Factors that Contribute to the Completion of Programs of Study at Arkansas Institutions of Higher Education for African American Males

by

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Abstract
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Chapter 1 Introduction

The American Human Development Index (HDI) is a composite measure of well-being and opportunity. It combines indicators in three fundamental areas – health, knowledge, and standard of living – into a single number that falls on a scale from 0 to 10. Life expectancy is an indicator of health. Educational degree attainment and school enrollment are indicators of knowledge. Median earnings are an indicator of standard of living. The HDI provides a more in-depth view into the overall state of citizens than an exclusive monetary measure such as the Gross Domestic Product (Lewis & Burd-Sharps, 2010).

The concept of the HDI came into existence in 1990. This benchmark has been used to rank every country in the world since its origin. In the United States, the data are disaggregated by state and congressional districts, gender, race, and ethnicity. The disaggregation allows a snapshot of current conditions among regions and groups. All data come from official government sources such as the United States Census Bureau and the Centers for Disease Control and Prevention (Measure of America, 2015).

The overall HDI for Arkansans is 3.91 and for African American males in Arkansas, it is 2.19. The average Arkansan is expected to live 7.5 years longer than an African American male in Arkansas. The percentage of Arkansans who have earned at least an undergraduate degree is 13.2, while the percentage of African American males is 7.2. The health index for the average Arkansan is 4.15 but for an African American male in Arkansas, it is 1.11. The education index for the average Arkansan is 4.11 but for an African American Arkansan male, it is 3.43. The income index for the average Arkansan is 3.48, while the income index for an African American male in Arkansas, it is 2.03.
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(Measure of America, 2013). According to the National Assessment of Education Progress (NAEP) (2013), in the United States and Arkansas, African American males consistently score the lowest among Caucasian and Hispanic males in mathematics and reading in both 4th and 8th grades. These data clearly show that African American males in Arkansas are experiencing life at a subpar level compared to other populations.

Many African Americans live in poverty at enormous rates higher than their Caucasian counterparts (Alexander, 2010). Poverty affects one’s accessibility to education and resources. African American students make up the greatest population in schools comprised of 75% or more students eligible for free and reduced lunch (Digest of Education Statistics, 2015a). Many P-12 schools that are located in impoverished areas are filled with teachers that are not qualified to teach especially math and science courses. Parents cannot afford the expense of extracurricular activities that would aid the academic and social development of their children.

From the beginning of their education, many African American males are not exposed to the vast array of possibilities one can take in regards to their education. Many parents enroll their children into pre-K programs and kindergarten. The degree to which parents are involved in their children’s education has been directly linked to positive educational outcomes (Jeynes, 2005). However, many African American parents cannot afford high quality pre-K programs and kindergarten as they are consumed with the worries of financially providing for their families. Some parents relinquish the responsibility of enriching their children to the teachers although the teachers may not be highly qualified.
Gaps among African American boys and their Caucasian counterparts begin in elementary school. African American boys are more likely to be viewed as deviant and lacking the ability to learn (Milner, 2006). This mentality causes these young boys to be severely disciplined at higher rates than others. Moreover, African American boys are more likely to be removed from the normal classroom setting. These young boys do not have access to much needed knowledge to further their education. Therefore, African American boys begin to cultivate the idea that they cannot be successful in an educational setting at an early age.

African American males disproportionately attend large, urban schools that have a high concentration of students with low-socioeconomic status (Hughes, Stenhjem, & Newkirk, 2007). Academic achievement and graduation rates in many of these schools are extremely low in comparison to national averages (Baker, 2005). These students are at higher risk for school failure, special education designation, out-of-school suspension, expulsion from school, and episodes of school violence (Ferguson, 2003). Noguera (2003) connects high dropout rates and school failure of African American male adolescents to increased violence among this age group.

In secondary education, many African American males do not seek help from school or guidance counselors. With increased responsibilities, many counselors do not make an effort to dive into the pertinent issues of college and career readiness with their current students as counselors provided their students in the past (Wyatt, 2009). Therefore, the access to information about college and opportunity to attend college for many African American males are extremely limited.
In 2013, African American and Hispanic males made up the lowest percentage of persons between the age of 18 and 24 enrolled in a degree granting institution when comparing race/ethnicity and gender (Digest of Education Statistics, 2015b). Most African American males’ first postsecondary experience occurs at a community college (Wood, 2012). The highest percentage of African American students enrolled in postsecondary programs is found at both private and public two-year institutions of higher education (Clinedinst, Hurley, & Hawkins, 2011).

In order for African American males to sustain themselves in college, many of them have to maintain jobs. Working takes away from the time devoted to studying. Due to financial circumstances at their home, some African American male students send money earned during college back home (Dowd, 2004). African American males who work on campus in departments, colleges, and administrative offices and as residential assistants have an advantage. Even though time is being taken away from studying, these males are more likely to feel a part of the campus and persevere than students who stay and work off campus.

African American males have a long spectrum of challenges that they must endure to become successful. From financial difficulties to not feeling welcomed in the educational setting, African American males must have more resilience than the average student to obtain a postsecondary certificate or degree. Consequently, many African American males do not find this resilience and become subject to poverty, inferior education, and a quality of life that is nowhere near the American dream.

**Problem Statement**
African American males are receiving degrees and postsecondary certificates at lower rates than other subpopulations (Owens, Lacey, & Holbert-Quince, 2010). This phenomenon is occurring across the United States as well as within the state of Arkansas. It is well-established that increased education leads to a better quality of life. The attainment of a baccalaureate degree determines occupational status and income (Pascarella & Terenzini, 2005). The human development capital of African American males in Arkansas is drastically affected. However, at present, no model addressing this issue within Arkansas exists.

**Purpose**

The purpose of this study was to identify factors that contribute to the successful completion of a program of study at an institution of higher education by African American males in the state of Arkansas. The factors that will be closely examined in the study include the student’s high school grade point average, ACT score, and socioeconomic status, out-of-school suspensions during 12th grade; and the institution of higher education’s enrollment size, institutional type, and net price. These factors have been selected because they are traditional factors that are used to determine successful completion of a program of study at an institution of higher education (Astin, 1993b). Out-of-school suspension is a not a traditional factor. However, incorporating this factor will shed more light onto the experiences of African American males during their secondary years of education and the effect on their completion of a program of study.

**Research Question**

1. What factors predict the completion of a program of study at an institution of higher education by African American males in the state of Arkansas?
Hypotheses

The following hypotheses were determined from existing studies and literature related to this topic. The researcher examined these sources to find trends that may explain the findings in this study. The validity of the hypotheses was determined when data were analyzed.

1. There will be a statistically significant, direct relationship between selected traditional predictors – high school grade point average, ACT score, and socioeconomic status – and the successful completion of a post-secondary degree for both African-American and Caucasian males.

2. There will be a statistically significant, inverse relationship between the new predictor of the number of days suspended in high school and the successful completion of a post-secondary degree for both African American and Caucasian males.

3. The type of institution attended will be a statistically significant predictor of successful completion of a post-secondary degree for both African-American and Caucasian males. Specifically, a student attending a private institution will be more likely to graduate.

The above hypotheses were answered by hierarchical logistic regressions: one for African American males and one for Caucasian males. The outcome variable was the subject’s completion of a program of study at an institution of higher education.
4. There will not be a statistically significant relationship between the net price, enrollment size, and the successful completion of a post-secondary degree or certificate for African American males.

This hypothesis was also answered by the above described hierarchical logistic regression run for only African American males where the outcome variable is the successful completion of a post-secondary degree or certificate.

5. Race will be a statistically significant predictor of successful completion of a post-secondary degree. Specifically, Caucasian males will be more likely to graduate than African American males.

This hypothesis was answered by a logistic regression using race as a categorical predictor along with those predictors in the subsequent analyses that were significant.

