate more comfort with the extreme positives of a Likert scale—more than Caucasian peers and much more than Asian American peers. Similarly, female students are also less comfortable with extreme positives on a Likert scale. Additionally, Reuben, Rey-Biel, Sapienza, and Zingales (2011) coined the term "honest overconfidence" to describe the relationship between male self-esteem and perceived female self-esteem. Reuben et al. (2011) share that societal expectation for males reward males for extremely high confidence. Society often looks to confident males to lead both during crisis

and times of peace (Reuben et al., 2011). Likewise, even when evenly paired, males were twice as likely to positively inflate their self-inventory of abilities when compared to females of the same abilities or accomplishments. Therefore, African Americans' comfort with rating themselves highly and societal expectations for males to demonstrate confidence should be considered when making generalizations.

Locus of control. Similarly, both older male and female students' loci of control become increasingly more internal than elementary-aged students, and neither group demonstrates a significant difference in perception of loci of control long-term (Chubb et al., 1997). As students approach high school, they feel that their life trajectory is increasingly under their own control. Female students tend to experience this shift in perception of control approximately a year earlier than males (Bachman, O'Mallay, & Johnston, 1978, as cited by Chubb et al., 1997). Although as a group female students' self-esteem is lower across all subgroups and ages (Wagner et al., 2014), locus of control does not vary significantly by gender (Chubb et al., 1997).

An internal locus of control is important for students in taking responsibility for graduation success and career and college paths and positively correlates with self-esteem (Chubb et al., 1997). Caucasian students report the highest sense of internal locus of control of all racial subgroups and also demonstrate the most change in locus of control during high school (Wang & Su, 2013). Locus of control level is more stable for Asians Americans, African Americans, and Hispanics than Caucasians through high school. African American students not only demonstrated the highest self-esteem but also demonstrate the most stable locus of control of all race subgroups. Caucasian locus of control is the lowest in ninth and tenth grade but changes significantly in eleventh and twelfth grade (Wang & Su, 2013). Also, African American students who demonstrate graduation success tend to demonstrate greater intrinsic and extrinsic

motivation, and arguably greater internal locus of control, than African Americans who do not go to graduate (Young et al., 2011). Additionally, African Americans at universities also demonstrated higher motivation than Caucasian and Hispanic student peers.

Summary

According to researchers, inequality of educational access for American students continues to be demonstrated by the academic achievement gap among student subgroups (Barnes & Slate, 2014; Kena et al., 2015; Rumberger, 2013). African Americans and Hispanics are statistically less likely to graduate than Caucasians and Asians, and those that do graduate are statistically less likely to be college-ready (Barnes & Slate, 2014). This graduation gap is even wider when considering students who are not proficient in the English language (Chapman et al., 2012; Kena et al., 2015; Secada et al., 1998; Schneider, Martinez, & Owens, 2006). Classroom teachers have the greatest influence on student performance (Osterman, 2010). Teachers' relationships with students are a significant tool in supporting students in feeling greater school engagement and support to graduate (Brown & Evans, 2012; McCollum & Yoder, 2011; Osterman, 2010, Woolley et al., 2009). Of even greater importance, students of lower SES place higher value on relationships with teachers than students of higher SES (Payne, 2013). Likewise, students of many ethnic or racial cultures place higher value on relationships with teachers (Brown & Evans, 2002; Martinez et al., 2004). Although engagement in school through teacher relationships are a powerful tool, relationship barriers for students who do not mirror the race and gender of the classroom teacher may contribute to the disconnect between the predominant Caucasian female teaching force and the non-Caucasian or non-female student (Riley & Ungerleider, 2012). School connectedness strategies that encourage maximum usage of programs already in place can be a cost-effective strategy in the dropout battle (Daly et al.,

2010). The impact of the support network outside of school as well as the potential for support to carry over into the school has promise in addressing the disparity of the Hispanic student dropout rate (Young et al., 2011). Therefore, a better understanding of the relationships of students who graduate or do not graduate and their school engagement, relationship with parents, self-esteem, and race is a natural fit strategy that warrants additional research using empirical data to remove barriers and increase understanding to better support the academic success of all students.

CHAPTER THREE: METHODS

Design

A correlation research design was used to investigate the relationship between students' likelihood of graduating from high school and school engagement, student self-esteem, student closeness to parents, and student race. The correlation research design was chosen to identify the strength and direction of the relationship between identified social and demographic predictor variables to graduating from high school. Simple logistic regression analysis was used to not only assess if there was a correlation but also to give a better view of the relationship, specifically how the likelihood of graduating was impacted by a predictor variable of school engagement, self-esteem, closeness to parents, or race. Simple logistic regression was used to identify if there is a relationship and did not assume or evaluate for a causal relationship between the variables. Simple logistic regression was the best fit for this study because each hypothesis tested involved a single criterion variable measured on a dichotomous measurement scale and a single predictor variable. It was hoped that analyses would provide a more accurate representation of variables that have the most significant relationship with high school graduation status to guide educators (Gall, Gall, & Borg, 2010).

Research Questions

The research questions for this study are:

RQ1: To what extent does school engagement relate to graduation success?

RQ2: To what extent does student self-esteem relate to graduation success?

RQ3: To what extent does student closeness to parents relate to graduation success?

RQ4: To what extent does student race relate to graduation success?

Null Hypotheses

The null hypotheses for this study are:

$H_0$1: There is no significant relationship between student school engagement and graduation success.

$H_0$2: There is no relationship between student self-esteem and graduation success.

$H_0$3$_i$: There is no relationship between student closeness to mother and graduation success.

$H_0$3$_{ii}$: There is no relationship between student closeness to father and graduation success.

$H_0$4: There is no relationship between student race and graduation success.

Participants and Setting

This study used the public use data set from the National Longitudinal Study of Adolescent Health (Add Health). The Add Health data is most suitable for this study because it consists of a large, nationally representative sample, explores multiple social and demographic factors for students, and consists of four total waves of data collection spanning over 15 years (Harris, 2009). The purpose of the Add Health study was to generate data on United States adolescents revolving around students' "social, economic, psychological and physical well-being with contextual data on the family, neighborhood, community, school, friendships, peer groups, and romantic relationships" (UNC CPC, 2014, para. 2). The Add Health project was directed and designed by researchers from the University of North Carolina at Chapel Hill and funded by over 24 grants or agencies, with the largest contribution stemming from the Eunice Kennedy Shriver National Institute of Child Health and Human Development (Harris, 2009).

In the school year of 1994–1995, cluster sampling of high schools across the nation resulted in 80 high schools recruited to participate in this study (Harris, 2009). Follow-up data collections were conducted in 1996–1997 (Wave II), in 2001–2002 (Wave III), and in 2008–2009 (Wave IV). Waves II–IV were conducted as in-home interviews. Add Health researchers were mindful to ensure that representative students from all regions of the United States and of all ethnicities were statistically represented as well as schools that varied in size, purpose, and urbanacity. Students were assigned codes for grade and gender, then 17 students were chosen randomly from each code for a yield of approximately 200 students participating from each of the 80 schools. Parents participated in in-home interviews, giving verbal answers for demographic information and using ear phones to listen to a recording of questions and entering answers on a data sheet for more sensitive information (computer-assisted self-interview). School administrators also completed surveys and supplied additional demographic information regarding school and teacher information. A logistic regression of the binary criterion variable (graduate or not graduate) on a continuous predictor variable using a sample size of 2,002 out of a database of 6,504 participants which exceeded the minimum sample size required (Gall et al., 2010) achieves .8 power at .0125 alpha significance level to detect an odds ratio of 1.61. The racial distribution of the sample was 1,574 Caucasian, 352 African American, 5 American Indian or Native American, and 71 Asian or Pacific Islander *(n* = 2,002).

