REDEFINING THE COLLEGE PERSONA: AN EXAMINATION OF NONCOGNITIVE PERSONALITY ATTRIBUTES THAT INFLUENCE COLLEGE PERSISTENCE IN HIGH-ACHIEVING AFRICAN AMERICAN STUDENTS

A Dissertation

by

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ABSTRACT

Much has been written about the college persistence process. Even so, increasing college persistence among commonly underrepresented racial groups has not been easy. To address this challenge, education researchers have collaborated with professionals in sociology, psychology, and economics, in the hope of gaining insight into the complexities of college persistence for these groups. This research is an extension of that work. In this mixed-methods study, noncognitive personality attributes—grit and conscientiousness—were examined as they relate to college persistence in high-achieving African American students.

The purpose of this study was to determine whether grit and/or conscientiousness predicted college persistence (as measured by grade point average [GPA]) by high-achieving African American students and whether these traits were influenced by racial identity and racialized campus experiences. The results were twofold. Quantitatively, both grit and conscientiousness were predictive of college persistence in high-achieving African American students. Grit was predictive of college persistence (GPA) at the commitment indicator level, r^2 =.080, $F(1, 2{,}248) = 14.441$, $p < .001$ ($\beta = .080$). One facet of conscientiousness (reliability/responsibility) was predictive, $r^2 = .076$, $F(1, 2{,}267) = 13.231$, $p < .0001$ ($\beta = .076$). Both noncognitive variables were linearly correlated to racial identity (measured by a private and public collective racial esteem scale and identity salience) and racialized campus experiences (measured by a sense of

belonging and nondiscriminatory climate). Qualitative data explained how race-related experiences and identity affected student use of each noncognitive variable.

The alignment of quantitative and qualitative results provides multiple implications for policymakers, researchers, and educators with regard to strengthening college persistence efforts.

Increasing the number of African Americans who complete college is important for the future of the American economy. High-achieving African American students use noncognitive personality attributes in the college completion journey in a very racially nuanced way. Universities that wish to see more African Americans graduate should recognize how these skills function and intentionally nurture their growth so that both grit and conscientiousness can thrive because of the environment, not in spite of it.

DEDICATION

This study is dedicated to my immediate and extended family who have gone before me in accomplishing the admirable, and to the immediate and extended family who will come after me to accomplish even more than what has been done already.

I could not live without the tireless love and support from my husband, Daix D. Anderson, CPA. He is my rock and I will always be grateful for him. My daughter, Sienna B. Anderson, is so much smarter and more gifted than Mommy. She will do beyond what I could ever do. I thank them both for believing in me, looking past my flaws, and pushing me to be my best self. I dedicate this degree to my father, Dr. Osmond A. Lindo, Sr.; to my older brother, Dr. Osmond A. Lindo, Jr.; and to my sister-in laws Dr. Endia Lindo and Dr. Felise Anderson, because each has set the path to encourage me to do gain the doctorate. My mother, Miriam A. Lindo, sacrificed the world to make me who I am today and showed me how, by example, that it was possible to pursue an educational dream, work, and raise a family at the same time. My little brother, John A. Lindo, MS, loved me unconditionally and never failed to tell me that he was proud of me. My Aunt Cathy Anderson stood in my corner and went out of her way to help me find qualitative participants. My mother-in-law, Bonnie Anderson, and my father-in-law, Leslie Anderson, gave unconditional love and acceptance. My brilliant nieces, Milan and Autumn, bring me such joy. I will never be able to fully express my gratitude for what each of these people means to me and for what they have done for me in this process. Without God and them, I would not be here. I love them all endlessly. To God be the Glory for the great things He has done!

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NOMENCLATURE

BIC	Behavioral Indicators of Conscientiousness
GPA	Grade Point Average
HBCU	Historically Black College/University
IQ	Intelligence Quotient
MSL	Multi-Institutional Study of Leadership
MRA	Multiple Regression Analysis
PWI	Predominately White Institution
SAT	Scholastic Achievement Test
SES	Social Economic Status
SPSS	Statistical Package for Social Sciences

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CHAPTER I

INTRODUCTION

Background of the Study

The challenges stemming from income and wealth disparities facing the African American community are alarming. Shocking statistics lay bare the significant wealth gap between African Americans and others in the United States. Jones, Schmitt and Wilson (2018) reported, for example, that the median net wealth of White Americans in 2016 was 10.2 times greater than that of African Americans. The median wealth of African American households was just $17,409, while for White households it was $171,000 (Jones et al., 2018). African Americans' median adjusted household income, as reported in the 2017 Aspen Institute's Economic Security Summit Report, was $38,555, compared to Latinos at $46,882, Whites at $61,346, and Asians at $80,710. The report also indicated that 10% of African Americans lived in poverty, compared to just 3.6% of Asians. The National Equity Atlas (2015) reported that a staggering 22% of African Americans were part of the working poor, meaning that, although they worked full time, their income was insufficient for a reasonable lifestyle. African Americans and Hispanics were more than twice as likely as Whites to be poor (Cohn & Caumont, 2016).

There are many reasons for the state of the African American community, much of it owing to racism. As Blackwell, Kramer, Vaidyanathan, Iyer, and Kirschenbaum (2017) stated, "In the U.S., racial inequity is largely perpetuated by structural racism. Structural racism refers to historical and ongoing political, cultural, social and economic policies and practices that systematically disadvantage people of color" (para. 10).

Despite this unfortunate sociocultural context, there are opportunities that, if maximized, can help to alter the current state. Increasing the college completion rates in the African American community is one such opportunity.

> Whatever the reasons for the continuing economic disparities between the races, it is certain that a college education, more than any other factor, serves to break down racial stereotypes, increase opportunities for African Americans, and decrease the economic gap between blacks and whites. ("African American Women," 2008, p. 17)

A college degree is an important lever that can produce greater financial security for families. A college degree might play a part in reducing unemployment and generational slide, allowing many African Americans to experience greater financial stability, as well. The U.S. Census Bureau predicted in 2016 that, by 2043, people of color will make up the majority of America, with African Americans comprising 15% of the population (Cohn & Caumont, 2016). Without a significant change, the financial stability and security of African American remain perilous. Their peril is America's peril (National Equity Atlas, 2015).

Inconsistent Correlation

The positive correlation between college completion and economic advancement is generally accepted as fact (Becker, 1994; Cohn & Caumont, 2016; Farrington et al., 2012). Even in the face of discrimination in the labor market, this truism works for many African Americans as well. The median earnings for African American females with a bachelor's degree in 2015 was $41,200, compared to $25,400 for the African American

female with only a high school diploma. Even the African American female with an Associate degree earned on average $6,000 more than the African American female with only a high school diploma. For African American males, this association is slightly more robust, with bachelor's degree holders earning on average $48,500, versus the African American male with just a high school diploma earning on average $27,800 (Ma, Pender, & Welch, 2016). Although significant inequities exist in wages by race and gender, across similar levels of educational attainment (for example, African American two-parent households where each parent holds a bachelor's degree make about $82,000 annually, compared to White households that earn $106,000), the correlation between higher levels of education attainment and higher life earnings holds strong (Cohn & Caumont, 2016).

Researchers and public officials alike have struggled to confirm a correlation between college and income as normative in the African American community. The income data for African Americans with college versus those without implies a straightforward solution: More African American high school students should go to college. However, the problem is less about getting more African Americans to go to college; over time, levels of enrollment have gone up. Rather, the challenge is that not enough are *persisting* through college to graduation. College completion has eluded many African Americans, including those in the fragile middle class (Lacy, 2007; Pattillo, 2013; Pattillo-McCoy, 1999).

According to the *Journal of Blacks in Higher Education* (JBHE; "African American Women," 2008), "Nationwide, the black student graduation rate remains at a

dismally low 42 percent [6-year graduation rate]. But the rate has improved by three percentage points over the past two years" (para 2). The 4-year graduation rate was 21% in 2012. In 2017, The U.S. Department of Education reported college enrollment rates for African Americans to be 35% or 2.4 million students, which was up 57% from 1.5 million in 2000 (Musu-Gillette et al., 2017).

Increasing college persistence rates, thereby growing the numbers of those who have degrees in the African American community, could improve income levels for many African American families. This, in turn, would affect financial security. Increasing college persistence might also halt the slippage of wealth from those African American families who have already acquired some. Low college enrollment rates and low college graduation rates for African Americans are accompanied by shockingly high rates of generational slide among middle- and upper-class African Americans. Long, Kelly, and Gamoran (2012) suggested that 45% of the children of middle-class African Americans fall out of that social standing from one generation to the next, compared to 16% of Whites. Fifteen years later, not much has changed. Chetty, Hendren, Jones, and Porter (2018) stated,

> Among children with parents in the bottom [income] quintile, 10.6% of white children rise up to the top quintile, but only 2.5% of black children do. Among children with parents in the top quintile, 41.1% of white children remain in the top quintile, compared with 18% of black children. Perhaps most strikingly, black children starting from families in the top quintile have nearly the same

> chances of falling to the bottom income quintile (16.7%) as they do of staying in the top quintile. (p. 18)

A Brookings Institution report, "Economic Mobility of Black and White Families," echoed this description of economic conditions facing African Americans.

> A majority of blacks born to middle income parents grow up to have less income than their parents. Only 31% of black children born to parents in the middle of the income distribution have family income greater than their parents, compared to 68% of white children from the same income bracket. . . . Almost half (45%) of black children whose parents were solidly middle class end up falling to the bottom of the income distribution. (Isaacs, 2007, p. 2)

Long-Term Vulnerabilities

These troubling reports, which reveal the enormity of the generational slide among economically middle- and upper-class African Americans are (again) attributed primarily to racism, according to Chetty et al. (2018). However, racism, coupled with the lack of a college degree and its potential advantages, has left many African Americans facing a daunting economic prognosis. For degreeless African Americans, especially those in the poor or working class, the prospect of a better life is particularly dismal as they are often relegated to low-wage/low-status jobs. The common assumption that life circumstances get better from one generation to the next is not necessarily a truism for many African American families because, in the face of racism without a college degree, they are much more vulnerable than their peers to devastating social injustices, including high incarceration rates, premature childbirth deaths, and swings in the nation's

economic and labor markets (Brand & Xie, 2010; Kahn, 2018; Lacy, 2007; Villarosa, 2018).

> As governments contemplate additional layoffs, it is important to note that few commentators have examined the racial implications of this reduction in government employment. . . . The public sector is the single most important source of employment for African Americans. During 2008-2010, 21% of all Black workers are public employees, compared with 16.3% of non-Black workers. Both before and after the onset of the Great Recession, African Americans were 30% more likely than other workers to be employed in the public sector. (Pitts, 2011, pp. 1-2)

College completion does not fix issues of racism and social injustice but it can strengthen the opportunity to pursue higher-income career pathways. Therefore, finding ways to increase college persistence among African Americans, such that completion rates increase noticeably, has potential for tangible benefits. Researchers (Cabrera & La Nasa, 2001; Melguizo, 2011; Perna, 2006; Roderick, Coca, & Nagaoka, 2011) who have investigated ways to increase the number of African American college attendees often point to the students' family background, motivation levels, or pitiable high school preparation. Some have advocated programs to address parenting deficits, bolster the use of school counselors, provide college resource centers, and develop stronger teachers to support the precollege preparation process. Policymakers have fluctuated between fights to revive fledging affirmative action programs on one hand (Harris, 2010) and improve high school academic experiences on the other (Roderick et al., 2011). It is clear, from

the amount of research (Harper, Smith & Davis, 2018) on underrepresented ethnic groups and college, that a plethora of variables affect the challenge of increasing college persistence and completion.

Existing research has given rise to questions about how best to increase college persistence by African American students. It is not clear that a comprehensive blueprint for college persistence in the African American community, or among any underrepresented group for that matter, exists anywhere. Indeed, there is little agreement as to why there are not more graduates and whether current interventions to overcome this challenge should be applied primarily to the individual or to the institution. Perhaps this is because, as the college literature often reflects, researchers have worked largely from a social and/or cultural capital deficit perspective (Strayhorn, 2010; Valencia, 2010). Or, perhaps it is because there is a dearth of theoretical models to address the complexity of the challenge in light of the unique racialized experiences that African American students face (Farrington et al., 2012; Harper et al., 2018; Rodgers & Summers, 2008). I hope that this study will aid researchers, practitioners, and policymakers to advance the complicated work of college persistence among African American students.

I studied the concept of college persistence using high-achieving African American college students as the core sample from which to learn. Focusing on an area that is receiving a growing amount of attention (Melguizo, 2010), I examined the noncognitive personality attributes, grit, and conscientiousness in this population of students and hypothesized that both factors exert a positive impact on college persistence

in a distinctly racialized manner. With this mixed-methods examination, I hoped to contribute to the body of literature by demonstrating how researchers and policymakers could leverage noncognitive personality attributes to support the African American college persistence process.

Statement of the Problem

Higher education practitioners and researchers have struggled to increase the percentage of African American students who persist through college. Unfortunately, these low levels of persistence, which have led to modest college completion rates, restrict lifetime career and income opportunities for the majority of African Americans and are partly to blame for some of the financial instability and insecurity that many in the community experience. Only 23.92% of African Americans have a college degree (U.S. Census Bureau, 2018). There are a number of reasons for this. First, although college enrollment rates have increased steadily since 2000, there are still not enough African American students going to college immediately after high school. Second, large portions of those who enter college do so with weighty risk factors, such as being a first-generation student, attending a less-selective institution that is unable to support their needs, and being from a low socioeconomic (SES) background (Perna, 2006). Third, once in college, many complex issues such as racism or stereotype threat (Steele & Aronson, 1995) have stymied the matriculation efforts of African American students, resulting in a large gap between college student enrollment and completion.

The news about African Americans and college enrollment is mixed at best. Since 2015, college graduation has increased slightly but the already low college

enrollment rate among African Americans has barely changed. According to the U.S. Census Bureau (2018), 22.92% of African Americans in the nation had a bachelor's degree and 1.9 million, or nearly 4%, had advanced degrees. However, these positive data are tempered by harsh realities. African Americans have the lowest matriculation and graduation rates of all ethnic groups. According to the National Center for Education Statistics (NCES; 2018), the percentage of recent high school African American graduates enrolled in a 2-year or 4-year college was 56.7% in 2016 and 56.0% in 2000. For Whites, the percentage of enrollment after high school was 71% in 2016, increasing from 65% in 2000. For Latinx students, the percentage of enrollment after high school was 71% in 2016, versus 49% in 2000. For Asians, the percentage of enrollment after high school was 87% in 2016, versus 74% in 2003. Relatively little change in college enrollment has occurred for African Americans in 16 years (NCES, 2018).

The number of African Americans enrolling in (and completing) college within 6 years is problematic. African Americans, when compared with other ethnic groups, are more likely to be first-generation and low-SES college attendees, both high risk indicators associated with academic failure (Perna, 2006). Those whose families are new to the college experience are more likely to be concentrated at community colleges and less-selective institutions; selectivity matters (Perna, 2006; Yamaguchi, 2009). Melguizo (2010) demonstrated that the selectivity of the college institution makes a difference in college graduation rates. Other researchers have revealed that attending community colleges rarely leads to the completion of a bachelor's degree because of the "cooling off effect" (Alexander, Bozick, & Entwisle, 2008). The "cooling off effect" or the slowing

of progress toward degree completion occurs for two reasons. First, family and general life responsibilities take priority over studies. Second, the number of remedial courses needed before making actual progress toward a degree dampens advancement. Less than one third of all students who study at a community college complete an Associate college degree within 3 years (NCES, 2017).

Third, in the same manner, college type and selectivity have been found to affect African Americans and college completion, as does low SES. Very low college enrollment and completion rates plague low-SES students. More of the middle class or those with higher SES attend college than poor or low-SES individuals (Cabrera & La Nasa, 2001; Perna, 2006, Yamaguchi, 2009). In 2015, NCES reported that 82% of high-income students enrolled in college versus 52% of low-income students. Social economic background has been shown to influence college enrollment. Although the college enrollment rates of African American men lag behind those of African American females, one study indicated that current African American male freshmen came from more affluent backgrounds than previously (Griffin, Jayakumar, Jones, & Allen, 2010). Griffin et al. (2010) stated that fewer low-income African Americans students coming from poorly resourced schools entering college in 2010 than in 1990. With fewer low-SES students going to and through college, breaking the cycle of poverty becomes daunting.

It has been demonstrated that increasing the number of African Americans with college degrees is a multifaceted challenge. There are simply not enough African Americans attending college immediately after high school for many reasons, the least of

which is that a disproportionate number of African Americans face high risk factors, making enrolling, persisting, and completing college difficult. Underscoring the challenges is that the scarcity of asset-based research that clearly directs practitioners toward promising solutions has made progress slow.

The research on African American college attainment, part of the expansive body of literature on African American student achievement, is not encouraging. Overwhelmingly, researchers have relied on deficit-based explanations, such as a lack of social or cultural capital, to understand the nature of these complex issues (Harper et al., 2018). Since there is a sense that African American students are themselves to blame, innovative policy solutions and interventions have remained elusive. In this research, I have adopted a different stance, because most African Americans understand the value of a college education and desire it (Dyce, Albold, & Long, 2013; Dyson, 2005). This is not surprising, as it is a familiar message in the African American community heard from parents, church leaders, and civic leaders alike (Dyson, 2005). One straightforward and optimistic approach for moving the research conversation away from what is not working with the African American college student to what is working with how some African American students persist through college is to learn directly from those who are finding success. In this manner, I chose to employ a mixed methodology to focus on two noncognitive personality attributes—grit and conscientiousness—and how they support high-achieving African American students' college process. I argue throughout this dissertation that African American students have grit and conscientiousness—

noncognitive personality attributes linked to student achievement that, if understood through the lens of race, could be leveraged to support college persistence.

First, one must understand why the deficit approach has caused confusion and limitations in addressing college persistence by African American students. A multitude of contradictory deficit research perspectives exists about why African American students are not graduating from college at robust rates. Most of it is quite dispiriting. The results of this research seemingly fall into three categories: (a) something is wrong with the African American student or his/her family background, (b) something is wrong with the high school preparation that most African American students received, and/or (c) something is wrong with governmental practices that fail to address discrimination, thereby allowing poor secondary schools to exist and biased college admissions processes to thrive. All three explanations are bound by the idea that the African American student is impotent to control his fate.

To be fair, research that has underscored the inequitable school systems or admissions policies to which many African American students are subjected is often accurate and has its place. Some of this research has proven useful for exposing negative education cycles that African American students confront.

Carpenter and Ramirez (2012) conducted such a useful study. They asserted that comparing college enrollment across races was not helpful because, as they demonstrated, race was not a significant predictor of college enrollment. They stated that looking at differences within a race for what predicts college enrollment was more valuable than looking at differences across races. They concluded that for African

Americans, categorized by SES, differences in college enrollment were influenced by whether the child had been retained or subjected to numerous suspensions during the high school years, had taken college preparatory tests such as the SAT, and had had the presence of someone (parent, counselor, friend, coach) who desired college for that student. Unlike the research conducted by Carpenter and Ramirez (2012), many studies have only highlighted the problem. Clear, decisive solutions have not always been given because the problem is thought to be with the students themselves.

Researchers who have concentrated on deficiencies in African American students and their families have written on issues of underachievement. That research, which focused on agency, has often led to the conclusion that African American students are missing capital of some sort—discipline, parenting, culture, and/or personal networks—that are necessary to transcend to a better station in life. Some researchers have even given credence to the notion of a "Black community culture of underachievement" (Rothstein, 2004, p. 1). For these researchers, even "middle-class African Americans behave more poorly and study less than White middle-class students and asking schools to close the achievement gap will not fix this issue of agency" (Rothstein, 2004, p. 1). Research explanations that disparage an entire community based on race have not been productive in generating solutions to the college persistence challenge.

Considering noncognitive personality attributes that successful African American students have brought to the college persistence process could prove productive. Given that the range of noncognitive personality attributes to consider is broad (Bowman, Miller, Woosley, Maxwell, & Kolze, 2018), this study focused specifically on grit and

conscientiousness in high-achieving African American students. Extensive research has been conducted on the noncognitive personality attribute conscientiousness and its long-established link to academic achievement (Costa, McCrae, & Dye, 1991; Roberts et al., 2014; Sanchez-Ruiz, El Khoury, Saadé, & Salkhanian, 2016). Some of this research (e.g., Lundberg, 2013) has suggested that a good part of the African American college population does not benefit from this attribute. This notion is challenged in the current study. To a lesser extent, some research has focused on grit and academic achievement; however, the findings are contradictory. While there are studies that have described how effectively grit and conscientiousness predict academic achievement, akin to cognitive attributes such as intelligence (Heckman & Kautz, 2013; Lundberg, 2013), there is little empirical research focused on how they support high-achieving African American students (Strayhorn, 2014). Exploring these noncognitive attributes, particularly from a racialized perspective, may be valuable for higher education administrators and policymakers alike as they develop programs and interventions that increase college persistence for this population.

In this study, the benefits and drawbacks of college persistence literature with regard to African American students are presented from multiple perspectives: social, cultural, and human capital. This examination eventually emphasized the advantage of the human capital perspective, particularly with its contribution of the noncognitive attribute concept influenced by the field of psychology. Research on noncognitive attributes and college is presented. This is followed by a focus on the variable constructs measured: grit, conscientiousness, racial identity as measured through both the private

collective racial esteem scale and public collective racial esteem scale, college racialized environment as measured by a sense of belonging, and campus discrimination. These variables were assessed from both quantitative and qualitative angles and examined sequentially, using the noncognitive factors conceptual framework and the psychological model of college student retention, modified for African American students.