Significance of the Study

While the existing literature has examined some of the factors impacting African American male college students, this study will address additional factors. There has not been a study that targeted this subpopulation in the state of Arkansas. The literature consists of qualitative studies, but a relatively small portion of the findings are well-documented or supported by empirical quantitative evidence. The study will add missing information by applying quantitative methods to a sample of African American males in Arkansas to find the significant factors that predict successful transition from high school to college. The findings will provide solutions and identify the parties and/or entities responsible for the implementation of these solutions. Overall findings will be used to inform policy makers, higher education administrators, public and private education
administrators, and other leaders about the directions that need to be taken to aid African American males in completing post-secondary certificates and degrees.

**Definition of Key Terms**

*ACT score* – The average of the scores from the English, mathematics, reading, and science reasoning sections of the American College Test (ACT, Inc., 2014d).

*African American* – A person who self-identifies as being an American of African or Black descent.

*Caucasian* – A person who self-identifies as being an American of European descent.

*Enrollment size* – The number of students enrolled in a postsecondary institution of higher learning (Pascarella & Terenzini, 2005).

*Four-year institution* – A postsecondary institution of higher education that offers programs of at least four years’ duration, including baccalaureate degrees, post baccalaureate certificates, and/or graduate degrees (Ginder, Kelly-Reid, Mann, & RTI International, 2014).

*High school grade point average* – The quantitative measure of a student’s academic performance during high school.

*Independent institution* – An institution of higher education incorporated in the state of Arkansas that is accredited, recognized by the United States Department of Education, and is not publicly funded (R. Jenkins, personal communication, December 23, 2014).

*Institutional type* – The extrinsic characteristics of a postsecondary institution of higher education.

*Net price* – The cost of tuition, fees, room, board, books, and supplies minus the amount given by financial aid (Pascarella & Terenzini, 2005).
Out-of-school suspension – A punitive measure taken that removes a student from the school environment for a period not to exceed ten days (Mendez, Knoff, & Ferron, 2002).

Private institution – An institution of higher education incorporated in the state of Arkansas that is accredited, recognized by the United States Department of Education, and is not publicly funded (R. Jenkins, personal communication, December 23, 2014).

Public institution – An institution of higher education incorporated in the state of Arkansas that is accredited, recognized by the United States Department of Education, and is publicly funded (R. Jenkins, personal communication, December 23, 2014).

Socioeconomic status – The status of one’s position based on education attainment, income, neighborhood type, and occupation (Collins & O’Brien, 2003; Titus, 2006).

Two-year institution – A postsecondary institution of higher learning that offers programs of at least two but less than four years’ duration that does not grant baccalaureate degrees (Ginder et al., 2014).

Summary

For several decades, the American Dream has been described as being happily married with children, living in a home with a white picketed fence, and achieving all of one’s education and career dreams. However, many African American males do not remotely achieve these expectations. When comparing subpopulations, African American males are definitely struggling to live the American dream. Poverty and low educational attainment are two key problematic areas for this subpopulation. These conditions illustrate the importance for this study and its focus in Arkansas. In the next chapter, the components comprising this study are discussed in depth.
Chapter 2 Review of Related Literature and Conceptual Framework

The following section describes the theoretical framework and literature surrounding African American males obtaining postsecondary degrees or certificates through the lens of Astin’s Input-Environment-Output Model (Astin’s I-E-O Model) (Astin, 1993a). First, several attributes of “I,” inputs, will be discussed. Following inputs, “E” or factors of environment at the institutional level will be examined. Finally, “O” or outcome (degree attainment) will be discussed.

Orienting Theoretical Framework

Astin’s Input-Environment-Output (I-E-O) Model will serve as the theoretical lens for this study. As stated in Campbell, Smith, Dugan, & Komives (2012), “This model posits that the combination of students’ pre-college characteristics together with the college environment contribute to student outcome achievement” (p.602). This model hypothesizes relationships among three types of variables: inputs, environment, and outputs.

Inputs “refers to those personal qualities the student brings initially to the education program (including the student’s initial level of developed talent at the time of entry)” (Astin, 1993a, p. 18). Some factors that would be considered inputs would include educational background, demographic information, attitudes, and beliefs.

Environment “refers to the student’s actual experiences during the educational program” (Astin, 1993a, p. 18). Variables that fall within this category that an educator can directly control to develop students’ skills would include the implementation of a specific policy, educational requirements, or program geared to assist students. These variables can impact the students and, therefore, outcomes. Examples are class size, faculty support of
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students’ future goals, amount of contact with faculty, and institutional type (Astin, 1993b).

Outputs are the ultimate skills or outcomes a college is trying to develop within students including an achieved grade point average or degree completion. The inputs have both a direct effect on the outputs as well as an indirect effect through the environment. “The fact that inputs are thus related to both outputs and environments means that inputs can, in turn, affect the observed relationship between environments and outputs” (Astin, 1993a, p. 19). The I-E-O Model enables obtaining considerable information on the potential connections between students’ pre-college characteristics, experiences while in school, and final educational outcomes. For this reason, Astin’s Model will be used to examine the conditions and experiences of African American males in Arkansas at institutions of higher education to determine the factors that predict the completion of a program of study.

Inputs

**High school grade point average.** College officials have wavered in their uses of high school grade point averages when considering admission requirements. College officials acknowledge a lack of uniformity exists in classrooms across the country when related to rigor and grades. A student’s performance in one classroom may earn the grade of an “A,” while in another classroom in the same subject, a “C.”

Grade inflation occurs when there is an increase in high school grades but no increase in test scores, standardized testing assessments, scholastic behavior, or any factor related to student content knowledge (Zhang & Sanchez, 2013). This phenomenon causes the predictive validity of high school grade point average to weaken and makes
admission decisions of institutions of higher education difficult (Godfrey, 2011). When examining high school grade point averages and SAT scores over an eleven year period, Godfrey (2011) found that teachers scored students beyond their accurate achievement level.

In a study incorporating high school grade point averages and ACT scores, Zhang and Sanchez (2013) found no overall grade inflation or deflation over a span of eight years when comparing results to a previous related study. Both previous studies used data from across the United States. The Arkansas Department of Education defines grade inflation as “schools in which more than twenty percent (20%) of the students received a letter grade of “B” or above but did not pass the end-of-year assessment on the first attempt” (Hoy, 2014, p. 13). Only 2.5% percent of Arkansan high schools fell into this category during the 2012-2013 school year.

The Common Core State Standards have been placed into the academic curriculum of schools across the United States. Mandated by most states, the Common Core State Standards have become the hope of policymakers and administrators to combat the lack of uniformity in both rigor and grading. However, the implementation of Common Core State Standards does not guarantee parity for all students. Research shows that there is a disparity of rigor experienced by minority students (Solórzano & Ornelas, 2002). One way that rigor can be experienced is minority student participation in the Advanced Placement (AP) Program.

College Board established the Advanced Placement (AP) Program in 1955. The purpose of the program is to give high school students opportunities to not only take college-level classes but also to earn college credits. The scores on AP Exams range
from 1 to 5. In most cases, students who achieve a score of 3 or higher earn college credit. Currently, there are more than 30 exams given in six content areas: English, mathematics and computer science, history and social sciences, arts, sciences, and world languages and cultures. Students who participate in this program receive weighted grade points that are applied towards their high school grade point averages. Students’ participation in this program increased their likelihood of attending and graduating from college (Godfrey, Matos-Elefonte, Ewing, & Patel, 2014).

African American and Hispanic students’ participation in the Advanced Placement (AP) Program has grown over the last ten years in Arkansas. Therefore, more minority students have been granted access to more rigorous curriculum and weighted grade point averages. Both minority groups have experienced increased success with passing at least one AP Exam. However, the number of Hispanic students passing at least one AP Exam has grown at a faster rate than the number of African American students passing at least one AP Exam in Arkansas (The tenth annual AP ® report to the nation, 2014).