Instrumentation

Survey responses and instruments incorporated within or from the Add Health survey were used to measure variables. Survey responses (one answer) were used for student race and graduation status. Three instruments were used to calculate composite scores of survey

responses for the three predictor variables: school engagement, student closeness to parents (separated by connectedness to father and connectedness to mother), and student self-esteem.

Student Connectedness Score (SCS)

Students' engagement in school is the perception of the level of positive support a student feels from his/her school community (Niehaus, Rudasill, & Rakes, 2012). In 2001, nursing instructors and statisticians collaborated to design a computed score for measuring school engagement from the Add Health survey, or the student connectedness score (SCS) (Sieving, Beuhring, Resnick, Bearinger, Shew, Ireland, & Blum, 2001). The resulting instrument measures student's school engagement as a total numerical value, or SCS. The SCS is a computed score of five variables from the Add Health survey: "I feel close to people at this school," "I feel like I am part of this school," "I am happy to be at this school," "The teachers at this school treat students fairly," and "I feel safe in my school" (Waters & Cross, 2010). This instrument has been repeatedly used in school engagement studies (Waters & Cross, 2010). Waters and Cross (2010) conducted further analysis of the SCS and reported that exploratory factor analysis in Statistical Package for the Social Sciences (SPSS) supports that the SCS is largely one-dimensional, explaining 56% of the variance with a 2.81 Eigen value. The Cronbach Alpha for the five items was .80 and reached conventional standards for good reliability of scale reliability. Permission to use the instrument was granted (Appendix A).

Student Closeness to Parents Scores

Students' perception of closeness to each parent were computed scores from the parent closeness (PC) instrument which is included in the Add Health Survey (Harris, 2005). Two separate scores were computed, separated by perception of closeness to mother or female guardian and perception of closeness to father or male guardian and has been used in previous

studies (Ream & Savin-Williams, 2005). The computed scores each consist of identically worded survey question responses with substitution for mother or father. The Cronbach Alpha for the five items for closeness to mother was .83 and reached conventional standards for good reliability. The Cronbach Alpha for the five items for closeness to father was .88 and reached conventional standards for good reliability. Survey questions are: "How close do you feel to your mom/dad?," "How much do you think he/she cares about you?," "Most of the time your mother/father is warm and loving toward you," "You are satisfied with the way your mother/father and you communicate with each other," and "Overall, you are satisfied with your relationship with your mother/father." Permission to use the instrument was granted (Appendix A).

Self-Esteem Score (SE)

A self-esteem instrument was included in each wave of data collection for the Add Health (Harris, 2005). The self-esteem instrument for this study is an abridged version of Rosenberg's (1965) global self-esteem instrument (Ang, Neubronner, Oh, & Leong, 2006; Warren, Harvey, & Henderson, 2010). The Cronbach Alpha for the six items was .85 and reached conventional standards for good reliability of scale reliability. The six variables are: "You have a lot of good qualities," "You have a lot to be proud of," "You like yourself just the way you are," "You feel like you are doing everything just about right," "You feel socially accepted," and "You feel loved and wanted." Warren et al. (2010) classified high self-esteem as any score greater than 25 and low self-esteem was classified as any score less than 25. Permission to use the instrument was granted (Appendix A).

Procedures

First, this researcher began by examining public use data sets that would provide variables about the relationship of social and demographic variables on graduation success. This researcher found the public use data set from the National Longitudinal Study of Adolescent Health (Add Health). The Add Health public use data set provides social, psychological, and demographic variables from students across the nation of varied social and demographic backgrounds and was collected in four waves that span approximately 15 years (Harris, 2009). Next, this researcher requested and received approval from the Internal Review Board (IRB) to conduct this proposed study. See Appendix A for IRB Approval letter. After IRB approval was received, Wave I and Wave IV of the National Longitudinal Study of Adolescent to Adult Health (Add Health), 1994-2008 [Public Use] (ICPSR 21600) were downloaded to the researcher's password protected computer via IBM SPSS software from the Data Sharing for Demographic Research (DSDR) which is distributed by the Inter-University Consortium for Political and Social Research (ICPSR). Additionally, this researcher downloaded the Wave I Public Use Data Codebook/Questionnaire and Wave IV Public Use Data Codebook/Questionnaire from the ICPSR. Using the Wave I and Wave IV Codebook/Questionnaire, the researcher identified the variables needed for the instruments to measure school engagement, student self-esteem, and student closeness to parents and race in Wave I and the variable of graduation status in Wave IV.

The Wave I database contained 6,504 records while the Wave IV database contained 5,114 records. The two databases were merged by the Respondent Identifier variable, resulting in a database with 5,114 records with matching data for Wave I and Wave IV. Among the 5,114 records, one record was missing high school graduation status and was omitted from the analysis. Among the remaining 5,113 records, 1,738 (34%) were missing data for the Student

Connectedness Score and were omitted from the analysis. Among the remaining 3,375 records, 118 (3.5%) were missing data for the student Self-Esteem score and were omitted from the analysis. Among the remaining 3,275 records, 143 (4.39%) were missing data for the Student Closeness to Mother Score and were omitted from the analysis. Among the remaining 3,114 records, 835 (26.81%) were missing data for the Student Closeness to Father Score and were omitted from the analysis. Among the remaining 2,279 records, 276 (12.15%), were missing data for Student Race and were omitted from the analysis. Thus, the final sample size for the study was n = 2,002. The racial distribution of the sample was 1,574 Caucasian, 352 African American, 5 American Indian or Native American, and 71 Asian or Pacific Islander.

Data Analysis

A series of logistic regression analysis was used to examine each hypothesis. The assumptions of independence of cases, absence of multicollinearity, and mutually exclusive categories were satisfied. First, independence of cases is supported by the fact that no single student appears in the database more than once. Second, the absence of multicollinearity was supported by the fact that only a single predictor variable was included in each model. Third, categorical predictor variables (e.g., race) have mutually exclusive categories, supported by the fact that each student could choose only one race category and could not appear in more than one category. Strength of the relationship between the predictor variables and the criterion variable was measured by the odds ratio, which took on a value between 0 and infinity. Bonferroni adjustment was used to reduce the likelihood of Type I errors since four hypotheses were tested (Cohen, Welkowitz, & Brooke, 2011). The Bonferroni adjustment was p=.05/4 for a .0125 Alpha, therefore, relationships that were .0125 or lower were considered statistically significant.

The criterion variable, high school graduation status (HSG), was coded as 0 = did not graduate and 1 = graduated. The predictor variable of students' school engagement was measured via the student connectedness score (SCS), which was a continuous measurement scale with a range of 1.00 to 5.00 where lower scores indicate less engagement in school and higher scores indicate greater engagement in school. The predictor variable of self-esteem (SE) was measured on a continuous measurement scale with a range of 6.00 to 30.00 where lower scores indicate less self-esteem and higher scores indicate more self-esteem. The predictor variables of closeness to parents were separated as two separate scores: student closeness to mother (SCM) and student closeness to father (SCF). SCM and SCF were measured on continuous measurement scales with a range of 1.00 to 5.00 where lower scores indicate less closeness to mother or father and higher scores indicate more closeness to mother or father.