One of the most significant ways to increase the size of the African American middle class is to increase the number of African Americans with college degrees. However, the benefits of higher education are far more than financial. A college education is positively associated with better health decisions, stronger levels of civic engagement such as voting, and lower levels of unemployment and reliance on public assistance. (Ma et al., 2016). Because of the strong potential to the individual and community of having more African American students complete college, an asset-based research agenda that identifies factors that support college persistence for African American students is worth pursuing.

Purpose of the Study

It is increasingly important for researchers to find solutions for supporting African American students who are attending college and helping them to graduate within 4 years. Therefore, the primary purpose of this study was to analyze two noncognitive personality attributes—grit and conscientiousness—and their impact on college persistence for high-achieving African Americans. Through a quantitative evaluation, I sought to determine whether there was a predictive relationship between these attributes and college persistence (as measured by grade point average; GPA).

A secondary purpose of this study was to learn from 12 high-achieving African American students how grit and conscientiousness were expressed in the college persistence process directly. A sequential examination between the quantitative research data findings and the qualitative perceptions of current African American students offered insight into how these two personality traits have been used by students to increase momentum toward graduation.

Data collected from this study provided evidence as to whether racial identity and a racialized college environment (as exhibited by a sense of belonging and experiences of discrimination) of high-achieving college students influenced grit and/or conscientiousness. Ultimately, the juxtaposition of research next to quantitative data and student experience data should have policy implications for higher education leaders on what works and does not work in increasing African American college persistence.

Significance of the Study

The significance of this study is fundamental, as it contributes asset-based insights into how to increase college persistence using a very specific student population, high-achieving African American students. Research exists regarding the college attainment process by African American students and other traditionally underrepresented groups, such as low-income, first-generation, or immigrant college attendees (Perna, 2006). Many researchers have examined the problem that these students face at each phase of the college attainment process, including college choice, enrollment, persistence, and completion, based on race and/or class and have found these students wanting (Dyce et al., 2013; Smit, 2012; Strayhorn, 2010). Much of this research

has been done through a deficit-based viewpoint, which defaults into attempting to understand what about the African American collegian is leading to failure and what can be changed about their personhood and/or cultural environment. This type of research focus has not been useful.

> The dominant thinking in higher education attempts to understand student difficulty by framing students and their families of origin as lacking some of the academic and cultural resources necessary to succeed in what is presumed to be a fair and open society. This constitutes a deficit-thinking model: it focuses on the inadequacies of the student, and "fixing" this problem. In the process the impact of structural issues is often ignored or minimized. Employing a deficit mindset to frame student difficulties acts to perpetuate stereotypes, alienate students from higher education and disregards the role of higher education in the barriers to student success. In the process universities replicate the educational stratification of societies. (Smit, 2012, p. 370)

According to Smit (2012), the deficit model has minimized the responsibility of higher education administrators to find ways to support African American college students because it places blame on those students for presumed inadequacies. In short, deficit-based researchers and practitioners have struggled, citing cultural or academic reasons, to believe that many African Americans have the fortitude to get through college. For these researchers, it has become easy to conclude that many African Americans are not the right type of student for college (Lundberg, 2013). The findings in

this study led to the conclusion that African American students are the right type of college student when the conception of the "right type" is broadened to include them.

Another reason for the significance of this research was the importance of hearing directly from successful African American students who understand and can articulate how they have been navigating college successfully. Researchers Dyce et al. (2013), studying precollege preparation programs and parent support, reflected on the value of substantiating their findings with a qualitative perspective. In their study they surveyed 76 students and 75 parents who had participated in a precollege preparation program. They asked questions of the parents and students about the family's aspirations for college and confidence levels for pursuing those aspirations (e.g., completing financial forms, knowing what steps were necessary for entrance to college). They found that students and parents were extremely confident about making a commitment to attend college but were far less confident regarding the details for making college a reality. They acknowledged that "follow-up studies should incorporate qualitative methodologies such as interviews and focus groups, which would provide an opportunity to examine parents' strong but nuanced college aspiration efficacy beliefs" (Dyce et al., 2013, p. 162). The researchers pondered the accuracy of their data, recognizing that, without being directly asked, parents may have felt the need to give a socially desirable response. After all, they were participating in a college preparatory program.

The current study avoids the limitations that Dyce et al. (2013) acknowledged because it provided clarification of the quantitative findings through the voices of students. Insights were gained from listening to their matriculation experiences and

strategies as they described how they utilized grit and conscientiousness to persist through college. The results may more holistically support the dialogue about intervention programs that leverage the grit and conscientiousness that most African American students naturally possess.

This study is important because it examines the relationship between grit and/or conscientiousness and race. It is evident that the potential impact of grit and conscientiousness cannot be overlooked when striving for solutions to increase college persistence; however, understanding these constructs was arguably more useful through the lens of race.

> Although a body of knowledge has accumulated on the effects of race at other points in the educational pipeline, scholars have not focused enough attention on the effects of race on college students at the undergraduate and graduate levels. Prior studies tend to combine all non-white students as if they represent a monolithic group whose members are more similar than different. . . . [Future] researchers should continue analyzing each group separately. (Strayhorn, 2010, p. 323)

This study may contribute valuable directional insight to policymakers who seek to narrow the conversation regarding increasing African American college persistence to what really works from the broad spectrum of what could work, simply by understanding how race influences the process.

Definition of Terms

This study was conducted to analyze two noncognitive personality attributes that have demonstrated promise in supporting college persistence. These attributes were juxtaposed with the experiences of a small cohort of high-achieving African American students from distinctive universities to generate understanding of how grit and conscientiousness aid the college going process in a racially nuanced way.

Many familiar terms were used throughout this study. Some of these terms are defined differently in scholarly work than they are in informal conversation. Thus, key concepts are defined here to augment comprehension of the issue and to lay the foundation for policy recommendations given in the conclusion. These key concepts include terms such as *college persistence* and *cultural, social, and human capital.* Another broad term—*high-achieving African Americans*—is defined here to provide a functional definition specific to this study.

Asset-Based Approach

According to the *Merriam-Webster Dictionary* (Merriam-Webster, 2006), an *asset* is an item of value owned. In this study, the term *asset-based approach* refers to treating noncognitive personality traits (grit and conscientiousness) as valuable capital or internal strengths that, in tandem with other indispensable resources such as financial aid and social engagement structures, potentially enhance college persistence. McKnight and Kretzmann (1993) coined the term within a community-rebuilding context. They called it "asset-based community development" (p. 1) and argued that communities high in poverty levels were often characterized by "images of needy and problematic and

deficient neighborhoods populated by needy and problematic and deficient people" (p. 2). They contended that, while there were needs, a more complete version of the truth was that there were also strengths. Ebersöhn and Eloff (2006) extended the concept regarding community assets by stating that it was important to

> focus on the capacities, skills and social resources of people and their communities. This is not to deny that communities have problems and deficiencies, but to start out from what the community has rather than what it does not have. (p. 462)

Celedon-Pattichis et al. (2018) applied an asset-based approach to teaching mathematics. Borrowing from Civil (2017), they stated, "An asset-based approach is grounded in the belief that students', families', and communities' ways of knowing, including their language and culture, serve as intellectual resources and contribute greatly to the teaching and learning of high-quality mathematics" (Celedon-Pattichis et al., 2018, p. 375). They encouraged mathematics practitioners (e.g., teachers and curriculum writers) to move away from discourse that created barriers to equitable access and that focused on the failure of students of color to understand or be willing to do mathematics. They called for a focus on the strengths of the culture, language, and community of the students by which to ground the learning (Celedon-Pattichis et al., 2018).

By examining attributes that high-achieving African American students possess, this research demonstrates that there may be an asset-based way to leverage the capacity that African American students have in the college persistence process. Deficit-based

research often allows only for narratives by those who are struggling. This asset-based research approach incorporates the voices of students who have successfully used their personality traits to support their college dream.

College Attainment

Merriam-Webster (2006) defined the word *attain* as to come to as the end of a progression or course of movement. In this study, college attainment refers to students who enrolled, persisted, and completed a college degree. In the college choice literature, phrases such as *persist to graduation* or *college completion* commonly signify college attainment. Melguizo (2010) demonstrated how interchangeable the terms are:

> This article uses a model that extends traditional economic models of college persistence and attainment. . . . In addition the traditional human capital model is expanded by including a set of noncognitive characteristics that are associated with persistence and degree completion. (p. 237)

The college attainment process assumes that a student has enrolled in and attended college.

College Attendance

The term *college attendance* refers to the date of a student's enrollment in university until the date of leaving, either by dropping out or graduating (Adelman, 2006).

College Persistence

In the literature, the term *college persistence* is defined myriad ways. Hossler, Ziskin, Gross, Kim, and Cekic (2009) stated that the term can refer to "year to year

enrollment," "first-to-second year reenrollment," "within-year persistence," "transfer, return and reenrollment" and "ultimately graduation" (p. 395).

College persistence refers to uninterrupted matriculation in college courses past the first years of college, according to Adelman (2006). He preferred to look at indicators of college persistence only at the end of the second year of matriculation. He provided a technical definition of persistence.

> The definition of "persistence" is active and student-centered, marks a calendar academic year as July 1 through the following June 30, and runs as follows: Whenever the student first enrolls and earns credit in postsecondary education (summer, fall, winter, spring) marks the first academic calendar year of their postsecondary history. If the student enrolls and earns credits at any time and at any institution during the next academic calendar year, that student has "persisted. (Adelman, 2006, p. 56)

This study approached college persistence as continuous enrollment once college attendance (enrollment) had begun. However, most of the study participants were not freshman. In the quantitative portion of the data, 76% of the participants were in their sophomore year or higher, as were 92% in the qualitative portion.

College Persona

In "The College Type: Personality and Educational Inequality" Lundberg (2013) explained, "If individuals from advantaged and disadvantaged backgrounds experience different payoffs to persistence or to sociability, then the set of traits that defines the 'college type' may differ by socioeconomic status as well" (p. 1). She concluded that

African American men and lower-SES African American women do not possess the conscientiousness attribute, a trait that is most closely linked with academic achievement (Lundberg, 2013). In this dissertation, I refute the argument that there is a specific college type definable by race and SES. I argue that noncognitive personality attributes, such as grit and/or conscientiousness, are part of the successful college student's character or persona. I further assert that, if these attributes are understood in a racially nuanced manner, they could be used to support persistence by African American collegians.

Merriam-Webster (2006) defined *persona* as a character assumed by an author or the personality that a person projects in public. I apply the term to refer to the personality in the successful, high-achieving African American college participants of this study. The phrase *redefining the college persona* is an attempt to be more inclusive and equitable in the discourse regarding the personality type that succeeds in college.

Conscientiousness

Conscientiousness is one of the Big Five personality traits and refers to the tendency to be hard working, goal oriented, and organized (Roberts et al., 2014). The remaining four traits are openness, neuroticism, extroversion, and agreeableness. Of the five major personality traits that are generally agreed on, conscientiousness is most closely and consistently associated with academic achievement in the literature (Costa et al., 1991; Furnham, 2012; Goldberg, 1992; Roberts et al., 2014). Goldberg (1992) is credited with identifying subfacet traits under the category of conscientiousness. He

determined that individuals high in this trait were organized, dependable, practical, thorough, thrifty, cautious, serious, economical, and reliable (Goldberg, 1992).

Cultural Capital

Engberg and Wolniak (2010) observed that "cultural capital represents a range of attributes, such as language skills, cultural knowledge, and other mannerisms that are typically acquired from one's parents, which define and situate one within a particular class status" (p. 134). Often, college researchers have highlighted the absence of cultural capital in students of color. For instance, Wells (2008) studied the impact of social capital, cultural capital, and race and ethnicity on college persistence and concluded that African Americans and Hispanics had low levels of cultural capital.

> African Americans, though lower than Asians and whites for some measure of social and cultural capital, have high average levels of test prep tool usages. . . . These findings mean that not only should students with "low" levels of social and cultural capital- such as students from poor quality high schools or first generation college students—be targeted via rigorous recruitment and retention efforts, but such efforts must continue to recognize the stratifying effect that race and ethnicity may have in the broader degree attainment process. (p. 122)

Deficit Thinking

Valencia and Solórzano (1997) coined the term *deficit thinking* to explain the practice of researchers blaming students, particularly students of color and students of limited economic means, for their failure in school. Smit (2012) stated,

> The dominant thinking in higher education attempts to understand student difficulty by framing students and their families of origin as lacking the academic, cultural and moral resources necessary to succeed in what is presumed to be a fair and open society, and needing support from the dominant society or culture. (p. 2)

Ford, Harris, Tyson, and Trotman (2001) noted, "Deficit perspective regarding cultural diversity keeps educators from recognizing the talents of African American students" (p. 52).

Grit

Grit is defined as "perseverance and passion for long-term goals" (Duckworth, Peterson, Matthews, & Kelly, 2007, p. 1087). The construct has been used in attempts to capture the notion of sustained effort over time for a specific interest. The concept of grit has been linked by Duckworth and Quinn (2009) to the Big Five factor *conscientiousness*. Unlike most of the Big Five personality traits, which are considered relatively stable through a person's lifetime, grit is thought to change with age and is uncorrelated with the intelligence quotient (Duckworth & Quinn, 2009). In this study, the technical definition of grit offered by Duckworth and Quinn. (2009) is used.

High-Achieving African Americans

Merriam-Webster (2006) generally defined *African American* is an American of African and especially of Black African descent. The 2018 U.S. Census glossary (U.S. Census Bureau, 2018) defined an African American as "a person having origins in any of the black racial groups of Africa. It includes people who indicate their race as "black

or African American" or report entries such as African American, Kenyan, Nigerian and Haitian" (p. 79). However, African American students have a more nuanced understanding of what it means to be African American. That perception, according to Nasir, McLaughlin, and Jones (2009), is influenced by school context and achievement level.

> Qualitative findings show that both high-achieving and low-achieving students embraced African American identities, but what differs is what they view those identities as consisting of. Both high-achieving and low-achieving students viewed clothing styles and language patterns to be important for their African American identity. However, while some lower-achieving students define being African American as related to street activity and having a negative relationship with school (consistent with both their local experiences of school and the broader media messages about African Americans), some higher-achieving students viewed their African American identity as incorporating doing well in school and created peer groups that shared and supported this sense of being African American for themselves and one another. Furthermore, these identities were supported in critical ways by the school context that offered different students access to different resources. (Nasir et al., 2009, p. 107)

High-achieving African Americans in this research included any African American student who self-identified as African American or Black and whose origins could be traced to a country in Africa and who had a GPA of at least 3.0 in college, regardless of country of origin.

According to Wyner, Bridgeland, and Dilulio (2007), two fifths of all high-achieving low-income students fail to graduate from college, even though 9 of 10 high-achieving/low-income students go to college. It stands to reason that a significant number of high-achieving African Americans, who are disproportionally represented among low-income students, are not fulfilling their potential.

Human Capital Theory

According to Melguizo (2011), human capital theory applied to education "states that individuals decide whether or not to invest in additional years of education based on an analysis of their perceived cost and benefits" (p. 231). Melguizo included factors such as noncognitive skills, ability, and SES in her research. Dyce et al. (2013) used the following examples of human capital: "parent's occupation, college education, and physical resources such as access to a computer" (p. 157). In this study, human capital theory is considered to be valuable because of its emphasis on the malleable noncognitive traits. The term *human capital* is used primarily to refer to what the literature calls *noncognitive skills* and/or *personality traits* (Heckman & Kautz, 2013). College persistence researchers have presented a distinct look at the aptitudes that collegians possess through application of human capital theory (Melguizo, 2010).

Middle Class

The term *middle class* is used in this study only for financial purposes and not for the system of values and beliefs that is often disguised in the term. The U.S. Census Bureau (n.d.) defined the term as a "term commonly used to identify people who are

neither wealthy nor poor, but are between these groups" (p. 79). As Pattillo (2013) pointed out, this definition is not without flaws, particularly for African Americans.

> "Middle class" is a notoriously elusive category based on a combination of socioeconomic factors (mostly income, occupation and education) and normative judgments (ranging from where people live, to what churches or clubs they belong to, to whether they plant flowers in their gardens). Among African Americans, where there has historically been less income and occupational diversity, the question of middle-class position becomes even more murky. (Pattillo, 2013, pp. 13-14)

Noncognitive Personality Traits

The growing body of research on noncognitive traits, discussed more in Chapter II, has been the result of multidisciplinary efforts by psychologists, education researchers, and economists to identify attributes, other than intelligence, needed for college attainment. Across the disciplines, noncognitive traits have referred to many factors. Khine and Areepattamannil (2016) stated that "grit, tenacity, curiosity, attitudes, self-concept, self-efficacy, anxiety, coping strategies, motivation, perseverance, confidence are among those frequently referred to in the literature" (p. 10). Heckman and Kautz (2013) echoed the sentiment that both the nomenclature and the definition of this concept are varied.

> Throughout this paper we use the term character skills to describe the personal attributes not thought to be measured by IQ tests or achievement tests. These attributes go by many names in the literature, including soft skills, personality

> traits, non-cognitive skills, non-cognitive abilities, character and socio-emotional skills. (p. 10).

Lundberg (2013) and others have recognized that this literature uses personality traits and noncognitive skills almost interchangeably and for a wide range of attributes.

> Economists' concept of productivity-enhancing "skills" has become increasingly multidimensional. A growing body of research shows that individual traits other than cognitive ability, verbal, and math skills are associated with key economic outcomes. The traits studied include perseverance, self-esteem, social competence, and self-control, and they have been given collectively, a variety of labels including noncognitive skills, socioemotional traits, sociobehavioral skills and soft skills. In many cases, these characteristics have been found to be important contributors to achievement gaps. (Lundberg, 2013, p. 427)

Other researchers have preferred to use the term *personality traits* rather than *noncognitive traits*. Borghans, Duckworth, Heckman, and ter Weel (2008) wrote a very thorough treatment in which they examined "the relevance of personality to economics and the relevance of economics to personality psychology" (p. 973). They argued against the use of the term *noncognitive traits*:

> We eschew the term "noncognitive" to describe personality traits even though many recent papers in economics use this term in this way. In popular usage, and in our own prior work, "noncognitive" is often juxtaposed with "cognitive." This contrast has intuitive appeal because of contrast between cognitive ability and traits other than cognitive ability. However, a contrast between "cognitive" and

> "noncognitive" traits creates the potential for much confusion because few aspects of human behavior are devoid of cognition. Many aspects of personality are influenced by cognitive processes. (Borghans et al., 2008, pp. 973-974)

These researchers contended that personality traits are influenced by cognition and that to call them *noncognitive* has been misleading. Almlund, Duckworth, Heckman, and Kautz (2011) also rejected the "cognitive-noncognitive" dichotomy (p. 45). Those researchers used the term *personality traits* in their writing but, in recognition of other literature, frequently referred to the concept as "noncognitive (personality) abilities" (Almlund et al., 2011, p. 154).

Although the point of the aforementioned research was well noted, in this study I did not choose between personality traits and noncognitive traits. I combine the terms and refer to them generally as *noncognitive personality attributes*. It is important to note that, in this research, *noncognitive personality traits* refer only to noncognitive factors that have also been defined in literature as *personality traits* (Roberts et al., 2014). Education literature is replete with the term *noncognitive*, referring to everything from leadership skills and realistic self-appraisal (Tracey & Sedlacek, 1987) to the Big Five personality traits (Roberts et al., 2014) to learning strategies, academic behaviors, and personality traits combined (Farrington et al., 2012). *Grit* and *conscientiousness* are established terms in the personality psychology literature and are often referred to as *noncognitive variables* by both psychologists and economists (Almlund et al., 2011).

Racial Identity

The *American Psychological Association Dictionary of Psychology* defined racial identity as "an individual's sense of being defined, in part, by membership in a particular racial group" (American Psychological Association, 2018, n.p.) In this study, racial identity to college persistence was examined through a number of angles, including stereotype threat (Steele, Spencer, & Aronson, 2002), and public and private racial esteem (Luhtanen & Crocker, 1992).

Racialized Campus Environment or Campus Racial Climate

The *Oxford Dictionary* defined *racialize* as to "make racial in tone or character" (Oxford Living Dictionaries, 2018, para. 1). In this study, a racialized campus environment is one that alters or makes difficult the matriculation experience of students of color based on racism, racial stereotypes, and racial perceptions. Hoyt (2012) discussed the idea that racism becomes particularly insidious as it systematically disadvantages a group. Solórzano, Ceja, and Yosso (2000) acknowledged the importance of examining race-related experiences with regard to college persistence.

> In this study, campus racial climate is broadly defined as the overall racial environment of the college campus. Understanding and analyzing the collegiate racial climate is an important part of examining college access, persistence, graduation, and transfer to and through graduate and professional school for African American students. (Solórzano et al., 2000, p. 62)

The students who were interviewed in this study shared stories about race-related experiences such as microaggressions, discrimination, and racism while being in college.

These racial issues on campus characterized the campus racial climate or racialized their campus environment. Researchers have argued that directly understanding the college racial context is as important as understanding the African American college student.

> Rarely do studies critically examine a particular campus context to offer more nuanced insights into how racist institutional structures, policies, and practices undermine Black student achievement (Harper, 2012). Instead, emphasis is placed on what students lack and how their deficits contribute to their troubled status. (Harper et al., 2018, p. 4)

Racism

In this study, issues related to racism and race are highlighted. These included the experience of racism through discrimination, reduced sense of belonging, and microaggressions. The *American Psychological Association Dictionary of Psychology* (APA, 2018) defined racism:

> A form of prejudice that assumes that the members of racial categories have distinctive characteristics and that these differences result in some racial groups being inferior to others. Racism generally includes negative emotional reactions to members of the group, acceptance of negative stereotypes and racial discrimination against individuals; in some cases it leads to violence. (n.p.)