High school grade point average is one of the most revealing predictors of degree attainment. According to the National Center for Education Statistics’ (NCES) High School Transcript Study, the average high school grade point average among African Americans is 2.69 while the average high school grade point average among Caucasian students is 3.09 (Nord et al., 2011). First time, first year freshmen are more likely to return to college for their second, third, and fourth years of college when earning higher high school grade point averages (Shaw & Mattern, 2013). Consequently, students with higher high school grade point averages are more likely to graduate from college.
At two-year institutions, students earning higher high school grade point averages are more likely to obtain degrees and/or transfer to four-year institutions (Porchea, Allen, Robbins, & Phelps, 2010; Radunzel & Noble, 2012a).

Adding the cultural characteristic of race into the equation of completing a degree yields mix results. Some studies states that for both majority and minority students, high school grade point average is a strong predictor of college graduation (Fischer, 2007; Hoffman & Lowitzki, 2005; Zwick & Sklar, 2005). Hoffman and Lowitzki (2005) found that high school grades for students of color were statistically significant in regards to retention while Zwick and Sklar (2005) found that high school grades were statistically significant for Caucasian students graduating from college. Bryson, Smith, and Vineyards (2002) found that high school grade point averages were a positive predictor of success in college for African American students, whereas high school ranks and ACT scores were predictors of college success for Caucasian students. Bryson, Smith, and Vineyards also suggested that the best academic predictors of college success may vary by race. Achievement gaps develop between African American and Caucasian students during the first semester of college. Spenner, Buchmann, & Landerman (2005) attribute 40% of this gap to the students’ high school academic preparation and socioeconomic status.

High school grade point averages are extremely important when discussing the ways that African American males can eventually complete a postsecondary degree or certificate. Even though there are services available on college campuses that should
assist African American males, many African American males do not either participate and/or feel that they cannot access these services. Therefore, high school grade point average remains one of the leading indicators to degree completion given its effects on both college retention and degree completion. If African American males continue to earn lower high school grade point averages than their racial counterparts, the trend of African American males not completing their programs of study at institutions of higher education will continue.

**American College Test.** The American College Test (ACT) is a standardized exam that many universities and colleges use as a criterion for admission and scholarships. This score is factored with other variables such as high school grade point average, class rank, extracurricular activities, and strength of high school curriculum (Radunzel & Noble, 2012b). Many universities and colleges with higher academic rigor require students to take the optional writing test. The ACT composite score is the average of the English, mathematics, reading, and science sections.

For the graduating class of 2014, there are minimum differences in the average ACT composite scores among all races/ethnicities when simultaneously observing the scores across the United States and the state of Arkansas. However, the differences within the races/ethnicities are substantial and reveal the gap. Caucasian students score more than five points on average on the ACT exam than African American students. African American students are the lowest performers on the ACT exam (ACT, Inc., 2014b; ACT, Inc., 2014c).

The American College Test (ACT) also measures students’ readiness to take college level courses. If a student earns a particular score on each section of the ACT,
then the student has a 50% chance of earning a grade of “B” or higher or about a 75% chance of earning a grade of “C” or higher in the corresponding credit-bearing college course. Earning an 18 on the English section of the ACT indicates the student’s readiness to take college English composition. Earning a 22 on the mathematics section indicates a student’s readiness to take college algebra. Earning a score of 22 on the reading section indicates a student’s readiness to take a college social science class. Finally, earning a score of 23 on the science section indicates a student’s readiness to take college biology.

Within the state of Arkansas, only 5% of African American students were college level ready for all four subjects. Among other racial groups, 27% of Caucasians, 12% of Hispanic/Latinos, and 31% of Asians were college level ready for all four subjects in the graduating class of 2014 (ACT, Inc., 2014a). On the national level, students who were college ready in three or more areas in this same graduating class by racial groups were 11% of African Americans, 49% of Caucasians, 23% of Hispanic/Latinos, and 57% of Asians (ACT, Inc., 2014c). African American students in the state of Arkansas are struggling significantly to achieve college readiness.

Additionally, students with higher ACT scores are more likely to graduate than students with lower scores (Harackiewicz et al., 2002; Sparkman et al., 2012). The probability of earning a bachelor’s degree by the sixth year at a four-year institution with an ACT score of 25 is substantially higher than students earning an ACT score of 16 (Sparkman et al., 2012). Earning an ACT score of 19 or higher improve the chances of students completing an associate’s degree and/or transferring to an in-state four-year institution by the third year (Radunzel et al., 2012a). ACT scores contribute the most
towards predicting college graduation within six years when the score falls within the 25th percentile (Stumpf & Stanley, 2002).

Selected data suggest that ACT scores play a significant role in predicting the completion of a postsecondary degree or certificate. From the literature, findings indicate that the higher the ACT score the greater the likelihood of completing a program of study. Historically, among African American males, scoring lower on the ACT than any other subpopulation presents additional barriers to completing a program of study from an institution of higher education.

**Socioeconomic status.** Low socioeconomic students are most likely to be African American, Hispanic, or another marginalized minority group (Thompson et al., 2006; Titus, 2006). Some studies have used parent or family income as the measure of socioeconomic status (Dowd, 2004; Fischer, 2007; Owens, 2010; Walpole, 2008). Other studies have used a combination of parents’ income, educational level, and occupation as the measure (Porchea et al., 2010; Wang, 2009).

Poverty enters the discussion when socioeconomic status is being examined. Poverty or the poverty line is described as “the minimum level of resources that are adequate to meet basic needs” (United States Census Bureau, 2014, p. 5). In the United States in 2012, the percentage of Caucasians (not Hispanic) living below poverty was 9.7; the percentage of African Americans was 27.2%; the percentage of Asians was 11.7%; and the percentage of Hispanics of any race was 25.6% (DeNavas-Walt, Proctor, & Smith, 2013). Between 2007 and 2011 in Arkansas, the percentage of Caucasians living below the poverty line was 14.7%; the percentage of African Americans was 34.1%; the percentage of Asians was 12.6%; and the percentage of Hispanics was 31% (Macartney,
One study, involving a national sample, found that Asian and Caucasian families on average were able to contribute more than 60% of personal resources to cover children’s college expenses compared to 33% and 43% of personal resources contributed by African American and Hispanic families (Fischer, 2007).

Educational attainment of parents affects their children greatly. In the United States, 83% of adolescents with parents who have earned less than a high school diploma live in low-income families. Comparatively, 60% of adolescents with parents who have earned only a high school diploma live in low-income families. However, only 28% of adolescents with at least one parent who has earned some college or more live in low-income families (Jiang, Ekono, & Skinner, 2014). In Arkansas, 44% of Caucasian children live in low-income families; 74% of African American children live in poverty; 73% of Hispanic children live in poverty; and 53% of Asian children live in poverty (National Center for Children in Poverty, 2014).

Living in a low socioeconomic status life critically affects the quality of life for African American males. These males witness family members suffering from medical ailments due to not having quality medical care. The families experience low birth weights babies, high infant mortality, chronic asthma, and lack of prenatal care (Lamy, 2013). Parents are often not able to attend meetings related to their children’s educational progress. Due to demanding inflexible work schedules, many parents leave the burden of educating their children entirely on teachers and administrators. Residing in intensive agriculturally, rural, and socioeconomic challenged regions causes all students including African Americans to earn lower scores on the ACT (Herman, Huffman, Anderson, & Golden, 2013). These students and their families cannot afford
test preparation that will help them increase their scores (Toldson & McGee, 2014). Earning lower wages has contributed to African American residing in poorer neighborhoods. These neighborhoods lack effective schools, good libraries, positive community activities, and enriching cultures that feeds their creativity (Farkas, 2008).