The predictor variable of student race was coded prior to analysis. The Caucasian group was treated as the referent group and did not have a dummy variable. The two dummy variables for race were defined as follows: race (1) = 0 if the study participant is not "Black or African American" or 1 if the study participant is "Black or African American." Race (2) = 0 if the study participant is not "Asian or Pacific Islander" or 1 if the study participant is "Asian or Pacific Islander."

CHAPTER FOUR: FINDINGS

Research Questions

RQ1: To what extent does school engagement relate to graduation success?

RQ2: To what extent does student self-esteem relate to graduation success?

RQ3: To what extent does student closeness to parents relate to graduation success?

RQ4: To what extent does student race relate to graduation success?

Hypotheses

H_{01}: There is no significant relationship between student school engagement and graduation success.

H_{02}: There is no relationship between student self-esteem and graduation success.

H_{03i}: There is no relationship between student closeness to mother and graduation success.

H_{03ii}: There is no relationship between student closeness to father and graduation success.

H_{04}: There is no relationship between student race and graduation success.

Descriptive Statistics

The racial distribution of the sample was 1,574 Caucasian, 352 African American, 5 American Indian or Native American, and 71 Asian or Pacific Islander (n = 2,002).

Criterion Variable

Graduation status for the study population was explored. A total of 96.6% graduated from high school and 3.4% did not graduate from high school (n = 2,002) (Table 1).

Table 1.

Comparison of Race and Graduation Status of Sample

	Did not graduate	Graduated
Caucasian	53 (3.4%)	1521 (96.6%)
African American	14 (4%)	338 (96%)
American Indian	0 (0%)	5 (100%)
Asian/Pac. Islander	1 (1.4%)	70 (98.6%)
Total	68 (3.4%)	1,934 (96.6%)

Predictor Variables

The range of the Student Connectedness score was 1.00 to 5.00 and the average was 3.66 (*SD* = .81). The self-esteem score range was 6.00 to 30.00 and the average was 23.23 (*SD* = 4.44). The range of Closeness to Mother Score was 1.20 to 5.00 and the average was 4.45 (*SD* = .61). The range for the "Closeness to Father" score was 1.20 to 5.00 and the average score was 4.28 (*SD* = .73). See Appendix B for detailed frequency tables for all survey questions relating to the predictor and criterion variables.

Results

Null Hypothesis One

Simple logistic regression was used to analyze the first Null Hypothesis that looked at what extent school engagement related to graduation success. As explained in the methods section, the assumptions for logistic regression were satisfied. Specifically, the assumptions for logistic regression were satisfied because: 1) independence of cases was supported by the fact that no single student appeared in the database more than once; 2) absence of multicollinearity was supported by the fact that only a single predictor variable was included in each model, and

3) categorical predictor variables (e.g., race) have mutually exclusive categories illustrated by the fact that each student could choose only one race category and could not appear in more than one category. The range of the Student Connectedness score was 1.00 to 5.00 and the resulting average was 3.66 (*SD* = .81). Considering this score had a minimum possible score of 1.00 and maximum possible score of 5.00, on average, students scored above the midpoint of 3.00, indicating a relatively high score of students' perception of their school engagement.

Table 2 showed that the relationship between school engagement and graduation success was statistically significant, $p = .003$, Nagelkerke $R^2 = 0.016$, $OR = 1.51$. The null hypothesis was rejected and it was concluded that students with a higher level of school engagement were more likely to graduate than students with a lower level of school engagement. The interpretation of the Nagelkerke R^2 was that SCS explained only 1.6% of the total variance in HSG. The interpretation of the odds ratio (*OR*) was the odds that a student would graduate from high school increased by 51% for every one-point increase in the level of SCS.

Table 2.

Simple Logistic Regression Analysis of High School Graduation Status versus School Engagement

		B	S.E.	Wald	Df	p-value	OR[c]
Model[a]	SCS[b]	.415	.140	8.801	1	.003	1.514
	Constant	1.886	.489	14.877	1	<.001	6.593

a. Criterion Variable: High School Graduation Status (0 = Did not graduate, 1 = Graduated)
b. Student Connectedness with the School (higher scores indicate greater connectedness)
c. Odds Ratio

In examining student connectedness scores by race (Figure 2), it was noted that Caucasian students reported higher engagement than African American students (0.45 higher).

Caucasian students' engagement was 0.21 above the mean and African American students' engagement level was 0.24 below the mean.

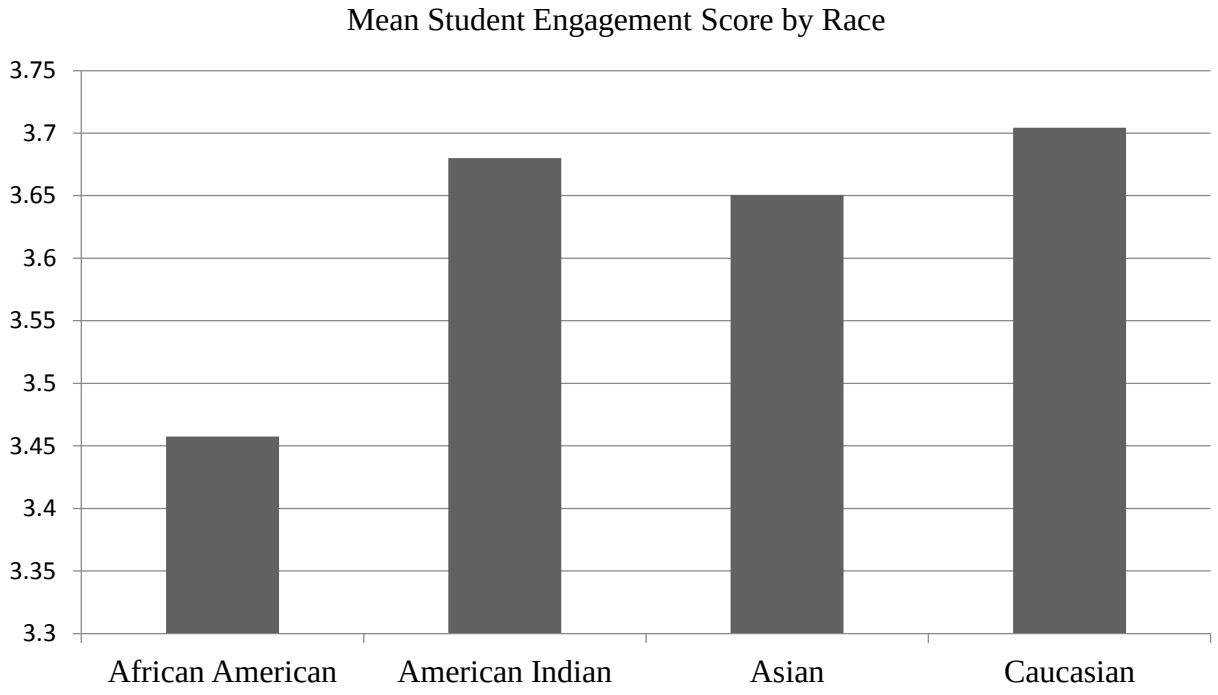

Figure 2. Mean student engagement by student race

Null Hypothesis Two

Simple logistic regression was used to analyze the second Null Hypothesis that looked at what extent student self-esteem related to graduation success. The assumptions for logistic regression were satisfied for the same reasons as explained for null hypothesis one. The self-esteem score range was 6.00 to 30.00 and the average for the sample was 23.23 (SD = 4.44). With the minimum possible score of 6.00 and maximum possible score of 30.00, this average supported that the students of the sample reported a relatively high level of self-esteem.