Social Capital

College attainment researchers have conducted many more studies framed on social capital than on human or cultural capital. The term *social capital* is used to represent all of the personal resources within a student's social network.

> Researchers to their children's education (Gandara, 2002; Lareau, 1987, 2000; McDonough, 1997; Perna & Titus, 2005) typically conceptualize parent involvement as a form of social and cultural capital that promotes college enrollment. Coleman (1988) stresses the role of parental involvement in building social capital, arguing that social capital communicates the norms, trust, authority, and social controls that are required for educational attainment. (Rowan-Kenyon, Bell, & Perna, 2008, p. 566)

While parental involvement is used as one popular form of social capital, peer groups and school counselors are used also as forms. All forms of social capital found in the literature were applicable to this study.

Conceptual Framework

Many researchers have worked diligently to identify key levers for increasing college persistence (Astin, 1984; Bean & Eaton, 2001; Farrington et al., 2012; Tinto, 2010). Researchers such as Tinto and Astin have posited models that have been instrumental in establishing the dominant thinking regarding how to keep students from dropping out of college (Melguizo, 2011). In Melguizo's 2011 review of college persistence theories, she stated, "It was clear that most of the researchers relied heavily on a single theoretical perspective, Tinto's model student departure" (p.1). However, these theoretical frameworks are not without shortcomings. Tinto's work, for instance, had only modest empirical evidence to support it and lacked depth in explaining the mechanisms of departure (Melguizo, 2011; Tierney, 1999). Some have stepped in to

revise or re-envision models in an effort to address missing links (Bean & Eaton, 2001; Rodgers & Summers, 2008).

The available bank of comprehensive college persistence theories and models, inclusive of students of color, is imperfect. Harper et al. (2018) suggested that "Black student success is considerably more complex than theorists, researchers, and administrators often acknowledge. Theory advancement demands fuller considerations of the historical and current racialization of policies, practices, and institutional cultures" (p. 21). The orientation of many of the current models, although evolving to capture more accurately all facets of the college persistence process, leaves a vacuum as it relates to the African American college student (Harper et al., 2018; Strayhorn, 2010; Tierney, 1999). The models understate or do not address racialized environmental experiences that shape the process. While much of this research acknowledges nontraditional students, such as older or working students, as well as students of color who face additional challenges along the college attainment pathway, it does not describe fully how persistence for this group is fundamentally different or more difficult (Farrington et al., 2012; Strayhorn, 2010). Also, it has not incorporated the level of the impact of the challenges to the student. Instead, it has focused on persistence as an individual endeavor rather than a collective one (Tierney, 1999). Thus, the outcomes of programs, stemming from incomplete models but designed to support African American college students, are somewhat tentative. Interventions vary widely and often focus on the individual and not the institution (Harper et al., 2018).

Given that no singular college persistence theory is complete, three bodies of literature—economics, sociology, and psychology—were used to frame this study theoretically. They provided insights on factors that affect college persistence by high-achieving African American students. The overall conceptual framework was informed by (a) sociocultural capitals with an emphasis on human capital theory, (b) a conceptual framework for noncognitive traits, and (c) the psychological model of college retention modified by Rodgers and Summers (2008; Appendix A) to improve utility for studying African American college students.

Popular Forms of Capital

In the college access literature, *social capital theory* refers to the influential relationships that are available to students who support the college-going, academic achievement process. Major developers of the theory were Loury (1977), Bourdieu (1985), and Coleman (1988). According to D. P. Johnson (2008), their contribution was to identify how one person's capital increased through exchanges with another person who possessed more capital. D. P. Johnson observed that capital "exists within the ties that enable the transfer of social resources" (p. 35). In the quantitative college literature, social capital exists in school personnel such as counselors, parent/family networks, peer groups, and mentors (Dyce et al., 2013; Engberg & Wolniak, 2010). Engberg and Wolniak cited Coleman (1988) and Lin (1999) as they observed that "educational achievement and social ties partially determine the levels of social capital accessible to students, which in turn provides assistance in obtaining additional education and making effective educational choices" (p. 134).

Unlike social capital theorists, who have focused on attributes external to the individual, human capital theorists have focused on the individual, with a distinct look at personal aptitudes that can be cultivated and applied to college attainment efforts. Human capital theory was introduced and developed by Gary Becker in 1964. In his book *Human Capital* he introduced the idea that people make rational choices based on the value or payoff of their personal investment (Melguizo, 2011). Human capital includes characteristics such as ability, intelligence, economic background, and motivation. Melguizo (2010) explained that human capital theory allowed "individuals [to] decide whether or not to invest in additional years of education based on an analysis of their perceived cost and benefits" (p. 99). As it relates to college, Melguizo (2010) stated, "It starts with the basic assumption of human capital theory, which is that individuals will only apply and enroll in college if the perceived utility of going to school is higher than the perceived utility of going to work" (p. 13).

Economists Heckman and Kautz (2013) applied human capital theory to education and stated that, while intelligence was important in predicting outcomes, traits or "personal attributes not thought to be measured by IQ tests or achievement tests" were equally important (p. 10). They called these traits *character* or *noncognitive* traits. Of conscientiousness (examined in the current study), he stated that it "predicts years of schooling with the same strength as the measure of intelligence" (p. 23). Heckman and Kautz (2013) argued that noncognitive attributes were a skill, not a fixed trait, and that they could be adapted to intervention. The researchers also called for interventions in

early childhood, as that was when character seemed most malleable (Heckman & Kautz, 2013).

In the college literature, cultural capital theorists based their research on specific aspects of a student's culture that contribute to or undermine the ability to enroll and complete college. "Cultural capital represents a range of attributes, such as language skills, cultural knowledge and other mannerisms that are typically acquired from one's parents, which define and situate one within a particular class status" (Dyce et al., 2013, p. 134). According to those researchers, cultural capital consisted of group beliefs that were shared and transmitted within and outside of the group (Dyce et al., 2013, p. 156).

Yosso (2005) said that much of the literature on students of color, of lower SES, suggested that they are without beneficial cultural capital. This absence of cultural capital has contributed to the lack of student achievement and lack of college attainment, or so the theory goes. Like social capital deficit research that suggested that poor African American students have few people within their social network who possess college knowledge and the literature on human capital that has sometimes suggested that African American students lack motivation to attend and complete college, the deficit literature on cultural capital has tended to suggest that African American communities do not value or sacrifice for education.

A preponderance of research on African American student achievement has diagnosed the problem of low college completion rates from a deficit perspective. It has asked, What is missing in the individual's persona, upbringing, heritage, motivational constitution, culture, family, background, or prior schooling? While some value has

come from this approach, it has been misguided for a plethora of reasons, one of which is that African Americans have been generally compared to Whites instead of to other African Americans, and the experiences of middle-class African Americans have been disregarded (Carpenter & Ramirez, 2012; Graham, 1994, as cited in Griffin, 2006). Also, it has served to perpetuate the belief that there is an inherent dysfunction in African Americans, particularly African American men (Griffin, 2006; Griffin et al., 2010; Harper & Davis, 2012).

It has been assumed that most poor African Americans are ineligible for college. However, Cabrera and La Nasa (2001) assured us that not all African Americans of low income are unprepared for college. According to these researchers, of the prepared group of African American students of limited economic means, approximately 65% complete college applications, which increased the chance of college enrollment to 80%, close to the national average of 88.8% for high-income students.

Deficit researchers found many challenges to African Americans who aspire to attend college. However, other researchers have demonstrated that there could be a positive role for social, cultural, and human capital research. Therefore, the potential to gain a fresh understanding of how conscientiousness and grit affect high-achieving African American youth presented an opportunity for new direction and hope.

Framework for Understanding Noncognitive Traits

Social, human, and cultural capital theorists have focused on powerful assets of the individual and/or their environment that impact health, education, and economic outcomes negatively or positively. In the literature, each type of capital has been applied

to the college persistence process. However, this dissertation study is largely situated in the discussion of human capital theory because of its orientation toward malleable skills that influence education and labor market outcomes.

Farrington et al. (2012) developed a conceptual framework for identifying and understanding the mechanisms of noncognitive factors. They argued that precision about what represents a noncognitive factor, as well as standardized names and definitions of identified factors, is badly needed in the literature. They attempted to provide this clarity by synthesizing the literature and categorizing terms into strategies, attitudes, mindsets, and behaviors. Their conceptual framework articulated the relationships among these categories. Regarding this process the research team stated,

> We pushed to clarify the meanings of a number of loosely defined concepts and to reconcile disparities between researchers from different disciplinary backgrounds (economist, psychologist, sociologist) who occasionally used different terms for similar constructs or the same term to describe concepts that are measured quite differently. (Farrington et al., 2012, p. 8)

The conceptual model developed by Farrington et al. (2012) has five categories of noncognitive factors: (a) academic behaviors, (b) academic perseverance, (c) academic mindsets, (d) learning strategies, and (e) social skills. The researchers not only hypothesized about the relationships among the noncognitive factors; they also offered an explanation of the connection between each noncognitive factor and academic performance. The hypothesis anchored the foundation of the conceptual framework in academic behaviors, arguing that these behaviors (e.g., organizing materials, going to

class) were most closely related to academic performance. All other parts of the framework contribute to performance through academic behaviors. Academic performance in their model, at both the secondary level and college level, was measured by grades.

Academic perseverance is the tendency for the student to stay focused on a goal despite distractions (grit or persistence), as well as the tendency to delay gratification or exercise self-control. Obtaining a college degree, according to Farrington et al. (2012), "may well be more dependent on long-term persistence over years" (p. 21). Both grit and self-control as a facet of conscientiousness are the objects of this study.

Farrington et al. (2012) defined academic mindsets as a student's beliefs and attitudes about himself/herself associated with academic learning and intelligence. The authors presented the aspects to academic mindsets in terms of the student include: "1) I belong in this academic community, 2) My ability and competence grow with my effort, 3) I can succeed at this, and 4) This work has value for me" (p. 28).

The framework developed by Farrington et al. (2012) holds that academic mindsets inspire academic perseverance (grit and conscientiousness are included here) and academic perseverance causes academic behaviors to flourish, ultimately affecting academic performance. The relationships among these factors can be mutually beneficial or destructive.

> There is also a reciprocal relationship among mindsets, perseverance, behaviors, and performance. Strong academic performance "validates" positive mindsets, increases perseverance and reinforces strong academic behaviors. Negative

> mindsets stifle perseverance and undermine an academic behavior, which results in poor academic performance. Poor performance in turn reinforces negative mindsets, perpetuating a self-defeating cycle. (Farrington et al., 2012, p. 9)

Two other factors in the noncognitive conceptual framework were suggested by Farrington et al. (2012): learning strategies and social skills. Learning strategies are "processes and tactics one employs to aid in the cognitive work of thinking, remembering or learning" (p. 10). Specifically, learning strategies include metacognitive and self-regulation strategies, time management and goal setting, and function to make the use of academic behaviors more effective. Many of these learning strategies fall within the definition of the personality trait conscientiousness. Social skills as noncognitive factors are indirectly linked to academic performance in this conceptual framework through academic behaviors. Strong social skills, also thought of as socio-emotional intelligence, allow students to interact with peers through work on teams or in group projects. Within conscientiousness, there is a facet called *responsibility/reliability*. Working within groups and following through on commitments are also part of that definition. Conscientiousness supports the learning process as students employ appropriate behavior that elicits few disciplinary consequences.

The noncognitive factor model posited by Farrington et al. (2012) was a sweeping attempt to understand how factors other than intelligence contribute to or detract from student achievement. The researchers found evidence that this model applied to the K–12 setting as well as to college (Bowman et al., 2018). Regarding

college, the researchers contended that the issues that affect college completion, especially in light of the number of students who initially enroll, were complex.

> Evidence shows that where students attend college will ultimately determine whether in what measure their incoming academic achievement and/or noncognitive factors will affect their college persistence. In colleges with low institutional graduation rates (often those that provide few of the developmentally appropriate intellectual and/or social opportunities, challenges, and supports that stretch and grow students), even well-developed noncognitive factors are unlikely to improve students' probability of graduating on time. (Bowman et al., 2018, p. 18)

Because of this complexity, the researchers have concluded that more work is needed to understand the role of noncognitive factors for college students. Through their model, they have suggested that college requires a strong academic mindset and emphasized the sense of belonging that should be included within this factor.

> While there are strong theoretical reasons to believe that noncognitive factors are connected with college outcomes, there is still little empirical research directly exploring these connections, especially between noncognitive factors and college retention. Additionally, research studies have yet to explicitly explore the ways in which the importance of various noncognitive factors examined may be driven by specific elements of the college context. (Farrington et al., 2012, p. 71)

As stated in the background section of this chapter, the main purpose of this dissertation study was to explicitly explore two specific noncognitive factors—grit and

conscientiousness—and their impact on college performance and persistence by high-achieving African American students. Race, as part of that college context, was also investigated.

Stepping back from the detailed discussion of each noncognitive factor included in the model, it is clear that the model is situated within a school and classroom context that acknowledges differences in student background and characteristics such as race/ethnicity, age, gender, SES, family, community and language. Further, this school and classroom context is more deeply situated in a sociocultural context. This broader context

> shapes the structural mechanism of schools and classrooms, as well as the interactions and subject experiences within schools. Opportunity structure in the larger society; economic conditions that shape employment opportunities as well as school costs' the presence of racism, sexism and other types of discriminator that give rise to stereotype and prejudice and stark inequalities in resources across neighborhood and schools all contribute to the larger context in which students learn. (Farrington et al., 2012, p. 13)

Shortcomings in the noncognitive factor conceptual framework have been identified by researchers. The main shortcoming, relative to the content of the present study, is that researchers have not demonstrated via the structure of the model how the larger sociocultural context actually augments, alters, or undermines the presence of or the function of noncognitive factors in academic performance for students of color. For

example, what role does racial identity play in supporting social skills? How do academic mindsets or academic perseverance inform noncognitive factors?

> For simplicity sake, our noncognitive factors model does not specifically illustrate how these individual [student] characteristics are related to other factors, but we assume student background would affect virtually every aspect of the model. . . . Student background characteristics are very likely to mediate the relationships among the classroom context, the student's further development or enhancement of noncognitive skills, behaviors, attitudes and strategies in classroom and academic performance. (p.12)

The researchers acknowledged that students of color are affected differently. Unfortunately, their simplification provided a structural model that failed to describe fully how these differential experiences expressly transform the application of noncognitive factors to schooling. The danger in this lies in the fact that interventions and programs generated from the model and examined for the development of the model lack explicit direction on how to improve outcomes for African American students who are affected by a racial climate (Harper, 2012).

Psychological Model of College Student Retention

No single theory has been developed to capture the complexity of the college persistence process for African American students. This study was begun by situating this theoretical framework in popular forms of capital, ultimately highlighting human capital theory as the foundation for the other conceptual idea that supports this research: the *five noncognitive factors model*. From human capital theory comes the concept of

noncognitive factors (the founding theorist called them character traits) that have been found generally to support the college performance and persistence process (Farrington et al., 2012; Heckman & Kautz, 2013). The Farrington et al. (2012) conceptual framework is comprehensive in that it explains how multiple noncognitive factors, including grit and facets of conscientiousness, connect to academic performance and persistence for college students. However, the role of race, racism, discrimination, and other race-specific experiences goes generally unaddressed in the structure of the model. This leads to consideration of Rodgers and Summers's (2008) revision of the psychological model of college student retention that was originally developed by Bean and Eaton (2000).

Bean and Eaton (2001) theorized that certain psychological factors, such as self-efficacy, locus of control (attribution), and coping processes, are influenced by students' perception of self and experiences and abilities prior to college and serve in college to help them to persist when facing academic and social challenges. These psychological factors are considered entry characteristics.

> Among the most important of these psychological factors are self-efficacy assessments ("Do I have confidence that I can perform well academically here"); normative beliefs ("Do the important people in my life think attending this college is a good idea?"); and past behavior ("Do I have the academic and social experiences that have prepared me to succeed in college?"). (Bean & Eaton, 2001, p. 75)

The theory suggests that college students engage with the college (environmental interactions) in bureaucratic, academic, and social ways while at the same time continuing their interactions with family and friends outside of the college environment. The nature of these interactions produces a psychological response that can lead to academic and social integration, attribution, and confidence (Rodgers & Summers, 2008). “This feeling of successful adaptation to the environment can lead to greater motivation to study in the future, leading to better grades and other measures of academic success and increased academic self-efficacy and academic integration” (Bean & Eaton, 2001, p. 78).

Rodgers and Summers (2008) revised the Bean and Eaton (2000) psychological model to account for race-related experiences African American that students face at primarily White institutions (PWIs).

> We propose that while traditional retention models are useful in addressing the retention of African American college students, the effects of race and culture must be accounted for when describing the experiences and psychological process of African American students attending PWIs. (p. 172)

Student attitudes derived from student entry characteristics altered by campus environment interactions lead to psychological process and psychological outcomes. These outcomes can lead to social and academic integration, which influences intent to continue in college and, ultimately, persistence.

This is the original Bean and Eaton (2000) model. Rodgers and Summers made structural and content alterations to this model. For instance, they matched each phase of

the model with Cross's Nigrescence model of identity development. To these student attitudes, Rodgers and Summers (2008) added belongingness and integration. In the psychosocial processes section of the model they added goal orientation, locus of causality, and intrinsic and extrinsic motivation. To psychological outcomes they added enjoyment of learning/internal locus. To intermediate outcomes they added the development of biculturality. By adjusting the model, they attempted to show how race (including ethnic and bicultural identity development) created a different retention process for African American students and other students of color. This difference, they posited, is in the attitude that African American students possess. "Per our revised model, students' attitudes toward the institution will affect their psychological process and outcomes" (Rodgers & Summers, 2008, p. 177).

Given that the purpose of this study was to examine grit and conscientiousness as personality traits that influence performance and persistence by high-achieving African American students, the use of a model that expressly demonstrates that these noncognitive traits of psychology may be altered by race was important. The revised psychological model of college student retention presented an opportunity to study the ability of grit and/or conscientiousness to predict college persistence through a new lens.

Research Questions

The following research questions guided this dissertation study. There are four questions, three directing the quantitative portion of the study and one directing the qualitative portion of the study.

Quantitative Research Questions

1. Is there a correlation between college persistence in high-achieving African American students and grit and/or conscientiousness?

2. Which noncognitive personality attribute, grit and/or conscientiousness, predicts college persistence among high-achieving African American students?

3. Is grit and/or conscientiousness affected by factors such as racial identity, discrimination, and a sense of belonging in high-achieving African American college students?

Qualitative Research Question

What are the perceptions of high-achieving African American students with regard to (a) fundamental beliefs about achieving success in college, (b) grit and conscientiousness and whether these attributes impact their college persistence process, and (c) the relationship, if any, between race, grit, and/or conscientiousness and their college persistence process?

Limitations, Delimitations, and Assumptions

Limitations

The study has three acknowledged limitations.

1. The noncognitive personality attributes of grit and conscientiousness were often difficult to translate quantitatively when using a preexisting database. The database used for the quantitative portion was not originally designed to ask about these two constructs. Further, there is some disagreement in the literature as to what actually constitutes grit and conscientiousness (Borghans et al., 2008; Lundberg, 2013). To the

extent that the studies cited in this paper were bound by their limits to capture some features of their variables, this study has been bound as well.

2. It was decided to review research with a broad variation in the populations sampled. This study focused on high-achieving African American students. This emphasis on African American students may be skewed somewhat by studies that were considered for this research that included other students of color (or "minorities"), as well as low-achieving students or students whose achievement levels were undefined. Including research that studied average and struggling students to discuss college persistence may have skewed this study.

3. There is not a singular definition of college persistence in the literature. The term loosely includes everything from persisting from one semester to the next, persisting at a community college and at a 4-year institution, persisting after the first year of a 4-year university, or persisting only after the second year of college. To the extent that the studies cited in this paper were bound by their own definitions of persistence, this study has been bound as well.

Delimitations

The delimitations applied in this study were chosen to combat deficit narratives about African American academic achievement and to contribute to an asset-based approach about college persistence by African American students. While issues of persistence are vitally important to understanding college completion in all underrepresented college students, I purposefully delimited this study to learning from high-achieving African American students. These were students who had already found

success in college and could articulate their strategies. It was expected that learning from them could be extrapolated to other underrepresented students or to those who are not persisting well in general.

The second delimitation recognized that not all African American students in college would be represented in this study. Students with a GPA less than 3.0 were not included. Average-performing students were not addressed, either. Factors such as conceptions of socioeconomic status and gender were addressed (reported) in only a limited fashion, as these variables are present in the 2015 Multi-Institutional Study of Leadership (MSL) survey dataset used in this study. These variables provided clearer dimension to the issue of college persistence by high-achieving African American students. However, they were not the primary focus of this study. College dropouts and/or high-achieving community college students were not addressed in this study. Only students who were eligible to attend a 4-year institution and who had a GPA of 3.0 or above were considered to be high-achieving for this research.

Many factors influence the college persistence process, such as the quality of high school education, institution selectivity, or financial aid status; these factors were beyond the scope of this study. Some factors were acknowledged marginally as they related to the study's findings but were not the focus of the mixed-methods procedure.

Assumptions

This study included three significant assumptions. First, it was assumed that all forms of grit and conscientiousness being studied were similarly operationalized. The only form of grit used was the form generated through measurement using the Grit

Scale. Other researchers have conflated grit with concepts such as resilience and attempted to refine it. Only grit as defined by researchers Duckworth et al. (2007) using the Grit Scale applied to this study. Similarly, only the conscientiousness form as generally understood to be part of the Big Five personality trait model (Roberts et al., 2014) was used in the research. Other definitions of conscientiousness were not applied.