The literature clearly suggests the effect of socioeconomic status on degree attainment. Family income significantly predicts completion of programs of study from institutions of higher education (Dowd, 2004; Owens, 2010; Titus, 2006). The chances of graduating from college increase when socioeconomic status increases. Walpole (2008) found that socioeconomically challenged African American students experienced less interaction with faculty, studied less, were less involved on campus, worked more, and earned lower grades than their peers who had more socioeconomic leverage or all other African American students. Nine years after entering college, low socioeconomic students still earned lower incomes, rates of degree attainment, and aspirations than their high socioeconomic peers. Moreover, these disadvantaged students were less likely to have attended graduate school. Thompson et al. (2006) stated that degree attainment was related to several factors including students’ gender and socioeconomic status for both African American and Caucasian students.

The evidence strongly supports the conclusion that socioeconomic status has a great impact on completion of programs of study at institutions of higher education. Moreover, having a low socioeconomic status is more prominent among minorities such as African Americans and Hispanics and only impedes the journey of African American males attempting to graduate with a postsecondary degree or certificate.
Out-of-school suspensions. There is limited literature on the effects of punishment during formative education on degree attainment in college for all students. This phenomenon is especially a concern for African American males, for most research states that this subgroup suffers the greatest via punitive sanctions. One of these sanctions is out-of-school suspension. Incorporating out-of-school suspensions into the topic of postsecondary degree attainment is fairly recent. It is important to expound on the topic of out-of-school suspensions to see its effects on the graduation rate of African American males earning a postsecondary degree or certificate. If practices are occurring that are detracting from and/or not contributing to the completion of the program of study or degree attainment for African American males, then policies should be adjusted.

Forty years of research have stated that African Americans especially males receive the most punitive sanctions in the K-12 setting (Anderson, Howard, & Graham, 2009; Butler, Lewis, Moore, & Scott, 2012; Children’s Defense Fund, 1975; Fenning & Rose, 2007; Gregory, Skiba, & Noguera, 2010; Mendez & Knoff, 2003; Mendez et al., 2002; Rocque, 2010; Skiba, Peterson, & Williams, 1996; Wallace, Goodkind, Wallace, & Bachman, 2008). Many K-12 schools seem to rely on exclusion from the classroom setting as the primary discipline strategy (Arcia, 2006). Many scholars associate several reasons to this phenomenon. Teachers’ perceptions of students, the high stakes of academic achievement, and the lack of diversity in building-level leadership teams are a few of the research findings.

Some teachers and school personnel may find African American males and other marginalized subgroups including low socioeconomic students as not being fit to be in the school setting. Some teachers and school personnel judge these students as being
dangerous (Casella, 2003). At times, some teachers are driven by the perceived fear of losing control of their classrooms. These perceptions cause a heightened sensitivity to the behaviors of these students in the classroom and result in these students being sent to the office for disciplinary action.

The majority of the teaching force is comprised of Caucasian women (Rocque, 2010). Different styles of communication exist among Caucasian educators and African American students (Fenning & Rose, 2007). An African American student may be considered being disrespectful when a difference of opinions arises. However, research reveals that African American students are more likely to speak honestly and bluntly on an issue on the behalf of the whole class than their Caucasian peers (Vavrus & Cole, 2002). The resulting dissonance between Caucasian educators and African American students may become a distraction to learning environments.

Teachers already have the pressure of meeting academic benchmarks in order to earn favorable evaluations and access to monetary incentives. In the past few years, states have directly tied standardized test scores to teachers’ evaluations. This implementation has caused teachers and administrators to be extremely anxious about job security. Therefore, it is easy to remedy the situation by removing perceived misbehaving students from the classroom setting.

Many Caucasian educators have not experienced significant interactions with minorities outside of the classroom setting (Milner, 2006). Offering meaningful professional development for teachers centered on multiculturalism and diversity would help to alleviate the antiquated views that many teachers possess about minorities. Moreover, teachers can assess their own beliefs and opinions to determine ways that their
beliefs and opinions affect their interactions with minority students. The ultimate goals of these types of professional development opportunities are for all students to stay in the learning environment and to communicate more effectively with minority students and their parents.

Building-level administration teams should play a key role in facilitating multicultural sensitive professional development for teachers. However, this course of action is difficult when the composition of the building-level leadership team does not reflect the composition of the student body. As with the population of teachers, Caucasians are most likely to be the majority of administrators even in schools composed primarily of majority African Americans and other minority groups (Cooper & Jordan, 2005). However, the existence of diverse leadership team has many advantageous qualities. When an incident arises between a Caucasian teacher and African American student, an African American or minority administrator can act as a mediator as well as a translator (Gallien, 2007). The teacher and the student can leave the situation gaining much needed revelation about the other person. This course of action contributes to the morale of the building and, ultimately, to student achievement.

Numerous studies have shown the overwhelming number of African Americans especially males who are affected by punitive sanctions such as out-of-school suspensions. Butler et al. (2012) found that race significantly correlated with the number of assigned suspension days for elementary school students. A greater number of assigned suspension days were associated with African American elementary school students with socioeconomic status not being a significant factor. In a large, ethnically diverse school district, Mendez and Knoff (2003) discovered that approximately 26% of
African American males and 14% of African American females experienced at least one suspension compared to approximately 12% of Caucasian males and 4.5% of Caucasian females.

At the middle school level, almost one-half of all African American males and almost one-third of all African American females experienced at least one suspension. African American middle school males received by far the highest number of suspensions per 100 students and were overrepresented in suspensions across almost all categories of infractions. When an African American male was suspended the previous year in middle school, his chances of being suspended the next year in middle school increased dramatically (Anderson et al., 2009). Mendez et al. (2002) learned in their study that African American males were suspended more frequently than all other populations. African American females were suspended more than Caucasian and Hispanic females. Caucasian students received the lowest suspension rates of all students. The percentage of students who ate free lunch, were African American, or changed schools often showed moderate positive relationships with the out-of-school suspension rate. The percentage of students who were Caucasian and Hispanic showed moderate negative relationship with the out-of-school suspension rate.

Schools with higher standardized test scores have lower rates of out-of-school suspensions (Mendez et al., 2002). African American males who are suspended have lower reading scores than those who are not suspended. The reading scores of sixth graders are a significant predictor of suspensions in the seventh grade (Anderson et al., 2009). Ultimately, being removed from the learning environment generates negative effects on a student’s level of college readiness (Gregory et al., 2010).
African American males are the subgroup that spends the most time outside of the learning environment due to out-of-school suspensions. This occurrence coincides with the findings that African American males score lower on the ACT and have lower high school grade point averages. When socioeconomic status is considered, the plight of young African American men is clear.

High school grade point average, ACT score, and socioeconomic status traditionally have been studied to predict success in college. Incorporating number of days of out-of-school suspensions adds a new dimension to the conversation, especially concerning African American males. Past research indicates that these four inputs should shed light on the reasons that African American males are not as successful as other subpopulations in the completion of their programs of study at institutions of higher education.

Environment

**Enrollment size.** Enrollment size of a university or college or the number of students enrolled at the institution has had mixed results in determining its effect on the completion of the programs of study at an institution of higher education. In most cases, enrollment size has been used as a control variable (Pascarella & Terenzini, 2005). Some sources have stated that enrollment size has a negative effect on degree attainment but appears to be minimal when compared to other institutional factors (Astin, Tsui, & Avalos, 1996; Wolf-Wendel, 1998). In studies dating from the past ten years, there is strong evidence to conclude that enrollment size can have a positive effect on degree attainment.
The College Board Advocacy & Policy Center (2011) discovered that the highest four-year graduation rates occurred on campuses with enrollments between 1,000 and 3,000 students. For six-year graduation rates, the highest graduation rates occurred at institutions with 20,000 or more students. When examining outcomes of students who initially enrolled at community colleges, Porchea et al. (2010) discovered that greater enrollment sizes predicted increased transfer to a four-year institution without completing a program of study. Goble et al. (2008) found that small colleges only benefited mid-achieving students. Midsized colleges only benefitted top achieving students. For the lowest achieving students, enrollment size did not have any impact. Fischer (2007) discovered that enrollment size was significant for African American and Hispanic students. These two groups of students preferred to attend larger schools.