Table 3 shows self-esteem was not statistically significant (p = .050), therefore the null hypothesis could not be rejected and it was concluded that, based on this study, there was

insufficient evidence to suggest that a relationship between high school graduation status and the student's level of self-esteem.

Table 3.

Simple Logistic Regression Analysis of High School Graduation Status versus Student Self-Esteem

		B	S.E.	Wald	Df	p-value	OR[c]
Model[a]	SE[b]	.050	.026	3.833	1	.050	1.052
	Constant	2.204	.584	14.236	1	<.001	9.065

a. Criterion Variable: High School Graduation Status (0 = Did not graduate, 1 = Graduated)
b. Student Self-Esteem Score (higher scores indicate greater self-esteem)
c. Odds Ratio

The self-esteem mean of each race was within one point of the mean for all races in the sample suggesting that there was not a significant difference in the self-esteem scores by races of

Table 4.

Comparison of Student Self-Esteem of Sample

	Study Sample *n* = 2,002	
	Mean	Std. Deviation
African American	24.3835	3.80853
American Indian	24.2000	1.64317
Asian	23.1549	4.50919
Caucasian	22.9701	4.53016

students. Student self-esteem for the sample and population were illustrated in Table 4. The range of self-esteem scores from the highest self-esteem score (24.38, African American) was only 1.4 points from the lowest self-esteem score (22.97, Caucasian) for students of this study.

Null Hypothesis Three

Student closeness to mother. Simple logistic regression was used to analyze the first part of the third Null Hypothesis that looked at what extent student closeness to mother related to graduation success. The assumptions for logistic regression were satisfied for the same reasons as explained for null hypothesis one. The range of Closeness to Mother Score was 1.20 to 5.00 and the average was 4.45 (*SD* = .61). Considering this score had a minimum possible score of 1.00 and a maximum possible score of 5.00, on average, students scored near the maximum value of 5.00, indicating a high level of closeness to mother. Table 5 showed that the students' relationship with mother was not statistically significant (p = .95). The null hypothesis was not rejected and it was concluded that, based on this study, there was insufficient evidence to suggest a relationship between high school graduation status and the student's level of closeness to mother.

Table 5.

Simple Logistic Regression Analysis of High School Graduation Status versus Student Closeness to Mother

		B	S.E.	Wald	Df	p-value	OR[c]
Model[a]	SCM[b]	-.012	.204	.004	1	.951	.988
	Constant	3.403	.917	13.777	1	.000	30.065

a. Criterion Variable: High School Graduation Status (0 = Did not graduate, 1 = Graduated)
b. Student Closeness to Mother (higher scores indicate greater closeness)
c. Odds Ratio

Student closeness to father. Simple logistic regression was used to analyze the second part of the third Null Hypothesis that looked at what extent student closeness to father relates to graduation success. The assumptions for logistic regression were satisfied for the same reasons as explained for null hypothesis one. The range for the Closeness to Father score was 1.20 to 5.00 and the average score was 4.28 (*SD* = .73). With a minimum possible score of 1.00 and a maximum possible score of 5.00, on average, students generally scored near the maximum value of 5.00, indicating a high level of closeness to father for the study sample. Table 6 showed SCF was not statistically significant (p = .63). The null hypothesis was not rejected and it was concluded that, based on this study, there was insufficient evidence to suggest a relationship between high school graduation status and the student's level of closeness to father.

Table 6.

Simple Logistic Regression Analysis of High School Graduation Status versus Student Closeness to Father

		B	S.E.	Wald	Df	p-value	OR[c]
Model[a]	SCF[b]	.079	.162	.235	1	.628	1.082
	Constant	3.013	.698	18.622	1	.000	20.356

a. Criterion Variable: High School Graduation Status (0 = Did not graduate, 1 = Graduated)
b. Student Closeness to Father (higher scores indicate greater closeness)
c. Odds Ratio

Null Hypothesis Four

Simple logistic regression was used to analyze the fourth Null Hypothesis that looked at what extent student race related to graduation success. The assumptions for logistic regression were satisfied for the same reasons as explained for null hypothesis one. There were too few subjects in the "American Indian or Native American" group (n=5) to analyze statistically and

those five records were removed from the analysis. Table 7 showed race was not statistically significant (p = .56). The null hypothesis was not rejected and it was concluded that, based on this study, there was insufficient evidence to suggest a relationship between high school graduation status and the student's race.

Table 7.

Simple Logistic Regression Analysis of High School Graduation Status versus Student Race

	B	S.E.	Wald	Df	p-value	OR[c]
Student Race[b]			1.154	2	.562	
African American	-.173	.306	.318	1	.573	.841
Asian American	.892	1.017	.769	1	.381	2.439
Caucasian	3.357	.140	577.111	1	.000	28.698

a. Criterion Variable: High School Graduation Status (0 = Did not graduate, 1 = Graduated)
b. Student Race: Race (1) = 0 if not "Black or African American", or 1 if the study participant is "Black or African American"; Race (2) = 0 if the study participant is not "Asian or Pacific Islander" or 1 if the study participant is "Asian or Pacific Islander". If both Race (1) = 0 and Race (2) = 0, then race = Caucasian (the referent group).
c. Odds Ratio

CHAPTER FIVE: DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Discussion

The purpose of this study was to explore the degree to which social and demographic factors vary between at-risk students who successfully graduate from high school from those who do not graduate from high school. This study examined if there was a relationship between graduation success and social factors and the demographic factor of race for students of the Add Health longitudinal public use data set. The social factors of this study were school engagement, student self-esteem, and student closeness to parents (separated as student closeness to mother and student closeness to father).

The achievement gap between students of color and Caucasian students continues to necessitate study because unequal achievement by race suggests all races are not benefiting equally from a free and appropriate public education. The foundational theories of the theoretical framework of this study were Deci, Vallerand, Pelletier, and Ryan's (1991) self-determination theory, Hawkins and Weis's (1985) social development model, and Wehlage's (1989) school membership theory. The results of this study support that students with a stronger identity as part of a school are significantly more likely to graduate.

Since the NCLB Act, there has been slight improvement in the dissimilarity of graduation achievement of students by race. In 2001, the total dropout rate in the United States was 10.7% (10.9% African American, 3.6% Asian/Pacific Islander, 27% Hispanic, 7.3% Caucasian) (Stark & Noel, 2015). That dropout rate has since reduced to 6.6% but is not equal for all races (7.5% African American, 3.3% Asian/Pacific Islander, 12.7% Hispanic, 4.3% Caucasian). All racial groups have shown improvement, the most significant improvement in graduation rate has been

for Hispanic students (14.3%); however, reformation is still needed to provide equal opportunity for the success of all American students.

Dropping out is a steep penalty for individuals and society at large. As a group, students who drop out have lower employment and make an average of $10,000 less per year which compounds through decades (Chapman et al., 2012). Worse, although dropping out does not cause people to become incarcerated, there is a strong correlation for incarceration for students that drop out (Ewert et al., 2014). Not surprisingly, the majority of students regret the decision to drop out (Bridgeland et al., 2006). Therefore, investigations into factors that coincide with students who drop out are warranted both socially and economically.