Second, it was assumed that the high-achieving African American students in this research were on track to complete college. In other words, the study was not based only on students who were persisting at the moment of the study; rather, it was assumed that participants' level of achievement indicated that they were in the process of uninterrupted persistence to graduation.

Third, it was assumed that interpretation of the data from the cohort of high-achieving African Americans participants accurately reflected the relationships among grit, conscientiousness, and race. These student perceptions, while not generalizable, could become useful to practitioners and policymakers by clearly contextualizing the findings from the quantitative portion of this mixed-methods study.

Organization of the Dissertation

This study is reported in six chapters. Included in Chapter I are the background of the study, statement of the problem, purpose of the study, significance of the study, definition of terms, conceptual framework, research questions, limitations, delimitations, and assumptions.

Chapter II presents a comprehensive overview of the literature. This includes a case for why noncognitive personality traits such as human capital, specifically grit and

conscientiousness, above the social and cultural capital paradigms, should be the main source for predictive analytics and intervention in increasing college persistence by high-achieving African Americans. To this end, the chapter includes a detailed description of the current state of college attainment by African American students, statistics on high-achieving African American students, and an overview of research issues related to African American students and college.

Chapter III describes the methodology of the study and presents details of the exploratory sequential mixed-methods design used for the study. It addresses selection of participants, instrumentation, data collection, and data analysis procedures for the quantitative and qualitative portions of the study. The MSL dataset that was used for the quantitative portion of the study is explained.

The focus of Chapter IV is on statistical representations of grit and conscientiousness and the results related to addressing the two quantitative research questions. Demographic data are presented as well.

In Chapter V, demographic data, as well as the qualitative findings from the semistructured interviews of 12 high-achieving African American students, are presented. This chapter presents a response to the study's qualitative research question.

In Chapter VI, a discussion and summary of the entire study are presented. The quantitative data from Chapter IV are explained within the context that the qualitative data offered. Research implications, recommendations for policymakers, and suggestions for further research are offered.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter presents a foundation for conducting research on the noncognitive personality attributes, grit and conscientiousness, and their relationship to college persistence in high-achieving African American students. Within this chapter I offer the foundation for understanding these personality constructs through the lens of race. The chapter begins with the current state of college attainment and African American students and examines a large study conducted by Lundberg (2013) entitled the College Type. An argument is made in this opening that college persistence data are unsettling for African American students and that studies such as Lundberg's have not advanced the discourse on how the concern should be addressed but rather have exacerbated it.

Next, I review the benefits and drawbacks of the college persistence literature on African American students from multiple angles (social, cultural, and human capital) as is often done in the literature. This examination ultimately emphasizes the advantage of the human capital perspective, particularly with its useful notion of "productivity-enhancing skills" or noncognitive attributes and influences from the field of psychology. Then, research on noncognitive attributes and college persistence is presented. This is followed by a targeted focus on the main constructs measured in this study: grit, conscientiousness, GPA, and race-related variables. Race-related variables include racial identity as measured through the Private Collective Racial Esteem Scale, the Public Collective Racial Esteem Scale, and identity salience, as well as the racialized college environment as measured by a sense of belonging and nondiscriminatory climate.

The chapter ends with a summary of the literature to provide an overview of the historical, theoretical, and empirical literature supporting this investigation.

The State of College Attainment and African American Students

The college attainment research (research addressing all parts of going to college, from enrollment and persistence to completion) on African Americans is extensive. In this section a high-level overview of African Americans in college is presented.

College Aspirations

College aspirations are strong in the African American community. Several researchers have noted that African Americans, along with Asians, are more likely to enroll in college than Whites (Engberg & Allen, 2011; Perna 2006). A study by Engberg and Allen (2011), using 2002 Educational Longitudinal Data Study, stated, "In examining different demographic coefficients, we found that Black students were almost two times more likely to enroll in a 4-year institution versus no enrollment when compared to White students" (p. 11). Studies on African American youth have suggested that they lead in college aspirations among American youth (Pitre, 2006).

College Enrollment

College enrollment trends for African Americans are both positive and worrisome. A 2017 report from the U.S. Department of Education showed that 12.4% or 2,489,088 of all total college students at Title IV universities were African Americans. African Americans were 11.2% of all total enrollment at nonprofit private universities and 11.5% of total enrollment at public universities. African Americans were 11.7% of total enrollment at 4-year universities and 13.7% of total enrollment at 2-year

universities in 2017. At both the undergraduate and graduate levels, African Americans made up more than one quarter of the total enrollment at for-profit universities (Musu-Gillette et al., 2017). According to another U.S. Department of Education report, "Status and Trends in the Education of Racial and Ethnic Groups" (Musu-Gillette et al., 2017), of the African Americans enrolled in undergraduate schools in 2014, 62% were females and 38% were males.

College Persistence

College persistence data were obtained from the National Student Clearinghouse Research Center's snapshot report. For African American students attending full-time at a 4-year public university in the fall of 2016, the persistence rate (those returning to university in fall 2017) was 79.7% (Shapiro et al., 2018). Fully 14.9% of those students persisted at a different university from the one where they had started in their freshman year. For African American students attending full-time at a 4-year private university in fall 2015, the persistence rate was 79.3%, six percentage points lower than for Hispanic students and more than 10 percentage points lower than for White and Asian students. For African American students collectively who attended college full-time or part-time at a 4-year institution or a 2-year institution in fall 2016 and returned in fall 2017, the persistence rate was 67%. For African Americans attending a public community college in fall 2016, 56% returned for the fall of 2017 (Shapiro et al., 2018)). Race and ethnicity data were not available for 4-year for-profit universities, but the overall persistence rate for everyone combined was just 52.9%. It was noted earlier that more than one quarter of African American students attend a for-profit university.

College Completion

College completion rates have increased for African Americans, relatively speaking. A report developed by the Economic Policy Institute showed that, in the 50 years since Martin Luther King, Jr.'s assassination, college completion rates for African Americans doubled (Jones et al., 2018). However, that report stated, "In 1968 blacks were just over half (56.0 percent) as likely as whites to have a college degree, a situation that is essentially the same today (54.2 percent)" (Jones et al., 2018, para. 1). The 2018 National Student Clearinghouse report on college completion reported that the 6-year graduation rate for African Americans who graduated in the class of 2011 rose 1.6% to 47.6%, up from 45.9% for the fall class of 2010 (when including 4-year and 2-year universities; as cited in Shapiro et al., 2018). When examining solely 4-year universities, the completion rate by African Americans for the class that began in fall 2011 was 41%, almost 10% behind Hispanics. A full 59% of African American students from the fall class of 2011 had not graduated 6 years later. The encouraging statistical rise in college completion rates among African Americans must be kept in perspective with the rise of college completion rates for all races because, as mentioned in Chapter I, the financial implications are significant.

College Financial Aid

Financial aid and college persistence were not discussed as part of this study but they are closely associated. D. F. Carter (2006) stated, "Specifically, for African Americans, a group with a high percentage of low-income students, all types of packages with grant aid, including loans and grants, were positively associated with persistence"

(p. 36). However, available statistics are important to review as part of the current state of college attainment by African American students and surely have some impact on persistence rates. In 2011-2012, according to the U.S. Department of Education's "Status and Trends in the Education of Racial and Ethnic Groups" (Musu-Gillette et al., 2017), 85% of full-time African American students received grants to pay for college and 72% of full-time students received loans.

College attainment data reflect the strong desire among African Americans for a college degree. Among those going to college, most have taken loans to make it happen. The desire has even led a significant percentage to attend for-profit universities (outside of the scope of this study). Strengthening college persistence among African Americans is not about getting African American students to aspire to go to and graduate from college. It is about getting even more African Americans to complete college. Thompson, Gorin, Obeidat, and Chen (2006, citing Adelman (2006), said that the gap between African Americans graduating from college and White and Asians graduating from college was 15%. Even though the statistics are a little better among middle- and upper-class African American youth, college completion overall has remained low (Lacy 2007; Walpole, 2007).

The College Type: Why It Limits the Discourse on African American College Persistence

Lundberg (2013) conducted research to explore the effects of cognitive ability and personality traits on college graduation. She used data from 13,500 participants, ages 24 to 32 years, in the National Longitudinal Study of Adolescent Health (Add Health)

national database, taking into account their family background. She grounded the study in the idea that personality traits were highly heritable and stable. “One important pathway from parental achievement to child achievement is clearly through the heritability of IQ and other traits that enhance productivity, such as persistence and social skills” (p. 4).

Lundberg’s (2013) research was an attempt to predict college completion from each of the Big Five personality traits and cognitive ability. At a high level, she discovered that the mother’s educational background, whether a child was a member of a two-parent household, and SES were related to college outcomes such that disadvantaged men, and African American men in general, did not possess the trait most commonly associated with school success: conscientiousness (Furnham, 2012; Lundberg, 2013; Poropat, 2009). Specifically, this trait and extroversion significantly predicted college completion for affluent White men only. She concluded that both disadvantaged men and women were higher in openness, a personality factor providing the tendency to be information seeking and open to new experiences (Lundberg, 2013; Roberts et al., 2014). Ultimately, she suggested that personality traits were context dependent and that, by understanding more about the characteristics of each group in terms of family background, researchers could determine which skills should be enhanced and which were not useful.

The findings of the study for African American men in general (low income or high income) and for the disadvantaged African American female were not hopeful. In her study, Lundberg (2013) asserted that the lack of conscientiousness was not due to

school quality. “The returns to openness and conscientiousness do not vary by school quality, or by levels of cognitive ability” (p. 17). Specifically for African American men,

> In this sense, being black acts as an additional dimension of disadvantage-reducing the payoff to traits that promote focus and self-control and increasing the return to exploration or information-gathering skills. Other differences across racial groups include the absence of a significant positive return on agreeableness for black men. . . . In fact, risk aversion has a negative return for disadvantaged black men—taking risks, for this group only appears to be an effective education strategy. Finally, disadvantaged black men are the only group for whom the return to cognitive ability is not significantly positive—a surprising and disturbing finding suggestive of an uneven playing field. (p. 10)

According to Lundberg, the payoff of conscientiousness for African American women is not particularly strong, either. “Conditional on family background, openness has a higher educational return to disadvantaged black men and women, compared to non-Hispanic whites but conscientiousness has no significant payoff in any black subsample” (p. 17).

Lundberg (2013) said more about the openness construct. She posited that openness was a positive but acknowledged that “the personality psychology literature has found few consistent behavioral effects of openness” (p. 12). However, openness, according to Lundberg, is a strength for disadvantaged African American men and women because they “need to be immigrants to a world their parents and peers have little experience with, and openness to experiences is a characteristic trait of successful migrants” (p. 438). Lundberg concluded, “Many interventions, proposed and actual,

focus on skills related to conscientiousness, such as focus and persistence [and self-control], and yet, for young men from disadvantaged backgrounds in this cohort, there was not apparent education payoff to this trait" (p. 438). In short, according to the study's findings, enriched curricula that capitalize on building conscientious skills may not be suitable for poor or African American males. Such a conclusion begs further exploration.

Lundberg's (2013) study presented a clear association between deficit levels of noncognitive personality attributes such as persistence and self-control with income and race. The implications that conscientiousness, the preferred school success attribute and hence the preferred college type attribute, does not pay off for African Americans or economically disadvantaged students is disheartening. While Lundberg openly challenged deficit-based research, she may have, perhaps unwittingly, simultaneously propagated it. Her research efforts might just be misaligned.

The current study challenged the Lundberg findings by demonstrating that conscientiousness predicts college persistence for high-achieving African Americans and that, when given the opportunity, African American students are able to articulate how this construct is operationalized.

The Sociocultural Perspective of College Persistence for African Americans

African American students desire a college degree but, for many reasons, most who begin do not persist to completion. The current data on African Americans and college has revealed challenges at all stages of the college attainment process:

enrollment, persistence, and completion. Some researchers, such as Lundberg, in an effort to understand why educational inequity exists, have regrettably postulated that the crucial personality trait needed for academic achievement in college is missing in most African Americans. Within this context, an obvious question has emerged. What would it take to increase the number of African Americans who attend college, persist, and graduate with a bachelor's degree? This seemingly straightforward question has no simple answers. As a matter of fact, the issue of college persistence has been found to be so complex that current responses diverge widely depending on the scholarly agenda of the researcher. In describing problems related to African American academic achievement, in this case college persistence, researchers have used three common conceptual frameworks: social capital theory, cultural capital theory, and human capital theory. Capital is understood to be the accumulation of valuable personal assets that contribute to a student's ability and desire to achieve an educational goal (Levinson, Cookson, & Sadovnik, 2002). Often, the research has suggested that capital of some sort is lacking.

In this section of the literature review, the strengths and weaknesses of each form of capital, relative to college persistence, are presented. It is argued that social capital and cultural capital make important contributions to understanding the challenge that completing college has posed for many African American students but are not sufficient to speak fully to the complexity of the issue. I argue that the growing interest in noncognitive or personality attributes stemming from the human capital framework has shown promise.

The focus of this research, the personality traits of grit and conscientiousness, fits neatly within human capital theory. Burks et al. (2015) stated, “In addition to work by psychologist, there is a small but growing literature in which economist address the predictive role of personality, along with other factors, in several types of outcome, including academic success.” (p. 32). Levinson et al. (2002) recognized the connection when he stated, “It is clear that cultural and social capital play a large role in conceptualizing human capital” (p. 379).

Social Capital and Its Role in College Persistence

Perna (2002) summarized social capital as the networks surrounding a student that can be leveraged to assist the student in the college-going process. Social capital theory has its foundations in sociology. For those who have subscribed to social capital theory and college, the answer for increasing college persistence lies in creating social relationships for African Americans that can be used to support students in the effort to attain a college degree (Perna, 2002). Such support has come primarily through parents and college mentoring programs (Dyce et al., 2013), peer networks (Engberg & Wolniak, 2010; Griffin & Allen, 2006), and school personnel (Cabrera & La Nasa, 2001; Griffin & Allen, 2006; Roderick et al., 2011). All have the ability to provide knowledge about navigating complex elements such as the college application and financial aid process and college survival.

Social capital has also been used to explain how the student is encouraged to attend college through parenting expectations, peer pressure, or mentoring. Engberg and Wolniak (2010) found that parent expectations for college attendance are high among

African American students. In their study examining variables of human, cultural, and social capital, they found that parent and family college expectations were among the top three influencers of postsecondary enrollment for African American students.

In addition to studying parents as a support network for African American students, researchers examined the peer network of African American high school students. They questioned whether college enrollment and completion increased when African Americans' high school peers encouraged each other (Engberg & Wolniak, 2010; Griffin & Allen, 2006). Griffin and Allen found that African Americans at poorly resourced schools and at highly resourced schools turned to their peers for support in the college-going process. They concluded,

> This study showed how college-oriented peers, especially African Americans, were a significant source of support for students' resiliency and desire to achieve college goals. . . . This is consistent with the literature that highlights the importance of peer support in the lives of Black high achievers (Griffin & Allen, 2006, p. 491)

Parents and peers have been shown to be significant social networks, or forms of social capital, used by African American students to support college attainment. However, they are not the only relationships that have been the focus of social capital research. Much has been said of the role of school personnel, such as college counselors, in the college-going process of African American and low socioeconomic youth. In the Griffin and Allen (2006) study, African American youth experienced difficulty in leveraging the school in both predominantly African American low-resourced

environments and predominantly White high-resourced environments. The students attending the low-resourced school explained that they had very little access to college information because it was not a priority of the school. In high-resourced schools, where African Americans tended to be in the minority, African American students complained that counselors denied them access to important college preparatory experiences such as advance placement (AP) course enrollment. Overall, for first-generation students, African American students, and low socioeconomic students, school personnel mattered (Perna, 2006).

A great deal of the social capital literature regarding college looks backward to the social capital system of support that African Americans had before college. Wells (2008) found that social capital and cultural capital were predictive of persistence for all racial groups during college. He used the National Education Longitudinal Study (NELS: 88-94) database that provided data supporting the idea that African Americans had social capital that predicted college persistence. Like Hispanics, however, they had lower social and cultural capital than Whites or Asians (Wells, 2008). Wells acknowledged that African Americans were underrepresented in his sample and that the represented group had less parental education and income than others in the sample who were overrepresented for higher SES.

Gray, Vitak, Easton, and Ellison (2013) studied the role of social media in supporting social capital in college students, including African Americans. The public university setting where the survey took place served approximately one third students of color. African Americans made up 16% of the study sample. The researchers found

that African Americans were as well adjusted socially as other groups on the campus. They concluded that a more diverse campus aided with social adjustment and that using social media tools such as Facebook served to support social adjustment and therefore persistence (Gray et al., 2013). The number of Facebook friends who were also college peers (not just perceived friends) made a difference in building social capital.

Harper (2008) examined high-achieving African American males with a GPA between 3.0 and 4.0 to understand how they built social capital, which supported their college persistence. His qualitative study included 32 males who were asked to describe the networks that they had developed both before college and after college. Harper (2008) stated that the students were able to develop connections with top university officials, including the university president or a dean or vice provost, by being involved in university life. The students shared that being involved on the campus in organizations such as the National Association of Black Accountants assisted in being recognized by key university officials and others. The students also spoke of finding information about the university through older peers or the African American males who had reached out to them early in their college program.

Shortfalls of the Social Capital College Persistence Approach

Without a doubt, the contributions found in social capital research have been helpful in understanding college persistence in African Americans and others. According to sociologists, everyone has social capital (Portes, 1998). In short, it has been demonstrated through much of the research studies cited above that specific people shape the college-going behavior of African American students.

However, social capital research is not always good (Portes, 1998). In his review of the social capital theory, Portes cited negative aspects that emerge in the literature. "Recent studies have identified at least four negative consequences of social capital: exclusion of outsiders, excess claims on group members, restrictions on individual freedoms, and downward leveling" (p. 15).

The research on social capital and college has not been without flaws because it begs the question of which relationships actually influence college attendance. Some researchers have contended that some forms of social capital are more useful for student achievement than others (Perna, 2006; Warikoo & Carter, 2009). Other researchers have demonstrated that social capital is not as useful to persistence among African Americans as it seems to be for Whites, who may already have personal networks with a strong college knowledge base and are less reliant on the school (Perna, 2006). Further, for students without the seemingly right social capital, their social networks have been difficult to influence and maintain. For instance, in public schools, the school counselor, charged with providing information regarding college, is often inundated with testing responsibilities or simply does not exist due to budget cuts (Dyce et al., 2013). Quickly, what appeared as an asset in literature, social capital, has turned into another demonstration of what African American students lack as they approach the college attainment process.

A brief examination of cultural capital theory and college demonstrates that this form of capital is similar to social capital in two ways. First, it provides an important

way to consider elements that affect college persistence. Second, like social capital, it has been predisposed to deficit-based interpretations and implications.

Cultural Capital and Its Role in College Persistence

Cultural capital theory has brought a much different perspective on the college persistence process than social capital theory, although it has its roots in the same author. Bourdieu, the major architect of social capital theory, also contributed to sociology's understanding of cultural capital. Central to the cultural capital dialogue was Bourdieu's concept of the habitus. "Habitus is the internalized set of dispositions and preferences that is derived from one's surroundings and that subconsciously define what is a "reasonable" action" (Perna, 2006, p. 113).

According to the *Education and Sociology Encyclopedia* (Levinson et al., 2002), cultural capital was designed to capture the dispositions, interests, manners, values, and proclivities embedded in an individual's persona. These characteristics are believed to influence behavior. According to the theory, every potential student is situated within a culture. That culture, according to some researchers, may facilitate development of important habits that are necessary for college completion. As a matter of fact, some researchers, using the cultural capital theory, have suggested that a student's ability to achieve in college can be adversely affected by hidden cultural elements that do not align with or are not valued by mainstream educational institutions (Warikoo & Carter, 2009). Perna (2006) reviewed the cultural capital concept as applied by McDonough (1997) to the college access process. She said that middle- and upper-class students possess the type of cultural capital that is most esteemed by higher education institutions

(Perna, 2006). Students who are not in possession of this prized type of cultural capital may eventually lower their expectations regarding college (Perna, 2006).

Museus and Quaye (2009) challenged the appropriateness of the Tinto model of student departure as it related to students of color. The researchers argued that the call for the student's departure from the precollege culture (found in the model) to become part of the dominant college campus culture did not support students' for students of color. Instead, Museus and Quaye suggested that ideas found across the literature, such as integrating precollege culture into the campus through programs or connecting with cultural agents such as key campus leaders, offered a better way for students to persist. Using Kuh and Love's (2000) eight cultural propositions as their conceptual framework, they interviewed 30 students of different racial and ethnic backgrounds about persistence. "The experiences of participants in our study suggest cultural dissonance does, in fact, increase adjustment difficulty and lead to thoughts about departure" (p. 82). Cultural dissonance was explained as the tension between the student's before-campus culture and the campus culture. The researchers argued that campus administration could help to reduce that through quality connections that "emphasize achievement, value attainment, and validate their cultural heritages" (p. 87).

Paulsen and St. John (2002) had a similar finding for African Americans by race and by class. The researchers found that African American students of low income were more likely than Whites to persist but middle- and upper-income African Americans were similar to Whites in their persistence levels.