It seems safe to conclude that enrollment size does not give a consistent bearing on its effect on completion of programs of study at institutions of higher education. For this reason, it is important to examine this factor in individual settings. Examining enrollment size will provide important clues to the dilemma that African American males encounter in their journey to complete programs of study at institutions of higher education in the state of Arkansas.

**Institutional type.** Three types of institutions of higher education in the state of Arkansas exist: independent (private) universities and colleges, four-year public universities, and two-year public colleges. Currently, there are 12 independent universities and colleges, 11 four-year public universities, and 22 two-year public colleges. According to Wood (2012), the majority of African American males enter higher education through community colleges. “The two-year college often represent
Black men’s first experience with postsecondary education, and for many, their last opportunity for obtaining a degree beyond a high-school diploma” (Bush & Bush, 2005, p. 44).

Private institutions of higher education positively influence completion of programs of study at institutions of higher education (Titus, 2006). Looking at two-year institutions, students were more likely to graduate with a degree if it was classified as a vocational or technical versus community or junior college (Porchea et al., 2010). In 2009, College Board Advocacy & Policy Center (2011) found that the percentage of students who earned degrees within five years of initial enrollment at each type of four-year institutions was 44% at public institutions, 57.6% at private institutions, and 52.7% at all institutions. Six-year graduation rates were significantly higher than four-year graduation rates across all types of institutions (College Board Advocacy & Policy Center, 2011).

Scott, Bailey, and Kienzl (2006) also found that 57% of students complete their programs of studies at private institutions versus 45% at public institutions. However, public institutions appear to make better use of overall resources than private institutions especially student inputs. When analyzing types of institutions and African American males, Flowers (2006) found that African American males at community colleges were older and had lower socioeconomic statuses than their counterparts at four-year institutions. In addition, African American males at four-year institutions engaged in more academic and social experiences than their counterparts at two-year institutions. There is evidence to conclude that private institutions produce higher rates of students who complete their programs of study than public institutions. Moreover, this same line
of evidence points towards four-year institutions of higher education being more effective than two-year institutions. These observations attest to the need for this study.

**Net price.** Net price is defined as the cost of tuition, fees, room, board, books, and supplies minus the amount of monetary support given by financial aid (Pascarella & Terenzini, 2005). Financial aid is considered to provide students with more time to study than they would have due to time spent working to support themselves (DesJardins, Ahlburg, & McCall, 2002). Students who receive financial aid are more likely to return to the institutions of higher education the following year and eventually complete their programs of study. Finances play a significant role in African American students’ choices of institutions of higher education and their persistence toward completing their programs of study. Student aid and tuition strongly influences the selection process for African American students (St. John, Paulsen, & Carter, 2005). Long & Riley (2007) found that 56% of African American students had financial obligations after financial aid compared to 40% of Caucasian students.

In the last 25 years, tuition has risen at a greater rate than the rate of inflation (Brown, 2007). Tuition is much higher at private institutions than public institutions (Scott et al., 2006). Slater, Brackner, and Connell (2013) found that the cost of attendance was statistically significant when graduation rates were being measured. An increase in cost was associated with an increase in graduation rate. Receiving financial aid is positively associated with persistence (Long & Riley, 2007) and reduces dropout rates especially in the third year of college (Ishitani & DesJardins, 2002). Moreover, financial aid increases academic integration and commitment to one’s education yielding
higher achievement (Stater, 2009). Financial aid falls into two categories: merit based and need based.

**Merit based financial aid.** Merit based financial aid is awarded to students who have achieved a certain level of academic stature (Brown, 2007). The most common form awarded is scholarships. Students do not have to repay these funds to the entity that awards them. Merit based aid has a greater effect on college grade point average than need based aid (Stater, 2009). There are higher academic requirements tied to not only obtaining merit based aid but keeping it during the duration of one’s matriculation. Moreover, students gain a sense a loyalty to the institution that is rendering them the opportunity of a higher education via a scholarship.

**Need based financial aid.** Need based financial aid is awarded based on the income of students’ parents and possibly other measurements of socioeconomic status. Grants and tuition have significant and direct influence on persistence for African Americans (St. John et al., 2005). Low-income students are more likely not to graduate than middle-income students when the Pell grant is not awarded (Chen & DesJardins, 2008). Low income students are more responsive to grants (Paulsen & St. John, 2002). Simultaneously, grants greatly benefit African American and Hispanic students more than Caucasian students (Hu & St. John, 2001). Need-based financial aid is often given by state and federal governments and transferable to any institution at any time. Therefore, students may not gain a strong sense of loyalty to the institution unless receiving another source of aid directly from that institution (Stater, 2009). DesJardins et al. (2002) found that institutional scholarships not grants had an impact on preventing students from leaving. Moreover, institutional employment had a longer effect on
retention than federal work study. There is an ongoing battle at institutions between the admission and support of academically strong students through merit based aid and the admission and support of diversity and access through need based aid.

It is not surprising that students who receive merit based aid are more successful and complete their programs of study at institutions of higher education than students who receive need based aid. Alon (2005) highlighted that the same factors that contribute to program completion also contributes to the eligibility of both merit based and need based aid. Therefore, it is safe to conclude that the same students who are receiving merit based aid are also obtaining postsecondary certificates and degrees from institutions of higher learning.

**Student loans.** Even though student loans are part of students’ financial aid packages, student loans are not considered a part of net price because students have to repay the loans. Student loans are found to be more effective for Caucasians than any other racial group (St. John et al., 2005). Of all types of financial aid, loans were found to have the lowest effect in retention (DesJardins et al., 2002). However, student loans are found to decrease the risk of student departure (Chen & DesJardins, 2008). Loans have a greater impact on lower middle-income students than low income students. Overall, student loans seem not to have a significant positive effect on African Americans obtaining postsecondary degrees or certificates.

Students, especially African Americans, receiving financial aid have a greater chance of completing their programs of study at institutions of higher education. Even though the cost of attendance has increased over time and is documented as being a barrier to college access, higher costs increase the likelihood of completing the program
of study. Students who receive merit based financial aid have a higher probability of completing their program of study than students who solely receive need based financial aid. Any student can access student loans for college expenses. However, this type of financial aid did seem to be the least effective when considering obtaining a postsecondary degree or certificate. When considering appropriate types of financial aid, African American males become frustrated even discouraged. With the academic record of many African American males, their options are limited.

Students do not bring environmental factors with them to college. These variables are already present at institutions of higher learning (Astin, 1993b). These variables intermingle with input variables to determine collegiate success. From this study, the degree to which these variables play a role in African American males obtaining degrees from institutions of higher learning will be revealed.

Output

Degree attainment. During the 2012-2013 school year, in the United States at Title IV degree-granting institutions, African Americans comprised 10.3% of graduates while Caucasians comprised 59.6% of graduates (Ginder et al., 2014). Thompson, Gorin, and Obeidat (2006) stated the most likely educational outcome for Asian and Caucasian students was a bachelor’s degree. However, the most common educational outcome for African American, Hispanic, and Native American students was some postsecondary education but no degree was completed. On college campuses where a large portion of the population consists of minority students, all students’ chances of graduating decrease (Goble, Rosenbaum, & Stephan, 2008). This condition provides a strong illustration of
the difficulty graduating from college is for African Americans as well as other marginalized minority groups.