Hypothesis One

The first hypothesis of this study was to assess if there was a relationship between student engagement in school and student graduation success. Results from this study support that students with higher levels of engagement in school are more likely to graduate than students with lower levels of school engagement (p = .003). The result of this study's analysis of school engagement and graduation success support the conclusions of previous student engagement studies (Brown & Evans, 2002; Daly et al., 2010; Feldman & Matjasko, 2005; Fredericks, Blumenfeld, & Paris, 2004; Grossman & Bulle, 2006; Monahan et al., 2010; Martinez et al., 2004; McNeely et al., 2002; Nowicki et al., 2004; Suh & Suh, 2007; Werblow & Duesbery, 2009). These results support the cyclical effect of the social development model (Hawkins & Weis, 1985), school membership theory (Wehlage, 1989), and the self-determination model (Deci et al., 1991). Results of this study align with the self-determination theory because students that are more engaged in school are motivated to perform the behaviors necessary to graduate. Students with greater school engagement are more likely to learn and practice

strategies that lead to academic success which fulfills students' psychological needs for competence, relatedness, and autonomy (Deci et al., 1991). Similarly, the results of this study also support the social development theory because students that are more successfully socialized through school processes will value school and are more likely to graduate (Hawkins & Weis, 1985). Students that adopt behaviors that are advantageous to academic success, such as recognizing the importance of social order and healthy social interactions, are rewarded socially and academically, contributing to the likelihood of graduating. Finally, these results also aligned with the school membership theory. Students that feel they are members of the school community feel supported and have greater identity as part of the school community. Students with stronger identification as part of a school community are significantly more likely to graduate.

Additionally, like McNeely, Nonnemaker, and Blum's (2002) study, students of this study reported feeling more engaged in school than the midpoint score (3.00). The average of the SCSs of the students of this study sample was 3.66 (*SD* =.81) and were similar to McNeely, Nonnemaker, and Blum's (2002)'s results of 3.64. Although engagement only explains 1.6% of the total variance in the graduation rate, the engagement score gap of African American and Caucasian students of this and previous studies is significant because the *OR* of this study predicts that for every one-point increase in SCS, students are 51% more likely to graduate from high school.

Hypothesis Two

The second hypothesis was to test if there was a relationship between student self-esteem and graduation success. Logistic regression analysis reported that, for students of this sample, self-esteem was not a statistically significant factor for graduation success (p = .050). The null

hypothesis was not rejected and it was concluded that based on this study, there is insufficient evidence to suggest there is a relationship between high school graduation status and the student's level of self-esteem. Likewise, the self-esteem score inflation seen in this study was also seen in previous studies (Bachman et al., 2011; Ferkany, 2008).

There are mixed results regarding self-esteem and graduation success in past studies. For example, Ferkany's (2008) study suggests that there is no relationship between self-esteem and academic performance but Bachman et al.'s (2011) study suggest that there is a positive relationship between self-esteem and graduation success. Student self-esteem findings of this study are similar to Bachman et al.'s (2011) results with regard to African Americans demonstrating the highest self-esteem scores for both studies. Caucasian students of this study scored the lowest self-esteem of all subgroups but Caucasian students in Bachman et al.'s (2011) study closely followed African Americans students' self-esteem scores.

Hypothesis Three

The third hypothesis was to assess if students' relationship to a parent has a statistically significant relationship with graduation success. Closeness to parents was measured in two different scores—closeness to mother and closeness to father—to determine if there was a statistically significant impact by one or the other parent on resulting graduation status. Neither relationship with mother nor relationship with father yielded a statistically significant relationship with graduation status. Despite the reported high scores of closeness to both parents, for this sample, there was not statistical significance with graduation success, which is contradictory to reviews of previous empirical studies of student engagement (Upadyaya & Salmela-Aro, 2013). Specifically, Upadyaya and Salmela-Aro's (2013) review demonstrated that positive relationships with parents demonstrated by affection from parents, support, and

involvement are shown to positively correlate school engagement and ultimately graduation success. Parental communication, affectionate behaviors, and support were shown to predict student success for students in primary and secondary schools (Englund, England, & Collins, 2008; Garcia-Reid, Reid, & Peterson, 2005, Li et al., 2010; Marks, 2000; Murray, 2009; Simons-Morton & Crump, 2003; Wang & Eccles, 2012 as cited by Upadyaya & Salmela-Aro, 2013). A supportive relationship supports student engagement in school which contributes to student graduation success. Although closeness to parents did not relate to graduation success for the students of this study sample, Upadyaya and Salmela-Aro's (2013) review of both European and American research demonstrate that student closeness to parents and parental involvement in students' education contributes to the probability of students graduating from high school as well as being more successful in a college or career. Likewise, negative relationships with parents were also shown to have negative impact on students' graduation success in previous research.

The results of this study also contradict the results of Fall and Roberts's (2012) study that demonstrated that students that reported closer relationships with parents were more likely to be academically successful. Pathway analyses demonstrated that relationship with parents predicted student competence, mental health, and relationship to others which then impacted academic success. This pathway predicted student attendance, achievement tests scores, discipline records and grade promotion and graduation success. Closer relationships with parents contributed to student's improved perception of their abilities and autonomy which contributed to resiliency to persevere to graduate; however, the results of this study were contradictory.

Hypothesis Four

The final hypothesis assessed if student race had a statistically significant relationship with graduation success. Results from the logistic regression analysis between race and

graduation success were not statistically significant (p = .56) for this sample. There is insufficient evidence to suggest there is a relationship between high school graduation status and the student's race for this study so the null hypothesis was not rejected. The results of this study contradict previous research studies that demonstrated that student race correlates with a greater likelihood of dropping out of school (Nowicki et al., 2004; Benner & Wang, 2014). In 2014, African American and Hispanic students continued to demonstrate significantly lower graduation rates than Caucasian students (Caucasian 95%, African American 92%, Hispanic 86%) (Kena et al., 2015). Although race does not have a causal relationship with high school graduation, historically, minority students in America have demonstrated statistically lower graduation rates (Benner & Wang, 2004; Benner & Wang, 2014; Chapman et al., 2012; Kena et al., 2015). Therefore, the results of this study do not support a relationship between student race and likelihood of graduation success and conflict with previous studies.

Conclusions

Simple logistic regression was used to examine the relationship between race and social factors for students that participated in the public use data set from the National Longitudinal Study of Adolescent Health (Add Health). Random sampling of cluster-sampled high schools across America was used to secure participants for in-home surveys during the 1994–1995 school year with multiple follow-ups. Students with missing survey responses were excluded from this study resulting in 2,002 participants included in the study sample. Simple logistic regression analysis was used to examine if there is a relationship between graduation status and race, graduation status and school engagement, graduation status and student self-esteem, graduation status and student closeness to mother, and graduation status and student closeness to

father. For the purposes of this study sample, only student engagement and graduation status demonstrated statistical significance (p = .003).

The results of this study contribute to educational researchers' search for effective avenues to scaffold students to graduation. It is encouraging that, of the variables explored in this study, the variable that educators have the greatest potential to impact is school engagement and it is also the variable shown to demonstrate the most impact of all the factors studied. The results of this study are important because student engagement in school contributes to the likelihood of graduating and efforts that positively impact student engagement in school can increase a student's likelihood of graduating high school.

The increased publication of achievement scores due to the NCLB Act over the past decades has contributed to a culture of teacher blaming (Ravitch, 2011). School performance grades assigned based on collective achievement scores of students and finger pointing in the media contribute to educator discouragement and burnout. Some educators ascribe to the defeatist argument that students' home life, self-esteem, or race set a child up for success or failure. Instead, the results of this study bring increased ownership of academic success back to the school building and add to the wealth of studies that illustrate that school engagement is an invaluable investment and an important area of focus for continued school improvement.