> African Americans in the poor and working classes—but not middle- or upper-income groups—were more likely to persist than their White peers. Indeed, these findings support the argument that there is an African American habitus that promotes the acquisition of cultural capital related to personal affiliations with significant others and a community of caring that values postsecondary education (McDonough, 1997, p. 226)

Shortfalls of the Cultural Capital College Persistence Approach

Researchers from the cultural capital perspective have often analyzed African American academic achievement using a deficit lens. K. Freeman (1997) said, "It is generally accepted that African Americans do not bring the same kind of social and cultural capital to the classroom as Whites bring" (p. 527). Yosso (2005) stated, "Deficit thinking takes the position that minority students and families are at fault for poor academic performance because: (a) students enter school without the normative cultural knowledge and skills; and (b) parents neither value nor support their child's education" (p. 75). Proponents of this type of deficit thinking include the late anthropologist Ogbu, who had written about the lengths to which African American students go to avoid "acting White" (Warikoo & Carter, 2009). Other researchers, such as Bergin and Cooks (2002), have challenged this idea. In their study, African American students acknowledged their familiarity with the phenomenon of "acting White" but continued to perform at high academic levels despite accusations of acting White.

The suggestion that African American students operate within an oppositional frame is only one of the ways in which African American culture has been scrutinized.

Kalmijn and Kraaykamp (1996) said that the narrowing of the achievement gap to date (to the extent that it has closed over time) is partially due to the effects of African Americans being immersed in "Euro-American high-status culture" (p. 22). "With respect to growing racial equality in American society, we conclude that the integration of Blacks in Euro-American high culture has made a positive contribution to the relative gains of Blacks in the educational system" (p. 32).

These examples have demonstrated how the cultural capital theory has been applied erroneously. A deficit lens has posited that African Americans are not graduating from college because they have been imbued with the wrong cultural habits. Conclusions drawn from the cultural capital theory are imperfect. Royce (2009) cautioned against ignoring imperfections in the cultural capital theory. He said that there is no monolithic culture of poverty. He argued that "the poor" are a varied group with diverse cultures and beliefs. In a similar vein, a fair argument should be made that there is not a monolithic African American culture. Warikoo and Carter (2009) declared that the research on educational achievement and culture relating to students of color is plagued with the inability of current theory to capture heterogeneity accurately. "This literature—when synthesized—suggests that a coherent theory of culture's impact of ethnic and racial differences in school outcome must unpack the multiple influences of identity and context more deliberately than previous literature has done" (p. 368). The cultural capital theory has exposed the need for a more asset-based approach to increasing college attendance. Yosso (2005) suggested that re-theorizing cultural capital through the frame of critical race theory recognized the strengths of students of color more truthfully.

Human Capital and its Role in College Persistence

Through the frame of social capital theory, researchers have recognized that relationships can aid in college attainment (including persistence), directly or indirectly. However, the theory has limits because it suggests that, without the right relationships, college persistence is almost impossible. The type of social capital needed, one high in college knowledge and college connections, is often outside of the locus of control for most underrepresented groups, including African American students.

Cultural capital theory, on the other hand, has recognized that African American students have a habitus that is informed by proclivities, behaviors, and mores within their immediate community. The influences of these cultural assets are significant and can lead to aspirations toward college to become rooted (Paulsen & St. John, 2002). It has been well documented that the ability to identify fully all of the complexities of culture has eluded many researchers (Gutiérrez & Arzubiaga, 2012). Therefore, cultural capital research has a fundamental deficit underpinning (Yosso, 2005).

Human capital theory, like the other capital theories, is not without controversy. Unlike social capital theory and cultural capital theory, the question of a malleable agency is central to the human capital debate. The idea that there are skills that can be developed or preexisting traits that may support that learning has promise.

The architect of the modern-day human capital theory's perception of education is the economist Gary Becker (Heckman & Kautz, 2013; Lundberg, 2013). Becker contended that individuals invest in education because of the high rate of return that they receive in the labor market (Levinson et al., 2002). Melguizo (2011) said that Becker's

research “resulted in substantial evidence supporting the economic benefits of school and training” (p. 404). Strayhorn (2008) conducted a national study on the effects of African American college graduates on the labor market. In it he defined human capital as “the information, knowledge, skills and abilities of an individual that can be exchanged in the labor market for returns such as salary, financial rewards, and jobs” (p. 31). Krymkowski and Mintz (2011) asserted, “Human capital theory is the theoretical foundation for the ideological assumption that everyone should strive for a college degree” (p. 2). There has been strong support for the use of human capital theory as an explanation for why students, in this case African American students, go to or do not go to and persist through college.

Shortfalls of the Human Capital Theory College Persistence Approach

One of the polarizing elements of the human capital theory is that it has been grounded in the rational choice model, which assumes that all people are constant in their behavior and make a series of rational decisions over time that support or hinder their general economic welfare (Melguizo, 2011; Royce, 2009). Melguizo stated that proponents of the rational choice model assumed “that children and families act rationally when choosing among the different educational options available to them by evaluating cost, benefits, and perceived probabilities of more or less successful outcomes” (p. 10). Many have rejected human capital theory due to this fundamental assumption. Royce (2009), in his book *Poverty and Power: The Problem of Structural Inequality,* vehemently argued that human capital theory ignored structural obstacles in the rational decision-making process. “The extent and quality of the human capital

people acquire, and their economic outcomes more generally, are not simply a product of their investment decisions, they are a product of their investment options as well" (p. 74).

Indeed, some researchers have appeared to support the notion that, even when the outwardly rational choice to go to college is made, the rate of return is not there. Krymkowski and Mintz (2011) studied whether the college investment influenced inequity among women and persons of color in the labor market. They found that, for White women, a college degree affected earnings, prestige, and authority in the workplace positively. The most significant gains were for prestige of occupation. On the other hand, the results were mixed for Latinas and next to minimal for African American women. "Thus, for Latinas, the impact of a college degree is mixed, but African American women's progress is not due to investments in higher education" (p. 8). While they recognized that the gap in wage earnings between African Americans and Whites is narrowing, the increase in college degrees among African Americans is not necessarily the explanation, according to them. They suggested that less discrimination and inequity in the labor market also played a significant role in reducing the wage gap.

Harris (2010) agreed that this was true to a degree stating,

> Numerous studies suggest Blacks face significant challenges towards attaining equality within the labor market; Blacks human capital credentials receive more intense scrutiny than those of Whites when in contention for promotions, the racial wage gap widens after labor market entry, and the Black wage disadvantage persists net of education. (p. 10)

As has been demonstrated, human capital theory does not fully address inequity. Strayhorn (2008) began his research by acknowledging that, for African Americans, the path of college investment to financial gain is not necessarily linear. His work was an attempt to understand why this is so. He concluded that some of it may be related to where the degree was obtained, for example a Historically Black College/University (HBCU) versus a PWI. Through the process of his study, he acknowledged the value of the human capital theory but blended it with components of social capital theory and cultural capital theory in order to counter the shortcomings of the human capital theory alone. Strayhorn cited Perna (2000), "Prior research has shown that expanded econometric models that include measures of human, social and cultural capital are improved over traditional econometric models when explaining college student decisions such as enrollment in college" (p. 33). Perna (2006) cited research that she had conducted in 2000, in which she said, "Among 1992 high school graduates, measures of cultural and social capital made a relatively greater contribution to a traditional human capital model of four-year college enrollment for African-Americans and Hispanics than for Whites" (p. 137).

Melguizo (2011), in a review of college persistence theories, said that the preponderance of social science research and literature on college retention and persistence in the past 20 years has been based on Tinto's student departure model. She questioned the wisdom of research hinging on a "single theoretical perspective" (p. 396) and called for creation and use of broader theoretical frameworks. "In recent years, psychologist, higher education scholars and economist have explored the association

between non-cognitive factors, and different measures of college success as well as labor outcomes" (p. 10).

Other economists have also called for human capital theory to take seriously the idea of noncognitive traits. Heckman (2000), in his paper entitled "Policies to Foster Human Capital," said that human capital discussions often focus on attributes such as test scores and intelligence and therefore miss the value and influence of noncognitive traits on labor market outcomes and education. "However, this narrow focus on cognition ignores the full array of socially and economically valuable non-cognitive skills and motivation produced by schools, families and other institutions" (p. 6).

A focus on noncognitive skills or personality traits as an extension of the human capital theory has begun to gain more attention.

> Researchers have documented the important role of human capital in improving the likelihood of postsecondary enrollment (Cabrera and La Nasa, 2001; Engberg and Wolniak, 2010a; Perna and Titus, 2005). Human capital theory illuminates the college choice process by grounding the decision to attend college in the language of productivity-enhancement and investing returns. (Engberg & Wolniak, 2010, p. 20)

Many researchers have called for a deeper look at the role of noncognitive traits in education. Exploration of how they have affected the college persistence process is warranted. For this review of the literature, it was important to look at the challenge of defining noncognitive personality attributes. This is followed by a brief review of three studies demonstrating the relationship between college persistence and noncognitive

attributes. Finally, an examination of the two noncognitive personality attributes specific to this paper is presented along with variables of race, used to understand how these attributes influence African American college persistence.

Noncognitive Personality Attributes and College Attainment

Economist, educational researchers, and psychologists have written about college persistence and applied human capital theory in the process (Melguizo, 2011). Among them, there has been a universal effort to identify what attributes students need to enroll in college and persist to degree completion. From a cursory examination of the research, it has become clear that various disciplines have both named and operationalized these attributes differently (Borghans et al., 2008). Delaney, Harmon, and Ryan (2011) conceded, "For now it is noted that some authors refer to noncognitive abilities, some refer to noncognitive skills, and others (less formally) refer to personality (traits) when discussing the same idea" (p. 2).

In a study by Engberg and Allen (2011), noncognitive attributes were represented by high school GPA, course-taking patterns, AP examinations, and standardized tests and called noncognitive traits. Sedlacek (2004) called for noncognitive skills, which he termed noncognitive variables to be used for college admissions. He listed eight such variables: positive self-concept, realistic self-appraisal, successfully handling the system, preference for long term goals, availability of a strong support person, leadership experience, community involvement, and knowledge acquired in a field. He challenged the long-held notion that SATs and ACTs are the only way to predict college

performance. He offered his rationale for denouncing traditional cognitive measures as the only means for admitting a student into college,

> They give us some information that is useful for some students in predicting what grades they will get in their first year of college, but they don't even do that well for people of color, women, or anyone who has not had a White, middle-class, Eurocentric, heterosexual, experience in the United States. (Sedlacek, 2004, p. 6)

Farrington et al. (2012) called the attributes noncognitive factors and identified them as academic mindsets, social skills, academic perseverance, learning strategies, and academic behaviors, with each category having multiple layers of noncognitive traits.

Heckman and Kautz (2013) acknowledged that many names exist for the concept and stated that they were called soft skills, personality traits, noncognitive skills, noncognitive abilities, and character and socioemotional skills by various authors. Noncognitive traits, primarily called character traits by these researchers, included "perseverance ('grit'), self-control, trust, attentiveness, self-esteem and self-efficacy, resilience to adversity, openness to experience, empathy, humility, tolerance of diverse opinions, and the ability to engage productively in society" (p. 6). He used the terms *personality traits* or *noncognitive skills* interchangeably.

There has not been a consistent standard for identifying and operationalizing what constitutes a noncognitive trait in the literature. It is clear that there are many names for a similar concept, a trait not traditionally identified on an IQ or achievement test. In the current study, these traits are referred to as *noncognitive personality attributes* to emphasize traits that are also acknowledged in psychology to be part of the

personality domain. It is clear that many traits, quite a number outside of the personality domain, have been included in the literature under the term *noncognitive*. A review of the literature revealed that, despite the divergence in nomenclature and definition, noncognitive personality attributes are productivity-enhancing skills that have influenced college persistence for African American students and others.

Noncognitive Traits and College Persistence

Although there have been inconsistencies in how noncognitive personality attributes are defined, a link with college persistence has been established in the literature. Delaney et al. (2011) conducted a web survey across seven universities to elicit feedback from 24,000 students; 4,770 response sets were received. The final sample included only students who were enrolled full time: a sample size of 2,867 students. The researchers looked at levels of the Big Five traits (openness, conscientiousness, etc.) as predictors of college lecture attendance. Lecture attendance served as a proxy for college persistence. They found that conscientiousness and future orientation predicted class attendance. Race was not examined.

Another example of the noncognitive personality trait connection and college persistence is found in meta-analysis of 174 studies on community college persistence generated from 1971 to 2014. Fong et al. (2017) examined existing research studies for five noncognitive, or what they called psychosocial, traits, including motivation, self-perception, attributions, self-regulations, and anxiety. They found that self-perception and motivation positively predicted persistence, although the effect size was small. The impact of race-related variables was not considered.

A final illustration of the connection between noncognitive traits and college persistence was a study that looked specifically at seven noncognitive variables in African American students. Tracey and Sedlacek (1987) administered the Non-cognitive Questionnaire, which assessed seven noncognitive variables that had been linked to students of color in previous studies: "positive self-concept, the understanding of and the ability to deal with racism, realistic self-appraisal, the preference for long-range goals verse short-term goals or immediate needs, availability of a strong support person, successful leadership experiences, and demonstrated community service" (p. 10). They found that, for African American students early in their college pursuit, positive self-concept, realistic self-appraisal, preference for long-range goals, and the presence of a strong support person positively predicted college persistence. For African American students beyond 2 or 3 years in college, community service and the ability to deal with racism predicted college persistence.

To this point, the literature review has considered the state of college attainment, from college aspirations and challenges through completion, for African American students. One major study argued that African Americans lacked the requisite personality trait for college success. That study lead to the conclusion that noncognitive traits must be examined from an asset-based approach. In an effort to understand how to address the challenges in this manner, the literature was reviewed from different sociocultural perspectives: social, cultural, and human capital. While each perspective was found potentially to fall prey to deficit thinking, the promise that the human capital perspective was recognized. The human capital perspective showed the notion of

productivity enhancing skills or noncognitive traits. A brief look at the concept of noncognitive traits demonstrated two things. First, there is inconsistency around nomenclature within this area of study. Second, despite the inconsistencies, there was clear evidence that noncognitive traits, in multiple forms, support college persistence. This leads to an examination of specific noncognitive traits in this study: grit and conscientiousness.

The Research on Grit

Multiple noncognitive traits are linked to academic achievement, including college persistence, for African American college students. Within the realm of personality psychology is the concept of grit. Grit has been defined as the "perseverance and passion for long-term goals" (Duckworth et al., 2007, p. 1087). Grit captures the notion of a sustained effort for a specific interest over time. The way in which grit has been defined, specifically the time element of the effort, has separated it from other noncognitive traits such as self-control, which is the ability to apply discipline to tasks in the short term, or perseverance, which is the ability to press through challenges in the short term, or resilience, which is the ability to rebound from adversity in the short term (Burks et al., 2015; Duckworth et al., 2007).

According to Duckworth et al. (2007), the concept of grit is linked to the Big Five factor conscientiousness. They argued that it might even be a subfacet of conscientiousness. Unlike the Big Five personality traits, which are considered relatively stable through a person's lifetime, grit has been shown to change with age and to be uncorrelated to IQ (Duckworth & Carlson, 2013; Duckworth et al., 2007). Further, it has

been shown to predict achievement even beyond conscientiousness. Conscientiousness is widely accepted as the personality trait that is most closely associated with academic performance. It is for this reason that grit has received plenty of attention. Educators, among others, are looking for new, noncognitive ways to improve student achievement. For some, grit is a promising option.

To test the grit construct, Duckworth et al. (2007) conducted several studies and found that, while grit and conscientiousness were correlated, they did not have the same predictive strength with regard to achievement; grit was stronger. The strength of this prediction, as well as the researchers' position that grit grows with time, led them to conclude that grit was more promising than conscientiousness. "Our intuition is that grit grows with age and that one learns from experience that quitting plans, shifting goals, and starting over repeatedly are not good strategies for success" (Duckworth et al., 2007, p. 1092). Like conscientiousness, grit is also associated with high levels of educational attainment and age. Duckworth et al. (2007) demonstrated that diverse individuals with some college experience or more education scored higher on the Grit Scale than those without any college experience. Those over 65 years old scored higher on grit than those ages 25—34. In another study, freshmen cadets at West Point who scored higher on grit than their peers were accurately predicted to remain in a summer training program. Also, participants in the 2005 Scripps National Spelling Bee ranked higher in the contest because they studied more (Duckworth, Kirby, Tsuykayama, Berstein, & Ericsson, 2011). Those students also scored higher on the Grit Scale. Duckworth and her collaborators have linked grit to rising levels of performance and age.

Researchers other than Duckworth and her colleagues have reported a linkage between grit and academic achievement, including college persistence. Bowman et al. (2018) conducted a large study involving 10,622 students across 16 universities. They looked at the interrelationships among several noncognitive traits, including academic self-efficacy, self-discipline, time management, and grit. They also studied each noncognitive trait and second-year retention, social adjustment, and college grades. They found a strong direct predictive relationship between noncognitive variables and social adjustment and institutional commitment, indicating that the higher the presence of these noncognitive variables, the better the social adjustment and the stronger the likelihood of persistence. They also found that noncognitive variables of self-discipline, time management, academic self-efficacy, and academic grit were strongly linked indirectly to college GPA and second-year college retention. They concluded that their findings had potential, suggesting, "It shows that noncognitive attributes potentially influence both social and academic outcomes, which may then lead to greater retention" (Bowman et al., 2018, p. 14).

Pate et al. (2017) determined that grit can increase college persistence. These researchers used data from 724 pharmacy students across three pharmacy programs and found that the highest GPA students (≥3.5) had the highest grit scores. Those who had earned Ds or Fs had lower grit scores. They concluded that grit level could possibly determine who would persist (Pate el al., 2017). They even suggested that the grit construct could be used as a reflective tool for students.

The correlation of grit to persistence was found in medical residents. Salles, Cohen, and Mueller (2014) reported in the *American Journal of Surgery* that surgical residents who were higher in grit were lower in burnout rates and higher in indicators of well-being. One hundred forty-one surgical residents were given the Grit-S Short Scale, the Maslach Burnout Inventory, and the Dupuy Psychological General Well-Being Scale. Of the residents, 52% were female. Race was not indicated in the study. They found that grit was predictive of well-being. The authors expected that, by understanding the relationship of grit to well-being, they would be able to give direction to the leadership of residency training programs on how to lower the attrition rate. As with many areas, grit did not appear to be the miraculous silver bullet. For instance, the researchers found that the relationship between well-being and grit was stable for only about 6 months.

Some researchers adhere so strongly to the grit construct that they have sought to demonstrate that it is a psychological process that can be observed. Silvia, Eddington, Beaty, Nusbaum, and Kwapil (2013) found a physiological side effect of grit, noting that where high levels of grit existed, higher levels of cardiovascular function existed also. They examined the impact of grit on effort and motivation in order to understand the biological process of being gritty. They relied on motivational intensity theory to test the notion of a physiological reaction to grit. Motivational intensity theory posits that effort changes according to the perceived level of difficulty and importance of a task. Silvia et al. (2013) tied grit to the notion of effort by suggesting that it could enhance the importance or reduce the perceived difficulty of a task, thereby producing a reaction in

the body expressed in the cardiovascular system. Participants were initially asked to complete a personality inventory, a demographic survey, and a computer-based cognitive assignment. A baseline reading of their cardiac autonomic activity was taken. This baseline was compared to a final reading taken after students were asked to complete a parity test, in which a word was couched between two numbers (i.e., 3 four 5). Participants were asked to ignore the word and look for the relationship between the two numbers. The physiological function of the heart and the two subfacets of grit—perseverance and consistency—were examined. Participants who scored higher on the perseverance subfacet demonstrated higher levels of cardiovascular activity. The researchers suggested that grit's influence on the importance of the task caused individuals to exert more effort. This study suggests that different levels of grit manifest in the human body. Grit, again, was linked to a positive outcome.

Grit, Gender, and Race

None of the cited studies discussed grit in terms of gender and race. This may be because the predictive level of grit as it pertains to race and gender holds little utility. Knowing that the amount of grit by race and gender differs may not be as valuable as understanding how race and gender operationalize the grit construct, including the acquisition, manifestation, and use of grit. It stands to reason that there should be a natural difference in the expression of grit as influenced by gender and race because researchers have already established that cultures are expressed differently (Yosso, 2005). This point is fundamental to understanding how grit can be employed as an intervention when working to increase college completion among traditionally

marginalized groups and in program areas where attrition rates are high. An examination of research with regard to race and gender is warranted.

Gender. The current research on grit does not support the notion of definitive gender differences with regard to this construct. Ali and Rahaman (2012) attempted to capture differences in grit between male and female fencers who represented Manipur State (India) in national championships. Participants, 20 men and 20 women completed the full Grit Scale. No gender differences were found.

Duckworth and Quinn (2009) conducted an online survey study of 1,554 participants, of whom 81% were female. They attempted to do three things: (a) validate the factor structure of perseverance and consistency on Grit-S (short version of the Grit Scale) with a large sample, (b) look for links with the Grit-S and the Big Five factors, and (c) check for predictive validity for career change and academic achievement. No gender difference was found in any of those three areas. Duckworth and Quinn (2009) conducted another study to validate the "informant report version of the brief form" (p. 169). Participants completed a self-report and a nominated individual of their choice completed an informant report on the participant. The majority of participants (89%) were female. Again, no gender differences were identified.

Unlike the studies above, Rojas, Reser, Usher and Toland (2012) found a gender difference with regard to grit. They examined the psychometric properties of items that measured academic grit in a set of 2,426, middle school students in Grades 4 to 8, of whom 30% identified as African American. While the researchers did not identify

differences according to race or ethnicity, they noted that girls had higher grit scores than boys. No explanation was offered.

The number of studies that examine grit in terms of gender is small. The studies above (with the exception of one), while they included significant samples of females, were not designed to look for grit/gender relationships. Rather, the mention of gender was an aside. Due to this gap in the literature, it is not clear whether grit and gender interact in a specific way.