Summary

Past research has illustrated the strong influence of high school grade point average, ACT score, and socioeconomic status on degree attainment. Adding out-of-school suspensions to the topic gives more insight into the conditions affecting African American males and their quest to complete programs of study at institutions of higher education. These input variables combined with the environmental variables of enrollment size, institutional type, and net price will give a more thorough examination in this arena. In the next chapter, the method for investigating these variables will be detailed. Data retrieval and data analyses are also discussed.
Chapter 3 Methodology and Procedures

Participants

For this study, data for the input variables were obtained from the Arkansas Research Center (ARC). The ARC serves as a storehouse for data reported by both K-12 school districts and institutions of higher education from the state of Arkansas (Arkansas Research Center, 2014). The complete data set for the high school class of 2008 was utilized. The data spanned from the time these students were enrolled in kindergarten until completion of a degree or certificate from an institution of higher education in the state of Arkansas. In addition, environmental data such as characteristics of colleges and universities in the state of Arkansas was gathered from the Integrated Postsecondary Education Data System that is operated by the National Center for Education Statistics and housed by the United States Department of Education and the Institute of Education Sciences (Institute of Education Sciences, 2014). Participants in this study included both African American and Caucasian males who graduated from high schools in Arkansas in 2008. The class of 2008 in Arkansas totaled 26,669 graduates. Of these graduates, approximately 9% were African American males and approximately 36% were Caucasian males (ADE Data Center, 2014).

Output Variable

The output variable will be the completion of a program of study at an institution of higher education in Arkansas (0 = no, 1 = yes). The desired outcome is to complete a program of study. Therefore, “yes” is coded as “1” and “no” coded as “0.” An institution of higher education in Arkansas includes independent/private universities and colleges, two-year public colleges, and four-year public universities and colleges.
Predictor Variables

Guided by Astin’s (1993b) Input-Environment-Output Model, the predictor variables will include the Inputs and Environmental factors of the study. The Inputs include high school grade point average, ACT score (highest composite score), days suspended from school (during 12th grade), and lower socioeconomic status (0 = no lunch assistance, 1 = reduced lunch, 2 = free lunch). The Environmental factors include the number of students enrolled, the type of institution, and the average net price where the degree or certificate was received or the participant currently is or previously was enrolled (0 = independent/private, 1 = 2-year public, and 2 = 4-year public). The coding of “1” and “2” help delineate from the category coded as “0” in regards to socioeconomic status and type of institution. The Environmental factors will be derived from data taken during the 2008-2009 academic school year.

Sample

Two hundred males comprised the sample for each subgroup resulting in a ratio of 25 participants per variable, a good practice for multivariate sample size (Meyers, Gamst, & Gaurino, 2013). Initially, the sample was created by using random sampling. However, this sample did not provide enough participants who attended independent/private institutions of higher of education for both Caucasian and African American males. Therefore, a sample was created using stratified random sampling. Participants were randomly selected from within the three types of institutions.

Based on the enrollment numbers from Fall 2008, 9.7% of all students were enrolled in independent/private institutions, 35.7%, 2-year public institutions; and 54.6%, 4-year institutions in Arkansas. Within a representative sample of 200 participants, 19
males should be from independent/private institutions, 72 males from 2-year institutions, and 109 males from 4-year institutions. These percentages were reflected within the Caucasian male sample. However, only 11 African American males attended independent/private institutions. Therefore, the remaining eight slots were divided evenly and placed within the remaining two categories. Therefore, the African American male sample had 11 from independent/private institutions, 76 from 2-year institutions, and 113 from 4-year institutions. Random numbers were generated by Researcher Randomizer (Research Randomizer, 2015). These numbers were used to select participants within an Excel spreadsheet. Randomly selected participants substantially decreased the chance of having a bias sample, one that is not representative of the population (Morling, 2012).

**Descriptive Analyses**

Descriptive analyses included mean grade point average, ACT composite score, the number of days the student was suspended (during 12th grade), and average net price for all African American and Caucasian males graduating from high school in the class of 2008. Additionally, the descriptive analyses included a series of t-test to highlight the differences between the grade point averages, ACT scores, and average net prices of African American and Caucasian males. Moreover, the chi-square test highlighted the difference of lower socioeconomic status and number of days suspended between these same subgroups. The difference of the number of days suspended was originally going to be highlighted using a t-test. However, this predictor had a small range from zero days to two days. Therefore, chi-square test did a better job on analyzing the difference within a small range.
Hierarchical Logistic Regression Analyses

Based on the theoretically grounded set of predictors, a hierarchical logistic regression analysis was performed on the data. Hierarchical entailed that several procedural steps were involved (Meyers et al., 2013). The first regression model included the traditional predictors of completion of study: high school grade point average, ACT score, and socioeconomic status. The second regression model included the traditional predictors and the remaining input variable of out-of-school suspension. The third regression model included the previous input predictors and the environment variable of institution type. The last regression model included all the previous input and environment factors, average net price, and enrollment size. The purpose of the subsequent models was to infer if adding certain predictors increased the prediction accuracy. A logistic regression ran on the combined sample of African American and Caucasian males with race being included as a categorical predictor variable in order to determine if it was a significant factor in whether or not one completed a program of study. This model included the predictor variables found to be significant in the previous analyses from both subgroups.

Summary

This chapter discussed the way that data was retrieved and analyzed. The source of the data and the types of analyses were identified. Moreover, rationales were provided for decisions made concerning the analyses.
Chapter 4 Results

This chapter begins with the results of the descriptive analyses. The results of the hierarchical logistic regression analyses involving the African American male sample, the Caucasian male sample, and the combined sample are described. The chapter ends with comparing the results to the aforementioned hypotheses.

Descriptive Analyses

African American males had significantly lower high school grade point averages, $t(398) = 10.18$, $p < .001$ and ACT scores, $t(398) = 12.74$, $p < .001$ than Caucasian males. Moreover, there were more incidents of free and reduced lunches, $\chi^2 (2, N = 400) = 104.69$, $p < .001$ and number of days suspended, $\chi^2 (2, N = 400) = 6.80$, $p < .05$ for African American males than Caucasian males. The institutional enrollment size for African American males, $t(398) = 2.66$, $p < .01$ was significantly smaller; however, the average net price [$t(398) = 1.49$, $p = .138$] was not statistically significant between African American males and Caucasian males.

Table 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>African American Males</th>
<th>Caucasian Males</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSGPA</td>
<td>2.49  0.59</td>
<td>3.07  0.56</td>
<td>10.18 .000 0.91</td>
</tr>
<tr>
<td>ACT</td>
<td>17.19  3.51</td>
<td>22.29  4.45</td>
<td>12.74 .000 1.07</td>
</tr>
<tr>
<td>Net Price</td>
<td>$9,121 $2,358</td>
<td>$9,542 $3,232</td>
<td>1.49 .138 0.15</td>
</tr>
<tr>
<td>Enrollment</td>
<td>6,181  4,587</td>
<td>7,625  6,173</td>
<td>2.66 .008 0.26</td>
</tr>
</tbody>
</table>

Note. HSGPA = high school grade point average; ACT = American College Test score.

Table 2
**Socioeconomic Status Determined by Lunch Assistance of Participants**

<table>
<thead>
<tr>
<th>Lunch Assistance</th>
<th>African American Males</th>
<th>Caucasian Males</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Fully Paid</td>
<td>59</td>
<td>29.5</td>
</tr>
<tr>
<td>Reduced</td>
<td>17</td>
<td>8.5</td>
</tr>
<tr>
<td>Free</td>
<td>124</td>
<td>62.0</td>
</tr>
</tbody>
</table>

Note. $N = 400$.

**Table 3**

**Number of Days Suspended of Participants in Twelfth Grade**

<table>
<thead>
<tr>
<th>Number of Days</th>
<th>African American Males</th>
<th>Caucasian Males</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>0</td>
<td>180</td>
<td>90.0</td>
</tr>
<tr>
<td>1</td>
<td>16</td>
<td>8.0</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Note. $N = 400$.

**Hierarchical Logistic Regression Analyses**

Hierarchical logistic regression analyses were used to determine the predictors that were statistically significant in predicting graduation with a post-secondary certificate or degree from an institution of higher education in Arkansas. Logistic regressions were run for African American males only, Caucasian males only, and combined African American males and Caucasian males.