The results of this study empower educators with data that supports the importance of activities that contribute to increased school engagement in the fight to close the achievement gap. The time that educators invest in cultivating a positive classroom climate (Niehaus, Rudasill, & Rakes, 2012), building healthy relationships with students (Daly et al., 2010), maintaining and communicating high expectations for all students (Friedrich et al., 2015), modeling healthy conflict resolution skills (Goldwater & Nutt, 1999), and treating all students

fairly (Locke, Stedrak, & Eadens, 2014) contribute to school engagement and solidifies a foundation for student success.

The results of this study are encouraging because they support that school engagement is a data driven strategy within the grasp of educators that has the potential to impact students through their lifetime because graduating from high school greatly impacts students' life trajectory. Students' future SES (Benner & Wang, 2014; Chapman et al., 2012), likelihood of becoming incarcerated (Ewert et al., 2014), physical and mental health and the likelihood of substance addiction (Chapman et al., 2012) are all positively impacted by the decision to graduate from high school. Likewise, students' decision to graduate even affects future generations because students that remain in school are more likely to counsel their own children to remain in school when they become parents (Terry, 2008). Results of this study support that, of the variables tested, school engagement is the most important variable in the equation in impacting the likelihood of a student graduating from high school which is vital to students' long term success.

Implications

Results from this study imply that time and monies invested in increasing school engagement are quality investments. Results of this study demonstrated that increasing students' engagement (student connectedness score) by one point theoretically can increase a student's likelihood of graduating high school by 51%. Although it would be a significant amount of change to increase students' school engagement score one full point, increasing school engagement for students can yield a significant push in the direction of graduation success. Educators have a tremendous opportunity and responsibility to influence and sculpt students' academic and psychological health either positively or negatively, especially when considering

that educators often occupy the lion's share of students' day during the school year. Therefore, building awareness and actions that enhance students' school engagement levels can yield long-term financial, mental, and physical benefits for students, as well as improved satisfaction and happiness for the educators that work with them.

There is a fraternal connection between the individual and the school community described by Wehlage's (1989) school membership theory. Wehlage (1989) describes an effective school as a community of support that encourages student membership and success. The closer that the interconnectedness of the fraternal organization's identity, mission, and common interests are to the student's values, the greater compulsion the student will feel to perform the actions necessary to be successful in the fraternal organization. Students with higher engagement will perform the tasks necessary to be a successful member because they do not want to be excluded when the fraternal organization celebrates successes such as promotion to the next grade or graduation.

Students that report a higher school engagement feel close to people at school, feel like they are part of the school, are happy to be at the school, feel that teachers treat them fairly, and feel safe at school (Sieving et al., 2001). This fraternal feeling is experienced wherever the student feels the strongest connection to the collective organization or subunit of the organization. Teachers have the greatest impact on students' engagement (Osterman, 2010), but this familial connection is also experienced in afterschool activities with an impassioned coach, band director, or club facilitator that communicates high expectations of excellence to teach the group of students the behaviors necessary to be successful in the fraternal unit (Schwartz et al., 2013; Stevenson & Ellsworth, 1991).

Students with higher engagement are driven to adopt the mores of the fraternal organization and adopt the behaviors necessary to be successful in a fraternal unit (Wehlage, 1989). For example, band members that feel this fraternal bond in the symphonic band but do not value the classroom will put the time in necessary to complete the wearisome tasks of the classroom due to the need to remain part of the band fraternal unit. For the student that experiences success in the athletic arena, this student may have found the fraternal unit of like minded athletes as a young child. This student's connection with her fraternal unit of athletes makes her feel close to people at her school, feel like she is part of the school, that she is happy to be at the school, and likely feels safe at the school because she is surrounded by members of her fraternal unit (Sieving et al., 2001). However, students that do not have a fraternal unit within the school community or are members of a fraternal unit that is not valued or recognized by the school community, likely do not feel this same level of school engagement.

Effective schools are school communities that create a supportive environment by removing barriers to school engagement, matching student needs, addressing student problems, and maximizing student strengths and interests (Wehlage, Rutter, Smith, Lesko & Fernandez, 1989). Effective educators mindfully work to identify barriers to student engagement to better support students in building a connection to the school organization so that the student has the support necessary to persevere through to graduation. As noted in the school engagement mean score gap in the results of this study, African American students reported the lowest school engagement in this study. As a nation, 7.5% of African American's dropout of school compared to the 4.3% dropout rate of Caucasian students (Stark & Noel, 2015). This gap demonstrates that students are not equally engaged in school by race. Effective school administrators and classroom teachers must work to identify and remove barriers to African American students'

engagement. Schools must celebrate the strengths and interests of all students, including African American students, as well as provide culturally relevant answers to the needs of African American students to provide the environment necessary for African American students to increase and sustain school engagement levels. The results of this study suggest that 1.6% variance of high school graduation is due to students' school engagement and increasing students' school engagement by one point could theoretically increase students' likelihood of graduating by 51%. Targeted assistance in addressing the gap in school engagement by removing barriers to school engagement for African American students' could yield significant gains in the battle to close the achievement gap.

Results of this study, as well as previously noted studies, demonstrate that self-esteem does not statistically relate to graduation success, therefore, reward programs focused on building student self-esteem should be revamped to focus on building students' school engagement. Instead, educators are encouraged to provide multiple ways and opportunities for students to participate in school activities to build meaningful relationships with school adults and peers to continue to assist students in building their identity as a successful member of the school culture instead of focusing on self-esteem programs.

Fredericks et al.(2004) suggest several strategies to aid students in increasing school engagement. These researchers suggest that teachers support behavioral engagement by consistently informing and encouraging students how to successfully participate in academic, social, and extracurricular activities. Fredericks et al.(2004) suggest that teachers assist students in building emotional engagement by mindfully assessing students' emotions regarding school. Students of all ages benefit from assistance in identifying and processing feelings, such as anger, frustration, boredom and negative student-teacher relationships, which can act as obstacles to

successfully engaging in school. Students that are in a conflict state with school members likely do not identify themselves as part of the school community. Students that perpetually do not feel loved or included will spend their efforts on having these needs met before they focus on academics (Pfeifer, 1998). Finally, Fredericks, Blumenfeld, and Paris (2004) suggest assisting students build cognitive engagement by scaffolding students to build resiliency and problem solving skills. Educators must hold and demonstrate high positive academic and behavior expectations for all students. By pushing students to excel in areas of academic, social, or athletic strength, educators can then use these successes to build students' understanding that ability is not a static trait and instead growth is possible in all areas.

Educators are encouraged to systematically hone their awareness of not only their collective school's culture but also take the time to discover individual student's school engagement as a preventive measure and a better indicator of at-risk factors. Assessing students' school engagement levels can yield long-term financial, mental, and physical benefits for students as well as improved satisfaction and happiness for adolescents and the educators that work with them. Educators have a tremendous opportunity and responsibility to influence and sculpt students' academic and psychological health either positively or negatively, especially when considering that educators often occupy the lion's share of students' day during the school year. Minute for minute, classroom teachers have the greatest opportunity to assess and impact students' engagement.