Race. The connection of grit to race has been explored minimally. In fact, no research was found that explicitly demonstrated race-specific forms of grit. Yet, culturally responsive proponents, specifically within education, might suggest that the mechanism and expressions of grit in African American students and other students of color differ. Authors such as Gay (1997) and Boykin (1994) have argued that African American students bring forms of cultural capital to the learning process that often goes unrecognized, misinterpreted, or dishonored. In this way, the idea that there might be a racialized expression of grit is not farfetched. Examples of this idea can be found in literature pertaining to college among African Americans and Latinas.

Chang (2014) studied the effect of grit, race, gender, and academic performance in 342 students at a highly selective college. The sample was 67% female and 9% African American. His variables included SAT/ACT scores, high school GPA, freshman GPA, and data collected from the administered grit survey. In his findings, grit did not predict freshman GPA nor was it related to race or gender.

Vela, Lu, Lenz, and Hinojosa (2015) posited that certain positive psychology factors such as meaning of life, hope, and happiness and certain familial factors such as connectedness, cohesion, and identity influence grit in Latino college students. They asked the question, "To what extent do positive psychology and familial factors predict Latina/o college student's psychological grit?" (p. 292). To answer this question, they sampled 128 Latina/o students from a predominantly Hispanic-Serving Institution enrolling about 7,000 students and administered multiple questionnaires, including The Meaning in Life Questionnaire (MLQ), the Subjective Happiness Scale (SHS), the Hope Scale, the Pan Hispanic Familism Scale, and the Short Grit Scale. Students self-reported their GPA. Meaning of life, familial factors, and happiness were negatively correlated with psychological grit but hope was positively correlated. The researchers found that hope influenced academic achievement. They were surprised that familial factors did not support the existence of psychological grit but suggested that the scale that they used focused more on "attitudinal familism" (p. 298). They speculated that behavioral familism scales might produce a different outcome.

As with the study on Latina/o college students, studies of grit with regard to African Americans have begun with the assumption that grit exists. Researchers are less concerned with the presence of grit relative to other races but rather seek to explore how grit affects performance within the race. Strayhorn (2014) examined how grit predicted academic performance among African American male college students attending a PWI. Strayhorn briefly reviewed the literature regarding factors such as racism (direct and indirect), social relationships with diverse groups, and cognitive/behavioral traits that

affect African American males at a PWI. He sought to determine whether grit predicted grades above traditional means. One hundred forty African American males participated. They represented a traditional collegiate demographic, with 86% living on campus in dormitories and one third of them being science, technology, engineering, or mathematics majors. Students' self-reported grades were correlated with their responses to the eight-item Grit-S scale. "Grittier Black males earned higher grades in college than their less gritty same-race male peers" (p. 5). Strayhorn noted that these grittier students tended to have higher high school grades and ACT scores. He recommended mentoring, "structured opportunities" such as "working in groups and listening to guest speakers," and specific academic program advising for African American collegiate males (Strayhorn, 2014).

Bowman, Hill, Denson, and Bronkema (2015) examined how the grit construct affected the college experience (i.e., satisfaction) and GPA. They studied the grit construct in 417 students from two universities: Bowling Green State University and the University of Wisconsin La Crosse. Approximately 20% of the participants were students of color and 76% were female. For this study, African American students and other races/ethnicities were combined for a more robust finding. The researchers found no significant difference in grit, for the perseverance subfacet, or the consistency subfacet, for students of color or when compared to White students or with men when compared to women. In short, even when controlling for SES and mother's educational level, no demographic differences were apparent. "Of the six significant moderation effects (identified across 42 total tests within the three samples), three found larger

relationships for grit among students of color, and three found larger relationships among White students" (p. 644). However, grit was related to more than just GPA. They found correlations especially with the perseverance subfacet with nonacademic elements such as satisfaction with college, relationships with faculty, and intent to stay in school.

Yates et al. (2015) conducted a mixed-methods study to understand the role of grit in recruitment, retention, and teacher certification of African American males. Their research was driven by the fact that the number of African American males becoming teachers has decreased in recent years. The quantitative portion of the study was developed using the Grit-S Scale. The quantitative findings did not align with findings by Duckworth et al. (2007) that showed a grit-GPA correlation. For the African American male teachers, the relationship was not statistically significant; in fact, lower GPAs were associated (not statistically significantly) with grit. No explanation was offered for these findings. However, the study contained the qualitative perspective of five participants. Yates et al. wanted to know whether grit could be taught and, if so, under what conditions. They concluded that the participants' grit was learned via the role of spirituality, family, and life experiences.

Mixed Findings on Grit

The findings of research on grit, gender and race have demonstrated a positive impact of this noncognitive variable on academic achievement and college persistence. However, not all research on this construct has been suggestive of this.

The research on grit has been growing rapidly and not all of the findings have been positive. Some researchers have questioned the legitimacy of grit as an independent

construct and have wondered whether grit is not just a new name for preexisting constructs already found in literature (Credé, Tynan, & Harms, 2017; Muenks, Wigfield, Yang, & O'Neal, 2017). Still, some have found that the grit construct, when applied to academic achievement, has fallen into deficit domain and has been dangerously applied to students of color, especially in light of the notion that the public narrative has outpaced the research supporting it.

Possible jangle effect? Some researchers are not convinced that grit, as a noncognitive trait, is a distinct trait, different from what already exists in the literature. Muenks et al. (2017) studied grit in 203 private school students, 12% of whom were African American, and 336 college students, 7.6% of whom were African American. They sought to determine whether grit changed at age stages and whether grit contributed to achievement differently from other variables such as self-control, cognitive regulation, and behavioral engagement. While they found that grit shared a small variance with grades, they discovered self-regulation to be a better predictor of grades. They questioned whether the "jangle effect" was taking place, saying that perhaps the grit construct was not well defined and therefore might have been the same as other constructs by a different name.

> Grit, cognitive self-regulation, and engagement overlap greatly conceptually and empirically, and so it is not surprising that each explain about the same amount of variance. . . . These results suggest a jangle fallacy (Block, 1995; Whiteside & Lynam, 2001) may be operating; that is, there are different names being given to quite similar constructs. (Muenks et al., 2017, p. 615)

Credé et al. (2017) also questioned whether the grit construct is an independent construct, separate from conscientiousness. Through a large meta-analysis, which took into account data from 66,807 individuals across 88 independent samples, they examined the structure of grit and its correlations to preference and student college retention.

> Despite the widespread enthusiasm for grit as a potentially novel predictor and determinant of performance there are sound empirical and theoretical reasons why a critical reappraisal of the nature of the grit construct, its contributions to our understanding of performance and its general position within the nomological network may be warranted. (p. 492)

After an extensive search and coding strategy, they used the interactive meta-analytic method based on random-effect model and examined grit against grades and found a weak nonstatistical correlation. "Our findings indicate that current evidence does not support the claim that grit is a higher-order construct that is characterized by two lower-order facets" (p. 502). They suggested that the grit construct be narrowed to focus on the perseverance factor. As for college persistence, the researchers found the construct to be potentially useful.

> Grit predicts retention approximately as well as many more traditional predictors of retention such as cognitive ability and high school grades-although not as well as other noncognitive predictors. This suggests that the assessment of grit may be useful in settings in which retention is problematic (e.g., higher education) because it may allow researchers to identify individuals who might benefit the

most from interventions that target grit or offer assistance in some other fashion. (p. 503)

For these researchers, the claims about grit have been mixed. They concluded that "grit as it is currently measured does not appear to be particularly predictive of success and performance and also does not appear to be all that different to conscientiousness" (p. 504). They called for a more rigorous assessment scale of the construct.

Grit research versus the grit narrative: A deficit error. The two studies cited above were among a group of studies that actively stated the need for a better way to measure grit and called for a tempering of the claims of grit's impact on performance. These researchers were not alone in their failure to accept that the grit construct's growing popularity is warranted. Paul Thomas (2014), professor at Furman University, challenged the public's enthusiasm for the construct, charging that it is merely a smokescreen for a poorly constructed educational system and racism. Thomas argued that a focus on grit and students of color has detracted from a focus on fixing public education by falling into the deficit error of placing blame on the student. It is important to note that Thomas made a significant distinction between grit research and the grit narrative and suggested that the latter has become a code way of saying that African Americans and others of color are lazy or undedicated to learning.

> We must acknowledge that the "grit" narrative is primarily directed at-and the "no excuses" ideologies and practices are almost exclusively implemented with-high poverty African American and Latino/a populations of students. And we must also acknowledge that the popular and misguided assumption is that

> relatively affluent and mostly white students and schools with relatively high academic achievement data are distinguishable from relatively impoverished and mostly African American students because of the effort among those populations (as well as stereotypes that white/affluent parents care about education and AA/Latino/a parents do not care about education)—instead of the pervasive fact that achievement data are more strongly correlated with socioeconomic status than effort and commitment. (p. 1)

Thomas implied that, if researchers are not careful, the construct of grit will perpetuate the largely held belief that the lack of achievement among African Americans is due to internal deficiencies. His ideas have been supported by other researchers (Chambers, 2009; Ladson-Billings, 2006; Ris, 2015; Steele & Aronson, 1995), who acknowledge that some achievement problems exist but argue that the problems are only part of a larger issue of inequity in public education. Scholars such as Thomas have been right to sound a note of caution.

Kraft and Grace (2015) also offered a cautionary reminder about how little is understood about how grit works and argued that it was premature to assume that teachers could foster grit meaningfully. Using data from the Measures of Effective Teaching (MET) Project, the researchers had students respond to questions designed to measure both grit and growth related to student achievement and teacher experience. The MET Project incorporated data from 135,000 students and 3,000 teachers across Charlotte Mecklenburg, Dallas Independent Schools, Denver Public Schools, Hillsborough County Public Schools, Memphis Public Schools, and New York City

Schools. The researchers found that experience had an impact on student achievement but did not have an impact on growth mindset or grit. Teachers' impact on standardized test scores had only a modest impact on students' ability to answer open-ended questions on growth mindset and on grit and effort. Kraft and Grace (2015) said, "It is unclear whether this pattern is due to the limited attention teachers devoted to developing these skills, the lack of high-quality professional development opportunities in this area, or the very nature of the skills themselves" (p. 36). The research left many questions to be explored and the authors cautioned against the belief that a teacher could readily change a student's level of grit.

Thomas's (2014) work demonstrated that a focus on grit has potentially become a red herring for the larger issue of a broken education system. The MET study demonstrated how asking teachers to foster grit has not necessarily proven useful. Despite this, it has taken on a commercial tone in popular media and education reform circles at a perilously feverish pace. Paul Tough's book *How Children Succeed: Grit, Curiosity and Hidden Power of Character* catapulted the term into widespread usage. In the book, Tough (2013) reported research that suggested that physiological function of the brain is altered by early exposure to stress and long-term intense exposure to stress. He contended that this was the explanation for why many students in poverty-stricken areas were not as successful as their level of talent and intellect would suggest.

> Character strengths that matter so much to young people's success are not innate; they don't appear in us magically, as a result of good luck or good genes. And they are not simply a choice. They are rooted in brain chemistry, and they are

> molded in measurable and predictable ways, by the environment in which children grow. (p. 196)

Grit, as well as self-control, was two of those character strengths that he suggested should be taught.

Articles about the Knowledge Is Power Program (KIPP) and other charter school networks have also popularized the concept by featuring it prominently in the character report card given to school attendees, most of which are African American and Latino (Tough, 2013). Even the federal government has joined this camp in its 2013 publication of *Promoting Grit, Tenacity and Perseverance: Critical Factors for Success in the 21st Century* (Schechtman, DeBarger, Dornsife, Rosier, & Yarnall, 2013). This report cited research regarding ways in which schools promote the development of grit, goal orientation, and perseverance in students. However, the report noted that there is an unexplored taboo side of grit, namely, that encouraging blind or uninformed grit in students does not always lead to realistic self-assessment. Duckworth et al. (2007), the original proponents of grit research, suggested that grit can be taught as well, even though they noted that the construct is still relatively undeveloped (Duckworth & Gross, 2014).

The education field is not the only industry that has endorsed grit in a deficit-oriented way. The Chair of the American Bar Association Commission on Women in the Profession, Bobbi Liebenberg, initiated a project on increasing growth mindset and grit in female attorneys. The project has a complete online toolkit, replete with discussion scenarios, programs, assessment tools, speakers' bureau, PowerPoint slides, and

instructional materials to learn and teach grit (Rohne, 2015). The underlying assertions that women have potentially inadequate levels of grit is troubling. It is interesting that the American Bar Association, which now has equal numbers of female attorneys entering the profession as men, does not have a grit project for men. This was justified in a note on their website contending that "by the time women [attorneys] arrive at the most senior leadership levels-non equity and equity partners—they represent only 29 percent and 17 percent of their peers respectively" (Rohne, 2015, n.p.). There have been many reasons for women not reaching the highest rungs of leadership in law. Grit may or may not play a role. This is why more research about grit is needed. A clear understanding is needed before the general populace continues to misconstrue the grit function and unwittingly reinforces stereotypes.

Bazelais, Lemay and Doleck (2016) looked for a correlation between grit, GPA, and final examination grade in a beginner's physics course among 156 second-semester freshman; they were not successful. These researchers were purposeful in selecting a participant sample of average ability, citing the tendency among grit researchers to use high achievers. They not only concluded that grit did not predict achievement, they stated,

> Clearly lower SES are not systematically less gritty than their peers, only that there are institutional biases that can impede equality of opportunity….Focusing on individual difference at the expense of social-institutional factors runs the risk of biasing analyses from the very start and ignore the pernicious effect wrought by system inequities which often plague our institutions. (p. 41)

It has been demonstrated that the research on grit, although it appears to be promising, is inconsistent. There is still little understanding of how grit works and what it looks like for anyone; therefore, there is even less understanding of how grit can truly be fostered (Duckworth & Eskreis-Winkler, 2013). Almost no research exists that demonstrates how grit is operationalized in a racially nuanced way. Therefore, the application of grit as an intervention for students of color could be deemed fraudulent. The current study aimed to examine grit and conscientiousness as noncognitive variables that potentially affect the college persistence process in high-achieving African American students. To avoid promulgating a deficit perception of grit, the findings of the current study were dependent on the voices of African American students who confirmed the existence of both attributes and articulated how they used these strengths to build momentum toward graduation.

The Research on Conscientiousness

Conscientiousness researchers have linked this trait to academic achievement. Perhaps one of the earliest and best-known personality traits to be associated with academic achievement was conscientiousness. It has been most closely and consistently linked to academic outcomes (Furnham, 2012; Khine & Areepattamannil, 2016; Poropat, 2009; Sanchez-Ruiz et al., 2016) and is understood to be the propensity for hard work, self-control, and goal orientation (Roberts et al., 2014).

Conscientiousness belongs to a family of personality constructs called the Big Five, which also include openness, extroversion, agreeableness, and neuroticism. According to Roberts et al. (2014), conscientiousness is made up of subfacets:

orderliness, industriousness, self-control, and responsibility. These are the most agreed upon (Roberts et al., 2014). Other researchers have included persistence as a subfacet of conscientiousness (De Raad & Peabody, 2005; MacCann, Duckworth, & Roberts, 2009). Orderliness is the tendency to be prepared and organized and neat; industriousness is the willingness to work hard and be goal oriented (Costa et al., 1991; Roberts et al., 2014). Self-control is the ability to control one's impulses; responsibility is the ability to follow through on promises and commitments (Roberts et al., 2014). There are other subfacets that vary according to researcher. Conventionality, for instance, is included only in conception of conscientiousness offered by Costa et al. (1991) and it describes the tendency to follow the law.

Many have established that conscientiousness predicts academic achievement in students. Poropat (2009) conducted a meta-analysis of data from more than 70,000 participants and found that conscientiousness was as strong a predictor, from elementary through high school, of academic outcomes as intelligence, although it predicted academic outcomes independent of intelligence. In Poropat's analysis of the other Big Five traits, agreeableness, neuroticism, and openness were also found to be significant predictors of academic performance, declining in strength with age. Wagerman and Funder (2007) reported a similar finding, with 18% of freshman grades and 37% of senior college grades explained by conscientiousness. For these researchers, the effect of conscientiousness became stronger with age.

Noftle and Robins (2007) examined conscientiousness and found it to be the strongest predictor of high school and college GPA. What made their study unique was

that they examined all Big Five traits for correlations to GPA (self-reported) and SAT (self-reported) performance across four independent samples, one of which included more than 10,000 college students. They found that openness was related to higher verbal SAT scores across all four samples. They found that conscientiousness was strongly related to GPA, even when controlling for SAT performance. They found that conscientiousness was related to SAT scores. They determined that conscientiousness was a stronger predictor of GPA than SAT scores. The researchers asserted that, while the data were robust for the link between conscientiousness and GPA, conscientiousness was overall a very small portion of the variance in the achievement process. They posited that other factors (e.g., financial aid, test-taking skills) also played a role in achievement. While the findings from these researchers were aligned to findings from other conscientiousness researchers, Noftle and Robins encouraged caution in using the personality construct as an intervention.

> Our findings indicate that it may be useful for educators to foster and facilitate optimal personality development in their students, in addition to teaching the standard curriculum. However, before investing in interventions to modify personality in the hope of promoting academic achievement or using personality tests as predictors in a selection battery, we believe that further research is needed to establish the causal direction of the effects, to clarify the mediating processes, and to better specify the particular facets involved. (p. 128)

Dumfart and Neubauer (2016) were more direct in stating that the singularly most important noncognitive factor predicting academic performance was

conscientiousness. In their research, they used the self-reported grades of 361 secondary school students. The administered a modified Big Five inventory, an IQ test, and the Short Grit Scale. Both IQ test results and conscientiousness were correlated with GPA, oral language performance, and science performance. Intelligence was the strongest predictor, even for all three. But next to the cognitive indicator of academic achievement, conscientiousness held the largest amount of variance in GPA.

Trapmann, Hell, Hirn, and Schuler (2007) performed a sweeping meta-analysis of 58 studies from 15 countries (Australia, Austria, Bangladesh, Belgium, Canada, Germany, India, Israel, Malaysia, Netherlands, Norway, Philippines, South Africa, UK and US). Of all Big Five traits, only conscientiousness strongly predicted academic achievement, as measured by self-reported grades.

The research on conscientiousness is far more extensive than that on grit (Roberts et al., 2014). Studies have demonstrated that conscientiousness is linked to academic achievement at all ages, even college. The link between conscientiousness and college persistence has also been documented in college persistence research.

Laskey and Hetzel (2011) examined 3 years of data for 115 students in the Conditional Acceptance Program (CAP) at a private university in the Midwest. They collected the college GPA, high school ACT scores, and high school GPA and administered the NEO-FFI personality inventory to understand the impact of these measures on college retention. They found the strongest positive correlation for conscientiousness, followed by statistically significant correlations for agreeableness and extraversion. Students who were high in conscientiousness and agreeableness tended to

use the on-campus tutoring center more. Neither ethnicity nor gender was associated with retention in this sample with 61% students of color. In another example, MacCann, Fogarty, and Roberts (2012) examined data for 556 community college students and found that time management, an example of conscientious behavior, was a significant predictor for part-time students but not for full-time students.

Robbins et al. (2004) conducted a meta-analysis of 109 students regarding the effects of academic goals, academic self-efficacy, social support, and academic related skills such as time management and achievement motivation on GPA and retention. These researchers used achievement motivation, which for them was the propensity to "complete tasks undertaken and strive for success and excellence" (p. 267), as a proxy for conscientiousness and found that some of these constructs predicted retention. Academic goals, academic self-efficacy, and academic-related skills most strongly predicted retention. As noted earlier in this literature review and seen in the current study, similarly operationalized noncognitive traits were given different names. Achievement motivation was the strongest predictor of college grades. Motivation (intrinsic motivation) was also mediated by conscientiousness and thus was positively associated with GPA in the Komarraju, Karau, and Schmeck (2009) study of 308 college students.

Burks et al. (2015) studied the predictive value of conscientiousness on college graduation within 4 years and within 6 years. Conscientiousness strongly predicted 4-year graduation and predicted 6-year graduation even more strongly. These findings were not unique. What was unique was that only one of the subfacets, industriousness,

focused on being "proactive" and hardworking, was significant in the prediction model. The other subfacet did not show correlation.

There has been no shortage of studies linking conscientiousness to academic achievement and persistence in college students. As noted early, there has been a growing number of studies that found relationships among grit, academic achievement, and persistence in college students. This has led some researchers to question whether grit and conscientiousness are actually the same construct. Literature was presented that would suggest this is possibly the case. Some literature has suggested that grit could be one of the conscientiousness facets, in addition to industriousness, orderliness, self-control, and responsibility among others (Duckworth et al., 2007).

The Conscientiousness and Grit Connection

While some researchers have argued that grit is not a new noncognitive personality attribute, others have suggested that it should more accurately be considered a potential subcomponent of conscientiousness. These researchers contended that grit, as a potential subfacet of conscientiousness, has been shown to be a more accurate predictor of achievement outcomes beyond conscientiousness itself. Duckworth et al. (2007) stated that grit overlapped with the achievement feature and differed from both the dependability facet and the self-control facet of conscientiousness.

Ivcevic and Brackett (2014) accepted the notion that grit is a subfacet of conscientiousness. "The conceptualization of Grit as a lower-level trait in the Conscientiousness domain is supported both conceptually—with persistence being a component of Grit and emerging as a facet of conscientiousness in some analysis"

(p. 30). However, they concluded that it does not predict student achievement or student satisfaction, as Duckworth et al. (2007) suggested. They found that only conscientiousness and emotion regulation ability were such predictors. Their study was based on 213 private school students from New England, 4.3% of whom were African American and 3.8% Hispanic. They found that grit might have been relevant only when students had academic assignment choices. "Thus, Grit might be a better predictor of achievement in self-selected narrower goals, such as performance in elective courses or extracurricular pursuits" (Ivcevic & Brackett, 2014, p. 33).