**African American males.** In the first the hierarchical logistic regression, high school grade point average, ACT score, and socioeconomic status were predictors. These predictors accounted for 20.6% (Nagelkerke $R^2$) of the total variance and resulted in an
overall classification accuracy of 81%, \( \chi^2 (4, N = 200) = 27.94, p < .001 \). High school grade point average was the only statistically significant predictor, \( p < .001 \). Adding the number of days suspended to the model accounted for 20.7% of the total variance and resulted in an overall classification accuracy of 81%, \( \chi^2 (5, N = 200) = 28.00, p < .001 \). The number of days suspended was not a useful predictor and high school grade point average still remained the only statistically significant predictor, \( p < .001 \). Institutional type was added as a predictor in the third model that accounted for 23.6% of the total variance and resulted in an overall classification accuracy of 81%, \( \chi^2 (7, N = 200) = 32.40, p < .001 \). High school grade point average remained a statistically significant predictor, \( p < .001 \) and attending an independent/private institution was also statistically significant, \( p < .05 \). In the full model, average net price and enrollment size were added. This model accounted for 25.4% of the total variance and resulted in an overall classification accuracy of 83%, \( \chi^2 (9, N = 200) = 35.06, p < .001 \). High school grade point average was the only statistically significant predictor in the full model, \( p < .001 \). From this series of models, only high school grade point average was a consistently a significant predictor for African American males.

Table 4

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>OR</th>
<th>df</th>
<th>p</th>
<th>( R^2 )</th>
</tr>
</thead>
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<tr>
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</tr>
<tr>
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<tr>
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</tr>
<tr>
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<td>.944</td>
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<tr>
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<td>0.42</td>
<td>1.11</td>
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<tr>
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<td>.848</td>
<td>.206</td>
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Step 2

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<th>Wald</th>
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<th>Sig.</th>
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</thead>
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Step 3

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<th>Standard Error</th>
<th>Wald</th>
<th>df</th>
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</thead>
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<tr>
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</table>

Step 4

<table>
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<tr>
<th>Predictor</th>
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<th>Wald</th>
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<tbody>
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Note. HSGPA = high school grade point average; ACT = American College Test score; $R^2 = \text{Nagelkerke } R^2$.

**Caucasian males.** In the first the hierarchical logistic regression, high school grade point average, ACT score, and socioeconomic status were predictors. These predictors accounted for 34.2% (Nagelkerke $R^2$) of the total variance and resulted in an overall classification accuracy of 71.5%, $\chi^2(4, N = 200) = 59.32, p < .001$. High school
grade point average was the only statistically significant predictor, \( p < .001 \). Adding the number of days suspended to the model accounted for 35.2% of the total variance and resulted in an overall classification accuracy of 72.5%, \( \chi^2 (5, N = 200) = 61.30, p < .001 \). The number of days suspended was not a useful predictor and high school grade point average still remained the only statistically significant predictor, \( p < .001 \). Institutional type was added as a predictor in the third model that accounted for 38.1% of the total variance and resulted in an overall classification accuracy of 73%, \( \chi^2 (7, N = 200) = 67.27, p < .001 \). High school grade point average remained a statistically significant predictor, \( p < .001 \) and attending an independent/private institution was also statistically significant, \( p < .05 \). In the full model, average net price and enrollment size were added. This model accounted for 39.4% of the total variance and resulted in an overall classification accuracy of 73.5%, \( \chi^2 (9, N = 200) = 70.13, p < .001 \). High school grade point average, \( p < .001 \) and institutional type, \( p < .05 \) were the significant predictors in the full model. Moreover, attending an independent/private institution, \( p < .001 \) was a significant category within institutional type. Caucasians males were approximately 12.5 times more likely to graduate with a post-secondary degree or certificate when enrolled at an independent/private institution than enrolled at a four-year institution. From this series of models, high school grade point average and institutional type, especially independent/private institutions are significant predictors for Caucasian males.

Table 5

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AFRICAN AMERICAN MALE PROGRAM COMPLETION

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Note. HSGPA = high school grade point average; ACT = American College Test score, $R^2 = \text{Nagelkerke } R^2$. 
**Combined sample.** Because high school grade point average was statistically significant for both African American males and Caucasian males and institutional type (attending independent/private institutions) was only statistically significant for Caucasians males, these two predictors along with race were included in a hierarchical logistic regression analysis to determine the predictive power of race.

High school grade point average and institutional type were placed in the first step of the hierarchical logistic regression analysis. The predictors accounted for 38.1% (Nagelkerke $R^2$) of the total variance and resulted in an overall classification accuracy of 65.8%, $\chi^2 (3, N = 400) = 128.99, p < .001$. High school grade point average, $p < .001$ and institutional type, $p < .01$ were the statistically significant predictors in the model.

Moreover, attending an independent/private institution, $p = .001$ was a statistically significant category within institutional type. Adding race to the model accounted for 38.6% of the total variance and resulted in an overall classification accuracy of 76.3%, $\chi^2 (4, N = 400) = 131.04, p < .001$. High school grade point average, $p < .001$ and institutional type, $p < .01$ were the statistically significant predictors for the model.

Moreover, attending a private/independent institution, $p = .001$ was a statistically significant category within institutional type. Therefore, the aforementioned factors are the significant factors for the combined sample. Moreover, males attending a private/independent institution were almost five times more likely to graduate.

Table 6

*Summary of Hierarchical Logistic Analysis of Predictors of Post-Secondary Graduation for Combined Sample*

<table>
<thead>
<tr>
<th>Variable</th>
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<th>$SE$</th>
<th>$OR$</th>
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<th>$p$</th>
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Tests of the Hypotheses

The first hypothesis stated that a statistically significant, direct relationship exists between selected traditional predictors – high school grade point average, ACT score, and socioeconomic status – and the successful completion of a post-secondary degree for both African American males and Caucasian males. For African American males, high school grade point average was statistically significant and had a direct relationship with successfully completing a post-secondary degree. ACT score and socioeconomic status had no or very little contribution to completing a post-secondary program. For Caucasian males, high school grade point average was also statistically significant and had a direct relationship with successfully completing a post-secondary degree. ACT score and socioeconomic status were not statistically significant. Even though reduced lunch was not a significant predictor, its negative beta value indicated that lower socioeconomic status was associated with lower graduation rates.

The second hypothesis stated that a statistically significant, inverse relationship exists between the new predictor of the number of days suspended in high school and the successful completion of a post-secondary degree for both African American males and Caucasian males. For both African American males and Caucasian males, the number of
days suspended was not statistically significant. However, higher suspension was associated with lower graduation rates for Caucasian males.

The third hypothesis stated that the type of institution attended would be a statistically significant predictor of successful completion of a post-secondary degree for both African-American and Caucasian males. Moreover, a student attending a private institution would be more likely to graduate. For African American males, the type of institution was not statistically significant; however, this predictor was significant for Caucasian males. Attending an independent/private institution was a statistically significant category when compared to four-year institutions. Moreover, Caucasian males who attended an independent/private institution were 12.5 times more likely to graduate.

The fourth hypothesis stated that there would not be a statistically significant relationship between the net price, enrollment size, and the successful completion of a post-secondary degree or certificate for African American males. Both predictors were not statistically significant. Moreover, this occurrence was the same for Caucasian males.

The last hypothesis stated that race would be a statistically significant predictor of successful completion of a post-secondary degree in the combined sample. Specifically, Caucasian males would be more likely to graduate than African American males. Whereas Caucasian males were almost 1.5 times more likely to graduate than African American males, race was not a statistically significant predictor of obtaining a post-secondary degree or certificate mainly because high school grade point average was a single, string predictor.
Summary

The differences revealed in the descriptive analyses showed that African American males are living and achieving at a subpar level compared to Caucasian males. High school grade point average was statistically significant for both groups. However, the institutional type was statistically significant for Caucasian males especially attending a private/independent institution of higher education. In the next chapter, ways to use the results to implement change will be discussed.
Chapter 5 Discussion of Findings and Implications

In this chapter, an overview of the findings is discussed. The purpose, methodology, and findings of the study are reviewed. Authentic Leadership is introduced and the findings are interpreted through the lens of this leadership theory. Further discussion highlights the significance of the study. This chapter ends with the implications, delimitations, limitations, and future directions of the study.