The classroom teacher has the single greatest impact on students' school engagement (Osterman, 2010). Educators are encouraged to build relationships through positive, authentic, and caring communication with students (Payne, 2013). By the time students enter high school, the amount of time they have with their father, mother, or guardian is reduced to a matter of

minutes each day (Neumark-Sztainer et al., 2013). Educators are encouraged to purposively plan and schedule time devoted to attentively communicate with students with minimal distractions. Adults in the school must step out of their comfort zone and demonstrate care and interest in all students, even students that are culturally different than them, to build fraternal units within the school community (Soland, 2013). Clear, respectful two-way communication is needed for educators to discover and debunk negative stereotypes (Locke, Stedrak, & Eadens, 2014). Likewise, classroom teachers are encouraged to use internet forms that allow students to share ideas and web applications that build relationships while they increase academic investments (Tarantino et al., 2013).

Education administrators should be encouraged to allocate funds and time to school engagement. Administrators are encouraged to explore and provide opportunities for students to strengthen school identity and relationships with peers of like interests and caring adults in the school to increase their ties to the school community (Schwartz et al., 2013; Stevenson & Ellsworth, 1991). Likewise, it is beneficial to teachers and students for administrators to maintain and communicate expectations of excellence for the relationships as well as the product of school sponsored activities. Educators would likewise benefit from effective professional development on ways to build healthy student relationships in the school environment (Daly et al., 2010). Additionally, all stakeholders benefit from school wide democratic procedures and discipline policies rooted in respect (McNeely, Nonnemaker, & Blum, 2002). Administrators are encouraged to model conflict resolution and authentic professional relationships with students. Likewise, administrators are encouraged to utilize social media as an avenue for students to have greater access to the school community (Junco, 2012).

Limitations

A limitation to this study is the possibility of nonresponse bias due to the number of students that did not fill out all answers for this study. The sample was reduced from 6,000 to the remaining 2,002 students who answered all the questions. Brick and Williams's (2013) research supports that the reasons for nonresponse are largely static, even over the span of 30 years. The most frequent reasons for nonresponse across the years were lack of interest in the topic, lack of time or the feeling that the interview is too lengthy, poor mental or physical health, aversion to the survey question topic, the desire to protect personal privacy, and distrust of government (Brick & Williams, 2013). The most participants were excluded because they did not respond to school engagement questions (34%), followed by participants that did not respond to questions regarding their closeness to father (26.81%). It is within reason that antipathy toward school community the student's relationship with the father is a possible reason for student nonresponse for these survey questions and these voices were excluded from this study's results. There is the risk that students that felt more comfortable with school or more comfortable with their relationship with their father were more likely to answer the survey questions, thus impacting the results of this study. The answers from these excluded students may have impacted the results of this study if they had been included.

An additional limitation of this study is that there were not any Hispanic students remaining in the study sample. Again, students who did not complete all survey questions were excluded from the study. The exclusion of Hispanic students' answers from these survey results limits the applicability of this study to Hispanic students.

Recommendations for Future Research

Additional research into cost-effective ways to effectively impact students' school engagement is suggested. Public school funding crises dictate that many programs are at-risk of being cut out. Further research of specific strategies deemed effective is needed to prevent the reduction of effective school programs. Although extracurriculars, clubs, and other modalities provide additional opportunities for students to become immersed in school community, further research into activities, events, and programs that are the most effective and the components that most contribute to increasing school engagement are needed to increase and continue effectiveness.

Future research is recommended regarding both formal and informal ways for teachers and administrators to accurately assess and track student engagement in school. Early identification processes are needed to identify student's interests and strengths to best assist students in locating programs that would net the most engagement for individual students through their school years. Likewise, continued identification and awareness programs are warranted to assist students in building engagement through multiple modalities to increase depth and breadth of student engagement.

Further research is recommended into quantifying strategies within effective programs for application in less effective programs and settings. Additional research is needed for systematic strategies to incorporate and transfer the engagement experienced in extracurriculars, athletics, and the arts programs into academic settings. This research is specifically warranted in identifying and removing barriers to school engagement for students that do not participate in extracurriculars, athletics or the art programs to provide additional effective engagement opportunities to better support all students to graduation.

Finally, additional research is also suggested into ways to use social media to help students make meaningful connections with classmates and transition into making greater social investments in the school community. Educators need effective strategies to help students in building and solidifying school identity as a healthy part of the school community via social media. Research is needed into identifying effective social media strategies for assisting students in building their identity with a fraternal unit within the school organization for increased and more effective school engagement.

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APPENDIX A

IRB Approval Letter

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

March 24, 2015

Lisa Ann Taylor
IRB Application 2161: An Analysis of Social and Demographic Variables and Student Graduation Success

Dear Lisa,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study does not classify as human subjects research. This means you may begin your research with the data safeguarding methods mentioned in your IRB application.

Your study does not classify as human subjects research because you plan to utilize de-identified archival data that is publically accessible.

Please note that this decision only applies to your current research application, and that any changes to your protocol must be reported to the Liberty IRB for verification of continued non-human subjects research status. You may report these changes by submitting a new application to the IRB and referencing the above IRB Application number.

If you have any questions about this determination, or need assistance in identifying whether possible changes to your protocol would change your application's status, please email us at irb@liberty.edu.

Sincerely,

Fernando Garzon, Psy.D.
Professor, IRB Chair
Counseling

(434) 592-4054

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Permission to use Student Connectedness Scale Instrument

Re: requesting permission to use student connectedness scale

People

Renee Sieving Mar 31 at 7:07 PM

To Lisa Taylor, Ed.S.

Greetings, Lisa.

You are free to use the school connectedness scale we created from Add Health student data. The Add Health Wave 1 student survey items we used to form this scale are listed on page 9 of the attached document.

Best wishes with your dissertation!

Renee

Renee E. Sieving PhD, RN, FAAN, FSAHM
Professor | School of Nursing & Department of Pediatrics
Director | Healthy Youth Development - Prevention Research Center | prc.umn.edu
University of Minnesota | umn.edu

Permission to Use Self-Esteem Instrument and Closeness to Parents Instrument

RE: permission to use survey instruments

People

Add Health Mar 31 at 6:03 PM

To

Lisa,

Thank you for your interest in Add Health. You may use the questions from Add Health in your research as long as you cite the source with the following.

These questions are from Add Health, a program project directed by Kathleen Mullan Harris and designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris at the University of North Carolina at Chapel Hill, and funded by grant P01-HD31921 from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, with cooperative funding from 23 other federal agencies and foundations. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Information on how to obtain the Add Health data files is available on the Add Health website (http://www.cpc.unc.edu/addhealth). No direct support was received from grant P01-HD31921 for this research.

Good luck with your survey.

Best,

Joyce Tabor
Add Health Data Manager

APPENDIX B

Descriptive statistics for individual survey questions.

Table 9a.

Student Connectedness Survey Questions and Feels Close to People at School

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	428	21.4	21.4	21.4
Agree	816	40.8	40.8	62.1
Neither agree nor disagree	455	22.7	22.7	84.9
Disagree	212	10.6	10.6	95.5
Strongly disagree	91	4.5	4.5	100.0
Total	2002	100.0	100.0	

Table 9b.

Student Connectedness Survey Questions and Feels Part of School

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	538	26.9	26.9	26.9
Agree	721	36.0	36.0	62.9
Neither agree nor disagree	422	21.1	21.1	84.0
Disagree	198	9.9	9.9	93.9
Strongly disagree	123	6.1	6.1	100.0
Total	2002	100.0	100.0	

Table 9c.

Student Connectedness Survey Questions and Happy to be at This School

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	532	26.6	26.6	26.6
Agree	703	35.1	35.1	61.7
Neither agree nor disagree	437	21.8	21.8	83.5
Disagree	174	8.7	8.7	92.2
Strongly disagree	156	7.8	7.8	100.0
Total	2002	100.0	100.0	

Table 9d.