Conscientiousness and Race

The ability of conscientiousness to predict or even be correlated with achievement in African American students has not been found to be conclusive. Some researchers contend that it is not significantly related to achievement in African American students (Lundberg, 2013).

Metofe, Gardiner, Walker, and Wedlow (2014) addressed this issue directly. In their study, they assessed whether conscientiousness, self-efficacy, intrinsic motivation, and extrinsic motivation predicted academic achievement for African American collegians. They found self-efficacy to be significantly correlated with performance. A high sense of self-efficacy was reflected in higher GPAs. Collectively, self-efficacy, self-esteem, intrinsic motivation, and extrinsic motivation accounted for 15.7% of academic achievement variance in the sample. Conscientiousness added only 1.5% more, which did not support the hypothesis that conscientiousness predicted academic performance for African American students. The researchers speculated that this finding

might be due to “measurement issues of the instrument used to measure conscientiousness” as well as dishonest answers by participants (p. 64). Because their study did not use the grit construct, it is not known whether the outcome would have been different.

Keough, Biddeford, and Maertz (2011) conducted a study exploring the utility of personality constructs in the college admissions process. African American students and White students were found to have only one difference regarding their personalities. Conscientiousness predicted academic performance for both White and African American students. Extroversion was the only personality difference between the two races, with African Americans being less extroverted. Conscientiousness was found to be the closest predictor of academic outcomes for African Americans. Openness to experience, agreeableness, and neuroticism were not related to achievement, in contradiction to the Lundberg (2013) study. In fact, Keough et al. (2011) reported that openness to experience was negatively related to achievement. Of the five traits, only conscientiousness significantly predicted outcomes. They concluded that personality traits should be considered in the college admissions process for all students in order not to disadvantage students with lower GPAs and SAT scores. These findings were different from those reported in the Metofe et al. (2014) study.

Like the research on a number of noncognitive traits, including grit, more research is needed on conscientiousness. Generally, conscientiousness researchers have found a link between conscientiousness and college attainment. The utility of conscientiousness, as it has related to African Americans and college persistence, is still

unknown. Valuable insight into this noncognitive personality attribute, as with grit, was generated through the interview data of the 12 high-achieving African American students who participated in the current research project.

Mediating Effects of Race on Grit and Conscientiousness During College Persistence

It has been posited in this literature review that African Americans are strong believers in college. A 2014 study commissioned by the Gallup Poll and Lumina Foundation assessed Americans' opinion about college; 73% of African Americans said that it was very important to increase the number of Americans with degrees, compared to 56% of Whites and 72% of Hispanics. Also, 74% of African Americans stated that college was essential for getting a good job. African Americans were generally the most optimistic racial group about college attainment (Gallup-Lumina Foundation, 2014). Cabrera and La Nasa (2001) conducted a large study (N = 2,968,427) based on eighth graders in the NELS: 88 database and found that SES status was directly correlated with who attended college. The researchers also noted that African Americans, along with Asians, were "13% more likely to apply to college than their White counterpart" (p. 140). Perna (2006), using a 1992 database, reported a similar finding. African Americans have been making the effort to obtain a college degree.

Although most African Americans are optimistic about college, even strongly recognizing its value, the actual experience of college can be distressing (Caplan & Ford, 2014). For some African Americans, momentum in the college persistence process is marred by the lack of adequate preparedness in high school and exacerbated by

expensive and time-consuming remedial courses at the college level (Davis & Palmer, 2010). For other African American students, college persistence is slowed because the cost of college is prohibitive. Denning (2017) determined that 26% to 50% of the increased time past 4 years to complete a college degree could be explained by changes in college tuition. However, for the majority of African American college students, particularly at PWIs, the adverse experiences of stereotypes (Steele & Aronson, 1995) and microaggressions (Solórzano et al., 2000) have made college persistence challenging (Caplan & Ford, 2014). The Strada-Gallup 2018 survey reported that almost three quarters of White students said that a professor had mentored them; only 42% of minorities (African American numbers were not delineated) had been mentored by a professor (Strada Education Network, 2018). Students of color, including African Americans, are subjected to a racialized campus environment and are not intentionally supported on campus.

Many authors have written about the racialized campus environment and its challenges (Caplan & Ford, 2014; Fries-Britt & Griffin, 2007; Harper & Davis, 2012; Solórzano et al., 2000). The Voices of Diversity Project, a large mixed-methods study, detailed 35 findings on the experiences of structural racism that their study participants encountered. Data were collected from at least 50 participants in each race/ethnic category: African American, Latino, Asian and Native American students of color. Their first finding unequivocally stated,

> On all four campuses, racist and sexist treatment often take the form of micro-aggression, causing their targets confusion, sadness, self-doubt, anxiety, and frustration and constituting drains on their energy and attention. (p. 40)

Many African American college students have faced a challenging environment in which to persist.

Despite these challenges, some African Americans persist and continue to care deeply about their education and the future (Fries-Britt & Griffin, 2007; Griffin, 2006; Harper & Davis, 2012). Researchers have begun to investigate the strategies that these successful students use to maintain focus in spite of the campus environment (M. R. Carter & Barrett, 2006; Strayhorn, 2013). For example, in one quantitative study, African Americans were found to be high in positive self-concept; this noncognitive trait was more strongly related to achievement for this group than for other races (Tracey & Sedlacek, 1987). In another example, Griffin (2006) noted in her qualitative study that high-achieving African Americans "described relying on resilience, effort and hard work to overcome" in the face of the rigors of the university and ward off stereotypes (p. 394). However, more research is needed. Farruggia, Han, Watson, Moss, and Bottoms (2018) stated, "They [noncognitive factors] are understudied at the postsecondary level, especially among ethnically diverse, urban populations" (p. 309).

A review of the literature has demonstrated that grit and conscientiousness are important noncognitive personality attributes that may play an essential role in the college persistence process. The current study was conducted to learn more about how these attributes have supported high-performing African American students. Results

demonstrated that they are using these noncognitive attributes in a racially nuanced way. Universities that want to see more African Americans graduate would do well to recognize how these skills function for these students and intentionally harness it so that both grit and conscientiousness can thrive *in* the environment, not *in spite of* the environment.

Conclusion

The focus of this literature review was to develop a shared research platform from which to test the noncognitive personality attributes of grit and conscientiousness as predictors of college persistence for high-performing African American students. The review began by examining the state of college attainment, from aspirations to completion, among African American students today. Next, the urgent need to conduct more asset-based research on the connection between college persistence and noncognitive traits connection was established, so as to not to become misguided by studies, such as that by Lundberg (2013), that have the potential to exacerbate deficit thinking by labeling an entire group as devoid of an important academic asset.

After appraisal of the Lundberg study, sociocultural approaches to college persistence—social capital, cultural capital, and human capital—were assessed and the idea of noncognitive traits was borrowed from the last. Although no singular theory offered a solution to challenges encountered along the path to college completion for African Americans, human capital personality theories were found to be promisingly associated with academic skills needed for college via grit and conscientiousness. A brief introduction to the noncognitive personality attributes concept was presented with

acknowledgement of the confusing way in which constructs in this area of research have been defined and named.

A deeper examination of two specific noncognitive personality attributes was presented. Grit was defined and described as it related to college achievement and persistence, race, and unfortunate trends in concept development. This was followed by a review of conscientiousness and a discussion of the connection between conscientiousness and grit, as well as race. The chapter concluded with a call for more research about how race potentially mediates the use of grit and conscientiousness.

CHAPTER III

METHODS

The primary goal of this study was to address research questions regarding noncognitive personality attributes, grit and conscientiousness, and their relationship to college persistence. Separate instruments to measure these variables were utilized to this end. The sequential explanatory mixed-methods research methodology used to address the research questions is presented in this chapter with an explanation of how the chosen study design best supports research findings. Then the chapter is subdivided into two sections: quantitative and qualitative. Each part is organized into four subsections: (a) population and study sample, b) instrumentation, (c) data collection and study variables, and (d) data analysis (Creswell, 2014). The chapter concludes with a summary.

Study Design

This study used a mixed-methods research design. Mixed-methods research has the advantage of addressing complex questions that neither a quantitative or qualitative methodology alone can answer or answer completely (Creswell, 2014; Onwuegbuzie & Leech, 2004, 2005).

> Research problems suited for mixed methods are those in which one data source may be insufficient, results need to be explained, exploratory findings need to be generalized, a second method is needed to enhance a primary method, a theoretical stance needs to be employed and an overall research objective can be best addressed with multiple phases or projects. (Creswell, 2014, p. 7)

Onwuegbuzie and Leech (2005) referred to those who conduct research using mixed methodology as pragmatic researchers and suggested that this approach to research is not only more flexible but allows weaknesses in each structure to compensate for one another. “Pragmatic researchers also are more able to combine empirical precision with descriptive precision” (p. 9).

Many types of mixed-methods research structures are available to researchers (Creswell, 2014). The one chosen for this study, sequential explanatory mixed methods, was most appropriate as it allowed the initial findings from the quantitative portion of the study to be clarified through the voices of high-achieving African American college students. Collected and analyzed quantitative data were interpreted through the qualitative data findings. “Quantitative results can net general explanations for the relationships among variables, but the more detailed understanding of what the statistical test or effect sizes actually mean is lacking. Qualitative data and results can help build that understanding” (Creswell, 2014, p. 8).

> By utilizing quantitative and qualitative techniques within the same framework, mixed methods research can incorporate the strengths of both methodologies. Most importantly, investigators who conduct mixed methods research are more likely to select methods and approaches with respect to their underlying research questions, rather than with regard to some preconceived bias. (Johnson & Onwuegbuzie, 2004, p. 23)

This sequential explanatory mixed-methods research structure was employed to interpret and explain specific noncognitive personality attributes that influence college persistence and explain how these traits function.

The quantitative data findings are presented in detail in Chapter IV and the qualitative data findings are presented in Chapter V. The complexities of the connection between grit and conscientiousness, race-related variables, and college persistence among high-achieving African American students as measured by GPA is explained and interpreted in Chapter VI. Only by listening to the voices of these students was it possible to understand how and why this connection works. A more complete picture is drawn through a blended pragmatic approach than can be achieved with either a qualitative or quantitative approach alone (Onwuegbuzie & Leech, 2004).

Quantitative Section

The quantitative portion of this study was conducted using data from the 2015 MSL dataset (Dugan, Komives, & Owen, 2006). The MSL dataset consists of eight scales; it has been administered to more than 610,000 students in more than 350 institutions of higher learning since its inception. The MSL database was originally created to capture information on parts of the college environment that influence leadership development in students (Dugan & Komives. 2007). Students are asked to answer questions about their current experience and to reflect on pre-college experiences. More than 400 variables, scales, and composite measures were ultimately collected. Four theoretical bases inform the MSL database. The central theoretical framework is the social change model. The MSL scale is based on contemporary

leadership theory, "social psychology and human development, and critical and justice base perspective" (MSL, 2018, n.p.). Data for the MSL have been collected since 2006. Data were collected also in 2009, 2010, 2011, 2012, 2015, and 2018.

Population and Study Sample

The 2015 MSL dataset contained survey response data for 96,588 students (J. Dugan, *MSL Codebook* delivered by personal email communication, January 10, 2018); however, only data from the 5,444 African American participants were considered for this study. In response to the survey item asking students to choose their "broad racial group membership," students had the option of White/Caucasian or Middle Eastern/Northern African, African American/Black, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, Latino/Hispanic, Multiracial, and Race Not Listed. Data from students who selected African American/Black were included in the current study. Students were also able to indicate their ethnic group. When asked to do so, the African American student participants identified themselves as 73% (3,974) Black American, 17.6% (960) African, 6.8% (370) West Indian, 0.6% (30) Brazilian, 3.7% (199) Haitian, 7.6% (416) Jamaican, and 4.5% (243) Race Not Listed. In all, 96.2% (4,977) of the 5,444 African American participants were enrolled full time and 96% were undergraduate students. Only 42% had a GPA of 3.0 or higher.

Not all participants who self-identified as African American/Black were included in this present study. Participants were included only if they met the following criteria: (a) full-time student, (b) undergraduate status, and (c) GPA of 3.0 or higher (self-reported). This yielded a total of 2,323 student participants who fit the sample criteria.

Students with less than a 3.0 GPA were excluded. Also, 43 students with a 3.0 GPA were dropped from the sample because their classification (as an undergraduate student) was unknown. This allowed the sample to be completely free of potential graduate students. In the participant pool there were 617 males, 1,658 females, and 5 transgender students. Approximately 20.5% of the participants were first-generation college students. Of the 2,280 participants, almost 35% had a GPA between 3.5 and 4.0.

A significant portion of the MSL participants reported a family income that required financial assistance. It was not surprising that a greater portion of participants at the lowest combined total income levels (≤ $40,000) attended public universities rather than private universities at that same income level (Cabrera & La Nasa, 2001; Perna, 2006). The opposite was true at the highest income levels (≥ $200,000). One third of the participants (29.9%) estimated their parents' total combined income to be $39,999 or less, 10.6% estimated their parents' combined total income to be $40,000 to $54,999, 10.6% estimated their parents' combined total income to be $55,000 to $74,999, 8.7%, estimated their parents' combined total income to be $75,000 to $99,000, 3.7% estimated their parents' combined total income to be $150,000 to $199,000, and 3.2% estimated their parents' combined total income to be $200,000 or higher. Slightly more than one fifth of the study participants (23.5%) chose not to respond to the question of income or did not know their parents' income.

Study participants provided information regarding their parents' education level. One hundred twenty-nine participants (4%) had parents with less than a GED or high school diploma. Slightly fewer than 20% had only a high school diploma and 28%

reported some college up to an Associate degree. A little more than half (53%) reported having a parent with a bachelor's degree, master's degree, or doctorate. Specifically, 723 (23%) had parents with a bachelor's degree, 599 (19%) had parents with master's degree, and 6.9% had parents with a professional degree (e.g., JD, MD).

Both the size and type of college/university varied for the study sample. The majority of the participants (56%) attended large institutions with 20,000 or more students; only 13.4% attended universities with 499 to 1,000 students. Both private and public universities were represented in the sample. Participants did not attend for-profit universities or online universities. Of all participants, 43% attended private universities and 57% attended public universities. The colleges/universities in the sample were placed on the following scale: open enrollment, competitive, very competitive, highly competitive, and most competitive. The data regarding institutional selectivity skewed slightly toward more competitive universities, with the majority of the participants (58%) attending colleges that were considered very competitive or the most competitive in the United States. It should be noted that 73% of the participants attended very competitive or most competitive colleges/universities.

In terms of class standing, 24.1% were freshmen, 20.6% were sophomores, 22.6% were juniors, and 31.9% were seniors (including 4th year and beyond). The majority of the participants (82%) were traditional-age students (24 years or younger).

Instrumentation

The MSL was designed by Dugan et al. in 2006 to gather information about development leadership in college students.

> The purpose of the Multi-Institutional Study of Leadership (MSL) is to improve education and society by enhancing knowledge regarding contemporary youth leadership development as well as the influence of higher education as a context in which building leadership capacity occurs. To examine student leadership values at both the institutional and national levels with specific attention to the environmental factors that influence leadership development in college students. (p. 2)

The central theoretical framework is the social change model based on socially responsible leadership theory (Dugan, 2015). Dugan reported that Tyree created the Socially Responsible Leadership Scale (SRLS), of which the 103-question version became the central scale used in early MSL data collection. According to Dugan (2015), reliability levels of this scale ranged from .69 to .92 and construct validity was established using peer item review. Later, a 68-question revised scale called SRLS-R2 was used in MSL data collection but demonstrated a reduction in reliability. As the scope of the MSL has expanded, a 71-item version of SRLS is now employed. According to Dugan et al. (2006), the MSL scale is grounded in "contemporary leadership theory, social psychology and human development, and critical and justice base perspective" (Dugan & Komives, 2007, n.p.). The social change model of leadership development posits eight leadership values: consciousness of self, congruence, commitment, collaboration, common purpose, controversy of civility, citizenship, and change. These eight values are examined across three domains: the individual, the group, and the community/society (Dugan, 2015).

The MSL's reliance on the SRLS scale has generated some concerns regarding its cross-sectional design and the self-report nature of the SRLS questions. Such drawbacks of self-report inventories include social desirability, the halo effect, clarity of measures, and item format (Dugan, 2015). According to Dugan and Komives (2012), the precision of the SLRS with regard to these unintended pitfalls has improved.

> Through pilot tests and on-going psychometric research on the SRLS, MSL researchers have explored these concepts and continued to evolve the rigor of the SRLS when used in self-report and cross-sectional designs. This is further bolstered by studies specifically on the topic of leadership, which found self-reports to be generally accurate (Turrentine, 2001; Posner, 2012). (Dugan, 2015, p. 28)

Dugan (2015) reported that the construct validity of the SLRS was established in three parts: content, structural, and criterion. The original work by Tyree, author of the social change model, fortified the validity of the values measure through SLRS (Dugan, 2015). However, an expert review process led to removal of the change scale for the 2015 data collection process.

> MSL research has allowed for greater empirical testing of the psychometric and theoretical bases of the SRLS and Social Change Model. In 2012 this led to the removal of the Change Scale from the study as the measure was sound, but the latent construct being measured did not adequately align with the theoretical conceptualization (i.e., the scale measured comfort with transition in lieu of one's overarching ability to engage in social change work). Empirical testing validated

this decision and demonstrated that the omnibus measure of SRLS was more accurate and statistically appropriate. (MSL, n.d., n.p.)

Similar concerns were found with the Common Purpose Scale, which was also removed for 2015 data collection. The Collective Racial Esteem (CRE) scale, also used in the MSL database, was adjusted to remove the subscale associated with Membership Affiliation in an effort to improve data quality. As these scales were removed based on psychometric concerns, a new scale was added for the 2015 data collection. The Hope Scale improved the 2015 MSL database in the areas of resiliency and leadership. Over all, the reliability and validity of the MSL dataset were established over multiple studies (Dugan, 2015).

The MSL survey has been administered to more than 610,000 students in 350 institutions in five countries of higher learning (MSL, 2019). Universities and colleges were invited to participate in the study. University leaders paid a fee and administered the survey to their student bodies. The university has the ability to customize elements of the survey at an additional cost and the outcome of the survey yields a personalized report specific to that university. Students who participate in the MSL survey are asked to answer questions via an online survey about their present beliefs about self and experiences such as involvement in programs, experiences and peer and mentor relationships, and reflections on pre-college experiences. Student responses are examined across five theoretical models: social change model values, leadership efficacy, appreciation of diversity, cognitive development and leadership identity development (Dugan, 2006). The survey ultimately produces more than 400 variables,

scales, and composite measures (Dugan, 2015). Data for the MSL have been collected since 2006. Data were collected in 2009, 2010, 2011, 2012, 2015 and 2018. The most recent publically available data, from 2015, were used in the current study.

Data Collection and Study Variables

Although the MSL survey produced more than 400 variables and scales, it did not contain scales that directly measured conscientiousness or grit in respondents. The MSL data were collected for the express purpose of understanding college student leadership development. However, the scope and breadth of the variables made it suitable, beyond its original intent, for measuring personality constructs in college students. There were two advantages in using the MSL database. First, an analysis of survey items yielded representation of grit and conscientiousness facets. Specific survey items were identified as useful proxies of grit and conscientiousness. Second, a robust number of survey respondents were African American with a GPA of 3.0 and higher, attending a large number of diverse colleges and universities, both PWIs and HBCUs. MSL data released for this study protected the identity of the university and the respondents. The percentages of students who attended a PWI or an HBCU were not released, nor were data released by name of college or university.

The MSL database was mined for indicators of conscientiousness by comparing survey items to facets of conscientiousness as articulated in research by Costa et al. (1991), Roberts et al. (2014), and Jackson et al. (2010). To verify direct representation of conscientiousness, MSL survey items were aligned to the Jackson et al. (2010) Behavioral Indicators of Conscientiousness (BIC) scale items. The BIC scale was used

instead of the other more widely known conscientiousness scale, NEO Personality Inventory (NEO-PI-R) due to scale accessibility. Only the MSL data from items representing the study construct of conscientiousness were used. Items linked to other Big Five personality traits such as openness or neuroticism were present but not used.

While it has been widely accepted that there are five main categories (the Big Five) of personality types, there is no uniform agreement on these five categories, nor is there universal agreement of the facets of each of the personality types in the Big Five (Goldberg, 1993). Some researchers have argued that there are far more than five personality traits and others suggest as few as three (Goldberg, 1992). For this study, conscientiousness was considered a personality trait that has been commonly agreed on (Goldberg, 1992). Roberts et al. (2014) stated that at least eight major researchers include conscientiousness, specifically the facets of industriousness or the propensity to work hard, as part of this major personality type. Some researchers of the Big Five (Roberts et al., 2014) have also identified persistence/perseverance as a facet of the conscientiousness construct. MSL survey items most closely aligned with the items that represented the industriousness, reliability, competence, and persistence/perseverance facets of conscientiousness.

A similar method was used to identify examples of grit. The examples of grit were found in the MSL survey by directly matching the survey items of Duckworth's 17-item Grit Scale to the MSL survey items administered to the student participants.

An important note is warranted about the outcome of the identification and alignment process of both grit and conscientiousness. Through the alignment process

between grit and conscientiousness and the MSL survey, overlap was discovered (Credé et al., 2017). Each process was conducted independently. Nevertheless, some of the MSL survey items aligned with the perseverance facet of grit also aligned with the industriousness, reliability, competence, and persistence facets of conscientiousness (Appendix B). While some of the survey items were aligned to each variable, for the data analysis a separate mean was calculated for conscientiousness than was calculated for grit. Researchers (Duckworth et al., 2007; Roberts et al., 2014) have established a deep connection between grit and conscientiousness (see Chapter II for a detailed explanation). Through the coding process, that overlap was discovered in this research as well.