Introduction

The purpose of this study was to identify factors that contribute to the successful completion of a program of study at an institution of higher education by African American males in the state of Arkansas. Employing descriptive and hierarchical logistic regression analyses, the factors that were statistically significant emerged. For African American males, high school grade point average was the only statistically significant factor. For Caucasian males, high school grade point average and institutional type were the statistically significant factors. The subsequent result proved to be the same for the combined sample with race not being a statistically significant factor. African American males had lower high school grade point averages, lower ACT scores, more occurrences of free lunches, and attendance at smaller institutions of higher education. The previous differences were statistically significant. These findings are discussed thoroughly through the lens of authentic leadership. Specifically, Robert Terry’s approach is incorporated.

Authentic Leadership

Terry’s approach centers on two questions: (1) What is occurring, (2) What are we going to do about it? The Action Wheel (Terry, 1993) identifies what is occurring.
Moreover, it helps formulate and understand the key issues. Implementing the model involves a leader who first determines the location of the problem within the six categorical features of the Action Wheel. These six features are labeled: meaning, mission, power, structure, resources, and existence. Even though the problem is identified as fitting within one of the features, every feature is integrated in the analysis.

Terry (1993) summarizes the components of the Action Wheel:

Meaning legitimates and orients missions. It provides the cultural justification of actions. Missions, be they small or large, direct and focus power. The value of a mission is judged by the significance of its related meaning. Power, quickened by mission, energizes and modifies structures. Structures sustain power, generate new ideas, and press missions forward. Resources equip structures and come from what is actually or potentially available in existence. Existence both limits resources and makes them possible. Meaning and existence touch on the wheel. Each informs the other (pp. 83-84).

Using the findings of this study, the location of the problem will be identified to determine the preferred course of actions to help African American males complete their programs of study at institutions of higher education in Arkansas. To ensure that what is being addressed is accurate, the model shows the way to navigate through the six features. Navigation involves a clockwise relationship. When mission is found to be the problematic area, then meaning needs to be addressed. When meaning is found to be the problematic area, then existence needs to be address, and so forth (see Appendix A). The authenticity lies in the revelation that the real problem is being addressed while not entertaining a pseudo-problem resulting in arriving at a bona fide solution. The findings
of the study should identify the location to start and then build towards authentic-focused solutions to help African American males complete their programs of study at institutions of higher education in the state of Arkansas.

**Discussion of Findings**

African American males had significantly lower high school grade point averages, lower ACT scores, lower socioeconomic statuses, higher occurrences of out-of-school suspensions, and attendance at institutions with lower enrollment. High school grade point averages and ACT scores are the two most important requirements to admission into an institution of higher education. High school grade point average was the only significant predictor for African American males to obtain a postsecondary degree or certificate. When considering the factors that may affect one’s high school grade point average, an assortment of resources or the lack of them are influential.

African Americans are more prone to live in impoverished areas (Alexander, 2010; Digest of Education Statistics, 2015a; Hughes, Stenhjem, & Newkirk, 2007). In these areas, schools may not only have certified teachers but may not offer Advanced Placement courses as well. Taking Advancement Placement courses improves students’ chances of attending and graduating from an institution of higher education (Godfrey et al., 2014). These underprivileged areas are characterized with not having highly qualified teachers who are certified in “Science, Technology, Engineering, and Mathematics” (STEM) courses.

This phenomenon has an effect on the ACT scores of these students. High school grade point average and ACT score, $r = 0.52$, $p < .001$, moderately correlated for African American males and were statistically significant. For Caucasian males, the previous
correlation was also significant. However, the correlation of high school grade point average and ACT score, $r = 0.59$, $p < .001$ was stronger. This difference illustrates that African American males did not score as well as Caucasian males on the ACT when considering high school grade point average. In other words, African American males were worse than Caucasian males in scoring their potential on the American College Test based on their high school grade point average. The argument can be made that if African American males had more access to resources, these students’ high school grade point averages and ACT scores would be higher.

Having higher ACT scores and high school grade point averages increases the likelihood of one attending an independent/private institution of higher education than attending a two-year or four-year public institution (Titus, 2006). In the combined sample, males that attended this type of institution were almost five times more likely to graduate than attending a four-year institution. The same characteristics that enable students to receive merit scholarships also enable students to be accepted into independent/private institutions (Brown, 2007).

According to Terry’s Action Wheel (Appendix A), structures need to be addressed when resources are identified as the problematic issue. Terry (1993) states that “structure funnels power and/or distributes resources” (p. 74). State governmental officials such as the governor and legislators form structures for P-12 education by creating and passing laws. Government agencies such as the Arkansas Department of Education use these laws to build the structures within the four walls of P-12 education. From the results of this study, new structures are drastically needed to improve the current state of African American males in Arkansas.
Implications

Being African American alone was not statistically significant in completing a post-secondary degree or certificate. However, individuals who have the “characteristics” of African American males in this study would be less likely to graduate than individuals who have “characteristics” of the Caucasian males. Creating structures that allow African American males to receive resources is vital. All stakeholders must come to the table to brainstorm ways to effectively design these new structures.

Delimitations

From past research and findings, it has been established African American males had the lowest completion rates in college. In addition, this subpopulation tended to have the lowest high school grade point averages, ACT scores, and socioeconomic statuses and the highest occurrences of disciplinary infractions. Therefore, this subpopulation was the focus of this study.

Usually when analyzing college graduation rates, a period of six years is given for students to complete college. In this study, it was important for an appropriate amount of time to be designated for subjects to graduate from college. Therefore, this study examined students over a period of seven years.

Lastly, the sample was limited to Caucasian males and African American males attending traditional, public and private, and 2-year and 4-year institutions of higher education. Students attending institutions of higher education predominately offering cosmetology programs, for-profit institutions, or institutions originated outside of Arkansas were excluded. Students attending these institutions were not eligible for state
financial aid programs such as Arkansas Challenge and Governor’s Scholarship that affected the variable of net price in this study.

Limitations

The raw data do not track whether a student left one institution and graduated from another. Seemingly, not having the ability to track this phenomenon may have skewed results and/or not given a complete picture of the current happenings. The number of days suspended could only be tracked within the 12th grade. The ability to observe this trend over a span of years to discern its effect on African American males was definitely limited.

Future Directions

In some research, success for a two-year institution included students transferring to a four-year institution (Porchea et al., 2010; Radunzel & Noble, 2012a). Due to the raw data in this study, researchers conducting future studies may want to request additional data that track students transferring from two-year institutions to four-year institutions. In this study, students attending two-year institutions were the least successful in obtaining a post-secondary degree or certificate.

Asking entities that collect these types of data to track out-of-school suspensions throughout the secondary years of schooling would definitely help provide a complete picture of the effect on African American males. With the aforementioned suggestions, repeating this study after new structures have been implemented will reveal if African American males have improved in Arkansas.

Conclusions
The reasons accounting for the prosperity of African American males as well as Caucasian males continue to be a controversial topic in conversations and debates. High school grade point average was determined to be the only significant factor for African American males. However, the influence of high school grade point average begins during the elementary school years. From this study, the results inform readers that the experiences in school from Kindergarten to 12th grade strongly impacts the chances that an African American male graduates from an institution of higher education. All stakeholders from teacher candidates to state legislators need to be cognitive of this fact. Continuing to approach this dilemma in the same way will not lead to increasing the number of African American males obtaining post-secondary degrees or certificates.
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Appendix A

Action Wheel