Student Connectedness Survey Questions and Teachers Treat Students Fairly

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	338	16.9	16.9	16.9
Agree	762	38.1	38.1	54.9
Neither agree nor disagree	539	26.9	26.9	81.9
Disagree	228	11.4	11.4	93.3
Strongly disagree	135	6.7	6.7	100.0
Total	2002	100.0	100.0	

Table 9e.

Student Connectedness Survey Questions and Feels Safe at School

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	594	29.7	29.7	29.7
Agree	824	41.2	41.2	70.8
Neither agree nor disagree	395	19.7	19.7	90.6
Disagree	110	5.5	5.5	96.1
Strongly disagree	79	3.9	3.9	100.0
Total	2002	100.0	100.0	

Student self-esteem survey questions.

Table 10a.

Self-Esteem Survey Questions and Has Good Qualities

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	796	39.8	39.8	39.8
Agree	890	44.5	44.5	84.2
Neither agree nor disagree	242	12.1	12.1	96.3
Disagree	48	2.4	2.4	98.7
Strongly disagree	26	1.3	1.3	100.0
Total	2002	100.0	100.0	

Table 10b.

Self-Esteem Survey Questions and Has a lot to be Proud of

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	875	43.7	43.7	43.7
Agree	730	36.5	36.5	80.2
Neither agree nor disagree	289	14.4	14.4	94.6
Disagree	73	3.6	3.6	98.3
Strongly disagree	35	1.7	1.7	100.0
Total	2002	100.0	100.0	

Table 10c.

Self-Esteem Survey Questions and Likes Self

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	649	32.4	32.4	32.4
Agree	696	34.8	34.8	67.2
Neither agree nor disagree	370	18.5	18.5	85.7
Disagree	210	10.5	10.5	96.2
Strongly disagree	77	3.8	3.8	100.0
Total	2002	100.0	100.0	

Table 10d.

Self-Esteem Survey Questions and Doing Everything Right

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	217	10.8	10.8	10.8
Agree	619	30.9	30.9	41.8
Neither agree nor disagree	734	36.7	36.7	78.4
Disagree	342	17.1	17.1	95.5
Strongly disagree	90	4.5	4.5	100.0
Total	2002	100.0	100.0	

Table 10e.

Self-Esteem Survey Questions and Feels Socially Accepted

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	457	22.8	22.8	22.8
Agree	931	46.5	46.5	69.3
Neither agree nor disagree	424	21.2	21.2	90.5
Disagree	130	6.5	6.5	97.0
Strongly disagree	60	3.0	3.0	100.0
Total	2002	100.0	100.0	

Table 10f.

Self-Esteem Survey Questions and Feels Loved and Wanted

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	695	34.7	34.7	34.7
Agree	804	40.2	40.2	74.9
Neither agree nor disagree	358	17.9	17.9	92.8
Disagree	88	4.4	4.4	97.2
Strongly disagree	57	2.8	2.8	100.0
Total	2002	100.0	100.0	

Student closeness to mother survey questions.

Table 11a.

Student Closeness to Mother Survey Questions and Close to Mom

	Frequency	Percent	Valid Percent	Cumulative Percent
Not at all	6	.3	.3	.3
Very little	43	2.1	2.1	2.4
Somewhat	161	8.0	8.0	10.5
Quite a bit	452	22.6	22.6	33.1
Very much	1340	66.9	66.9	100.0
Total	2002	100.0	100.0	

Table 11b.

Student Closeness to Mother Survey Questions and Mom-How Much Does She Care

	Frequency	Percent	Valid Percent	Cumulative Percent
Not at all	2	.1	.1	.1
Very little	9	.4	.4	.5
Somewhat	34	1.7	1.7	2.2
Quite a bit	142	7.1	7.1	9.3
Very much	1815	90.7	90.7	100.0
Total	2002	100.0	100.0	

Table 11c.

Student Closeness to Mother Survey Questions and Mom-Warm and Loving

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	1092	54.5	54.5	54.5
Agree	753	37.6	37.6	92.2
Neither agree nor disagree	95	4.7	4.7	96.9
Disagree	47	2.3	2.3	99.3
Strongly disagree	15	.7	.7	100.0
Total	2002	100.0	100.0	

Table 11d.

Student Closeness to Mother Survey Questions and Mom-Good Communication

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	786	39.3	39.3	39.3
Agree	833	41.6	41.6	80.9
Neither agree nor disagree	191	9.5	9.5	90.4
Disagree	149	7.4	7.4	97.9
Strongly disagree	43	2.1	2.1	100.0
Total	2002	100.0	100.0	

Table 11e.

Student Closeness to Mother Survey Questions and Mom - Good Relationship

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	1014	50.6	50.6	50.6
Agree	767	38.3	38.3	89.0
Neither agree nor disagree	113	5.6	5.6	94.6
Disagree	84	4.2	4.2	98.8
Strongly disagree	24	1.2	1.2	100.0
Total	2002	100.0	100.0	

Student closeness to father survey questions.

Table 12a.

Student Closeness to Father Survey Questions and Close to Dad

	Frequency	Percent	Valid Percent	Cumulative Percent
Not at all	29	1.4	1.4	1.4
Very little	70	3.5	3.5	4.9
Somewhat	254	12.7	12.7	17.6
Quite a bit	546	27.3	27.3	44.9
Very much	1103	55.1	55.1	100.0
Total	2002	100.0	100.0	

Table 12b.

Student Closeness to Father Survey Questions and Dad-How Much Does He Care

	Frequency	Percent	Valid Percent	Cumulative Percent
Not at all	1	.0	.0	.0
Very little	26	1.3	1.3	1.3
Somewhat	69	3.4	3.4	4.8
Quite a bit	225	11.2	11.2	16.0
Very much	1681	84.0	84.0	100.0
Total	2002	100.0	100.0	

Table 12c.

Student Closeness to Father Survey Questions and Dad-Warm and Loving

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	846	42.3	42.3	42.3
Agree	847	42.3	42.3	84.6
Neither agree nor disagree	192	9.6	9.6	94.2
Disagree	83	4.1	4.1	98.3
Strongly disagree	34	1.7	1.7	100.0
Total	2002	100.0	100.0	

Table 12d.

Student Closeness to Father Survey Questions and Dad-Good Communication

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	670	33.5	33.5	33.5
Agree	889	44.4	44.4	77.9
Neither agree nor disagree	208	10.4	10.4	88.3
Disagree	183	9.1	9.1	97.4
Strongly disagree	52	2.6	2.6	100.0
Total	2002	100.0	100.0	

Table 12e.

Student Closeness to Father Survey Questions and Dad-Good Relationship

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	799	39.9	39.9	39.9
Agree	880	44.0	44.0	83.9
Neither agree nor disagree	164	8.2	8.2	92.1
Disagree	116	5.8	5.8	97.9
Strongly disagree	43	2.1	2.1	100.0
Total	2002	100.0	100.0	

Race.

Table 13.

Student Race/Ethnicity

	Frequency	Percent	Valid Percent	Cumulative Percent
White	1574	78.6	78.6	78.6
Black or African American	352	17.6	17.6	96.2
American Indian or Native American	5	.2	.2	96.5
Asian or Pacific Islander	71	3.5	3.5	100.0
Total	2002	100.0	100.0	

High school graduation status.

Table 14.

High School Graduation Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Did not graduate	68	3.4	3.4	3.4
Graduate	1934	96.6	96.6	100.0
Total	2002	100.0	100.0	