Indicators of Conscientiousness

To determine whether there was a correlation between conscientiousness and GPA, the MSL survey database was examined for indicators of well-known conscientiousness facets. Precedence for finding likenesses between constructs has been established.

> Indeed, the behavioral and theoretical signature of conscientiousness coincides with numerous variables often classified with respect to their "social," "cognitive," or "developmental" nature, as well as other personality constructs. In fact, many constructs not typically considered "personality" have robust research paradigms that often run parallel to the work done in personality psychology. It is our contention that many of these variables should be viewed as part of the family of conscientiousness constructs. (Roberts et al., 2014, p. 1320)

As established earlier, conscientiousness is a compilation of traits that captures the propensity toward order, planning, achievement, and hard work (Roberts et al., 2014). According to Costa et al. (1991), conscientiousness has the following six facets: competence, dutifulness, self-discipline, achievement striving, order, and deliberation. Other researchers have included additional facets or the same facets under different nomenclature. Roberts et al. (2014) stated that a comprehensive list of facets found in past research included orderliness, industriousness, self-control (also known as impulse control), responsibility (also referred to as reliability), traditionality (sometimes known as conventionality), decisiveness, formality, punctuality, persistence (sometimes referred to as perseverance), and virtue.

In addition to using facets of conscientiousness as described by Costa et al. and Roberts et al., a direct comparison of the indicators of the BIC scale was used. Parallel phrases that appear in the behavioral scale were matched to survey items in the MSL database. The BIC was useful for making the behaviors associated with conscientiousness explicit, particularly since the MSL database had survey statements expressed in behavioral fashion (e.g., “I follow through on my responsibilities”).

Upon examination of the MSL survey codebook, 23 survey statements aligned with facets of conscientiousness (Appendix C). These statements were found in the hope scale, resiliency scale, consciousness of self-scale, commitment scale, and collaboration scale administered as part of the survey. These statements largely corresponded to the facets of competence, industriousness, and responsibility/reliability. De Raad and Peabody (2005) identified persistence as a facet of conscientiousness. Similarly,

MacCann et al. (2009) identified perseverance as a separate facet of conscientiousness. MSL survey statements aligning to perseverance were used to measure grit in this study. Another common facet of conscientiousness, self-control, and other facets not consistently agreed on in literature, such as virtue, punctuality, conventionality, and formality, were not represented in the MSL database.

Indicators of Grit

Twenty-one survey statements aligning to grit were found in the 2015 MSL database. Each of the 21 survey statements was carefully examined and matched using comparison of language with the 17-item Grit Scale. The Grit Scale contains four subscales or indictors of grit: a grit subscale, consistency of interests subscale, perseverance of effort subscale, and ambition subscale (Duckworth et al., 2007; Duckworth & Quinn, 2009). MSL survey statements aligned only to the perseverance of effort subscale. No survey statement descriptors were found for the ambition or consistency of interest scale. Therefore, for this study, only the perseverance indicator of grit was measured (Appendix D).

As noted in the literature review, the grit construct overlaps considerably with the definition of other noncognitive traits. In the MSL dataset it was similar to hope, resilience, and commitment, each of which was directly measured in the survey. After comparing the survey statements found in the MSL dataset to the 17-item Grit scale, it was determined that most of the survey statements within the mean scores for the prehope scale, resiliency scale, commitment scale, and hope pathway scale aligned with descriptors of grit. After another round of comparisons, survey items within each of the

mean scores that did not align with grit were removed and a new mean was calculated where needed. Hence, the survey's original mean scores for prehope, hope, resiliency, and commitment found in the dataset were recalculated to be the purest measure of grit available. For example, the following prehope survey statements aligned to the perseverance indicator of grit and were used to calculate the mean score of prehope: (a) "I knew I could find ways to solve complex problems even when others gave up," (b) "I generally met the goals I set," and (c) "I pursued my goals with great energy." These MSL survey items corresponded to the following survey items found in the 17-item grit scale: (a) "I have overcome setbacks to conquer an important challenge," (b) "Setbacks don't discourage me," and (c) "I finish whatever I begin." Other components of prehope that did not align were discarded. In like manner, a new mean score was recalculated for resiliency, hope, and commitment because the complete mean score provided in the MSL database for these scales was not appropriate.

Indicators of Racial Identity and Campus Racialized Experiences

The MSL survey collected participant responses to survey statements assessing racial identity and racialized campus experiences. Mean scores for scales that represented these areas were used to understand participants' beliefs about how they were treated by peers and faculty at college, what they thought about their racial identity privately, and what they believed others thought about their identity publically. The scales that were used to understand racial identity were the private collective racial esteem scale, the public collective racial esteem scale, and the identity salience scale.

The scales used to understand race-related experiences on campus were the sense of belonging scale and the nondiscriminatory college experience (overall) scale.

Much has been written about racialized campus experiences and college persistence (Harper et al, 2018; Solórzano et al., 2000). In the MSL database, Dugan (2015) measured a sense of belonging with multiple survey statements. Examples include, "I feel valued as a person at this school" and "I feel accepted as part of the campus community." The MSL database also contained survey items that directly solicited information regarding the experience of discrimination in the college environment. Participants responded to statements such as, "I have encountered discrimination while attending this institution," or "I feel there is a general atmosphere of prejudice among students" or "Faculty have discriminated against people like me." Discrimination was measured directly and indirectly in the MSL survey. For this study, a mean score was generated for overall nondiscrimination experience. Direct nondiscriminatory statements and indirect nondiscriminatory statements were not used.

Data regarding a sense of belonging, as well as experiences of discrimination, helped to explain the sometimes racialized atmosphere that African American college students in the study faced. The statements were used to describe the broader context of matriculation. The MSL dataset also captured data regarding perceptions of race, both public and private. Grounded in the public collective self-esteem literature, survey items were presented to capture students' opinions of the public's perception of their race. Survey statements such as "Overall, my racial group is considered good by others," or "Most people consider my racial group, on the average, to be more ineffective than other

groups" were included in the study. Participants' private perceptions of their race were captured through survey statements such as, "In general, I'm glad to be a member of my racial group," and "Overall, I often feel that my racial group is not worthwhile." Finally, participants' beliefs about the importance of race to themselves, or identity salience, were captured in the survey. The evaluation of identity salience included survey statements such as, "The racial group I belong to is an important reflection of who I am," and "In general, belonging to my racial groups is an important part of my self-image." Data from these survey items were used to understand how racial identity was connected to grit and conscientiousness and college persistence.

Grade Point Average

Grit and conscientiousness were used as independent or predictor variables for this research. Student GPA was used as the dependent or criterion variable, along with racial identity and racialized campus experiences. The GPA has been a longstanding measure of academic performance that illuminates relationships with other variables of interest (Bacon & Bean, 2006). In this study, as in other studies, GPA was used to demarcate high academic performance from low performance and to serve as a proxy for college persistence. MSL student participants, at varying stages of academic college matriculation, generated a GPA that demonstrated their continued presence and highlighted how well they performed. According to Bacon and Bean (2006), GPA has both strong reliability and validity, particularly when the overall GPA was used, not just the yearly GPA or GPA for major subjects. GPAs in the MSL dataset, as well as in the qualitative portion of this study, were cumulative. These GPAs were also self-reported.

Kuncel, Credé, and Thomas (2005) recognized the frequent use of self-report GPA in research.

> The common use of self-reported grades is understandable, because grade point averages are important. Not only are they summaries of student learning, they are also important predictors of performance at other levels of education and of other important life outcomes. (p. 63).

However, they suggested that it should be used with some caution. In their meta-analysis research of 60,926 students, they asked how closely self-reported grades reflected actual grades and "to what extent do self-reported grades reflect learning, ability, persistence, achievement and whatever else we believe that actual grades measure" (Kuncel et al., 2005, p. 64). They found that, for students with high ability and strong GPAs, the self-reported GPA was fairly reliable. Although self-reported grades were imperfect, the researchers stated, "The ideal situation would be to collect self-reported grades from college students who have done well in school and have high cognitive ability scores" (Kuncel et al., 2005, p. 78). In this study, self-reported grades were used on the qualitative and quantitative side from students who had strong GPAs. The majority of these students on both the qualitative and quantitative side attended competitive universities, inferring the presence of at least solid cognitive ability.

Quantitative Data Analysis

Statistical techniques were used to analyze data and address research questions 1, 2, and 3 in an effort to understand the variables examined in the study. The characteristics of the data and the objectives of the research determined the appropriate

types of analysis. Descriptive statistics of the study sample were garnered from the MSL dataset, using the IBM Statistical Package for Social Science (SPSS) version 22. Demographic information included the participant's year in college, student major, racial identification and ethnic association, institutional selectivity, parent income, university type, and GPA. Quantitative analysis of the data conducted in SPSS included Pearson's *r* correlational analysis to define the nature of the relationship between indicators of grit and facets of conscientiousness and GPA. Multiple regression statistical measures were used to measure the extent of the relationship between indicators of grit and facets of conscientiousness and racial identity variables. Statistical measures were used to determine whether there was a relationship between GPA and racial identity and between GPA and racialized campus experiences. These variables of race were examined as possible mediating factors between noncognitive personality attributes and college persistence.

Correlation Analysis

The purpose of correlation analysis has been to determine the association of relationship between two (or more) quantitative variables (Gogtay & Thatte, 2017; Zou, Tuncali, & Silverman, 2003). According to Gogtay and Thatte (2017), correlation analysis is fundamentally based on the assumption of a straight-line (linear) relationship between the quantitative variables. Similar to the measures of association for binary variables, it measures the "strength" or the "extent" of an association between the variables and its direction (Gogtay & Thatte, 2017; Rebekić, Lončarić, Petrović, & Marić, 2015). For this reason, the coefficient of correlation (*r*) is employed for variables

on an interval or ratio scale (numerical data) that are in linear relationship where each variable is normally distributed (Rebekic et al., 2015).

The result of a correlation analysis is a correlation coefficient, or *r* value, the value of which ranges from -1 to +1 (Gogtay & Thatte, 2017). A correlation coefficient of +1 indicates that the two variables are perfectly related in a positive (linear) manner, a correlation coefficient of -1 indicates that the two variables are perfectly related in a negative (linear) manner, and a correlation coefficient of zero indicates no linear relationship between the variables (Gogtay & Thatte, 2017). The range also indicates the strength of the relationship. Data from a correlation analysis can be interpreted using the following guidelines: small strength (*r* =.10 to .29), medium strength (*r* =.30 to *r* =.49), and large strength (*r* = .50 to *r* =1.0; Cohen, 1992; Pallant, 2013).These guidelines apply whether or not there is a negative sign for the *r* value (Pallant, 2013). The negative sign refers only to the direction of the relationship and not to the strength of correlation; thus, r = + .5 and *r* = - .5 reflect the same strength but in different directions (Pallant, 2013).

In SPSS, several statistics depend on the level of measurement and the nature of the data (Pallant, 2013). To address the research questions, the Pearson correlation coefficient in SPSS was used to measure the strength of linear association between the dependent and independent variables. According to Pallant (2013), several issues have been associated with the use of correlation: the effect of nonlinear relationships, outliers, restriction of range, correlation versus causality, and statistical versus practical significance. Several tests in SPSS were used to check for violation of assumptions.

Multiple Regression Analysis

Correlation analysis is seldom used alone; it is usually accompanied by regression analysis (Gogtay & Thatte, 2017). In order to make predictions, a multiple regression analysis was used. Multiple regression is based on correlation but expresses the relationship in the form of an equation (Gogtay & Thatte, 2017; Pallant, 2013).

Multiple regression analysis (MRA) in SPSS was used to explore the relationship between the continuous dependent study variables and the independent variables or predictors (Creswell, 2014). MRA was used to predict GPA and racial identity, as well as the extent to which respondents had racialized campus experiences, the dependent variables, from the independent variables, grit and conscientiousness. According to Pallant (2013), although MRA is based on correlation, it allows a more sophisticated exploration of the interrelationship among a set of variables. This makes it ideal for investigation of real-life, complex research questions (Pallant, 2013). MRA provides information about the model as a whole (all subscales) and the relative contribution of each of the variables that make up the model (individual subscales; Pallant, 2013).

For this study, SPSS step-wise regression was used in the exploratory stages of model building to identify a useful subset of predictor variables. A list of independent or predictor variables was entered into SPSS and then SPSS was directed to select which variables entered and in what order they entered the equation, based on a set of statistical criteria. The idea behind using this technique was to maximize the power of prediction with a minimum number of independent variables.

Several assumptions about the data were made when using MRA. The sample size plays an important role in generalizing study results. According to Pallant (2013),

> Stevens (1996) recommended that "for social science research, about 15 subjects per predictor are needed for a reliable equation" (p. 72), while Tabachnick and Fidell (2007, p. 123) provided a formula for calculating sample size requirements, taking into account the number of independent variables that a researcher wishes to use ($N > 50 + 8m$, where m = number of independent variables). (p. 142)

Other assumptions when using MRA are multicollinearity and singularity. This refers to the relationship among the independent variables (Pallant, 2013). According to Pallant (2013), multicollinearity exists when the independent variables are highly correlated ($r = .9$ or above), while singularity occurs when one independent variable is actually a combination of other independent variables (e.g., when both subscale scores and the total score of a scale are included). Pallant (2013) stressed the importance of checking for both when performing MRA to have a good regression model. SPSS performed multicollinearity diagnostics. Pallant (2013) indicated that multicollinearity is present when the tolerance (indicator of how much of the variability of the specified independent is not explained by the other independent variables in the model variable) value is very small (less than .10). The other value is variance inflation factor (VIF). If the VIF value is above 10, there are concerns that multicollinearity may exist. Another check is to determine whether the correlation between each of the independent variables

is low. Two variables with a bivariate correlation of .7 or more in the same analysis is problematic.

MRA is very sensitive to outliers (very high or very low scores). Both dependent and independent outliers were checked before performing the analysis by inspecting the Mahalanobis distances produced by SPSS. Tabachnick et al. (2007) guidelines indicate that, for three independent variables, the critical value should be 16.27 and for four independent variables, the critical value should be 18.47. Outliers were deleted from the dataset following these guidelines.

Normality, linearity, homoscedasticity, and independence of residual assumptions were checked. These all refer to various aspects of the distribution of scores and the nature of the underlying relationship between variables (Pallant, 2013). These assumptions were checked from the residuals scatterplot generated by SPSS as part of the multiple regression procedure. According to Pallant (2013),

> The residual scatterplots allow one to check for normality (the residuals should be normally distributed about the predicted dependent variable scores), linearity (the residuals should have a straight-line relationship with the predicted dependent variable scores), and homoscedasticity (the variance of the residuals about predicted dependent scores should be the same for all predicted scores). (p. 144)

The initial quantitative research question in this study asked whether there was a correlation between college persistence in high-achieving African American students and grit and/or conscientiousness. Four mean scores (prehope, hope, resiliency, and

commitment) serving as the direct indicators (of the perseverance facet) of grit were analyzed using the SPSS program. Three mean scores (industriousness, competence, and reliability/responsibility) for each facet of conscientiousness were analyzed using the SPSS program. All statistical tests for assumptions were met.

The second research question asked which noncognitive personality attribute (grit and/or conscientiousness) predicted college persistence among high-achieving African American students. SPSS was used to conduct MRA to examine how effectively the predictor variables (grit and conscientiousness) predicted the criterion variable (college persistence as measured by GPA). All statistical tests for assumptions were met.

The third research question asked whether the noncognitive personality attributes (grit and/or conscientiousness) and GPA were influenced by factors of racial identity in high-performing African American college students and racialized campus experiences Mean scores for sense of belonging, nondiscriminatory climate overall, and public and private collective racial esteem and identity salience were calculated using SPSS. All statistical tests for assumptions were met.

Quantitative Design Juxtaposition With Lundberg's Quantitative Study

The quantitative method preceded the qualitative method as part of the sequential explanatory design of this study. In the discussion section, findings of the quantitative method are examined in light of the qualitative findings. Statistical findings offered insights that were contrary to the findings reported by Lundberg (2013). Hence, this dissertation researcher concluded that high-achieving African American college students had significant levels of grit and conscientiousness that were supported by a strong sense

of racial identity and were higher when sense of belonging was strong and discrimination was reduced. The differences in findings between the two studies may be attributed to differences in the datasets used.

The Lundberg (2013) study used a sample drawn from Wave IV of the National Longitudinal Study of Adolescent Health (also known as Add Health) with participants who ranged in age from 24 to 32 years. A multistage sampling design was used (Creswell, 2014). Participants were initially interviewed in 2008 and 2009 when they were in Grades 7 through 12. Of the initial 90,000 participants in the study, 7,209 females and 6,256 males were included in the Lundberg study. Lundberg did not specify how many African Americans were included in her sample. Data for that were collected after participants had graduated. Data for the present study were collected while participants were in college. Data for the Lundberg study included the academic performance levels of successful and unsuccessful students. Only high-achieving students were included in the present study in order not to mask study variables with factors causing students to fail to persist in college, such as the lack of financial aid.

As mentioned, the foundation of the MSL survey is in the social change model. Dugan, Kodama, and Gebhardt (2012) stated that this model is rooted in the social justice perspective. The 2015 MLS provided some advantages that the Add Health dataset may not have provided. First, the extent of data for African Africans was significant, allowing performance levels to be examined to produce more robust findings. There were enough data regarding African American students to be segmented into high and low academic performance and multiple SES groups. These data ensured

that the sample did not skew toward struggling students in poverty. Garland (2010) used the MSL survey data for a study on predictors of campus involvement by American Indians. The database provided complete information for 1,931 American Indians, allowing him to supersede the "research asterisk" signifying too small a sample that often accompanies research on American Indian college students.

Qualitative Section

The quantitative portion of this study supported the effort to determine whether grit and/or conscientiousness existed in high-achieving African American students and whether there was a relationship between these independent variables and specific race-related variables. The qualitative portion of this study was vital for three reasons. First, qualitative data, using a phenomenological methodology approach, were included to understand the study's quantitative findings. According to Onwuegbuzie and Leech (2004), the significance of the qualitative portion of a mixed-methods study resides in its ability to provide meaning and representation. Because research about academic achievement regarding African Americans has been strongly skewed toward the negative, deliberate solicitation of perceptions from successful students was warranted. This qualitative section purposefully used a high-achieving student sample from which to learn.

Second, qualitative data added to a limited number of studies about college attainment conducted from a qualitative perspective (Melguizo, 2011). Melguizo (2011) focused on the economics of higher education and said that quantitative research in the area of college persistence was overrepresented.

> The substantial majority of the work on college persistence and attainment has been quantitative. This is very intriguing given that most of the training that students in schools of education receive is qualitative. . . . . There is space for more large-scale qualitative or mixed method studies that focus on the process of college persistence and attainment. (p. 420)

In alignment with this recommendation, the present study served to bring a qualitative viewpoint to the conversation of college persistence among high-achieving African American students. The voices of the African American students chosen for this study could aid policymakers and school administrators by adding clarity and breadth to the theoretical constructs of grit and conscientiousness for this specific population.

Researcher's Perspective

Third, qualitative data augmented the findings of the quantitative portion of this dissertation study. As the researcher, I wanted to understand my own experience when I was a full-time, high-achieving African American student at Washington University in St. Louis. As a student and even after graduating, I struggled to explain why there were not more students like myself attending the university and/or completing their degree. While this research does not completely answer that broad question, it provides insight into the personalities of the African American students like myself who were successful. It also allows the students that I mirrored to share their own experience of what made them successful and what stood in the way of others like themselves.

As a researcher, I related in multiple ways to the 12 participants who were interviewed for this study. First, I earned admission to a competitive university but

required scholarships and financial aid to attend. Each participant who was interviewed for this study received financial aid and required this support in order to attend college. Second, as a student I was keenly aware of the expectations for performance from family and friends who supported my college experience. Each participant who was interviewed was clear that he or she was not in college just for himself or herself but had a broader responsibility for achievement to the community, often family, that supported attendance. Finally, as a student, I had both positive and negative racial experiences while attending a PWI. Almost all of the students who were interviewed offered detailed stories about how racism, discrimination on the campus, and larger societal stereotypes affected their college going experience. Some of the interviewees even suggested that negative experiences had an adverse impact on college persistence for high-achieving peers who had dropped out of school. As a researcher, I have wondered whether noncognitive personality attributes, specifically grit and conscientiousness, could be among the important factors that positively influenced my ability to complete my undergraduate studies.

Qualitative Population and Study Sample

Study participants. Twelve students participated in this study (seven females and five males). Data collection occurred in fall 2017 and spring 2018, with one student being interviewed in person and the remaining 11students being interviewed by telephone. All participants self-identified as African American or Black. Four students (three males and one female) were student athletes attending the university on an athletic scholarship. All but one student lived on campus or in off-campus, college-related

housing; one student lived at home with her parents in order to help take care of an ailing mother.

All participants self-identified as having a college GPA of at least 3.0, with seven participants reporting a GPA of 3.25 or higher. The highest GPA reported was 3.66. Every student was enrolled full time, carrying a minimum of 12 credit hours. The participants were not evenly distributed across classification years; there were no juniors in the study. Only one student was a freshman, four were sophomores, seven were seniors, including two who were fifth-year seniors. The college majors of the 12 participants varied widely; seven majored in a field related to science, technology, engineering, and mathematics (STEM). The remaining reported three business majors, one communication major, and one political science major.

College and/or universities attended. Participants attended colleges located in various parts of the nation: New England, southern and eastern United States, and on both the west and east coasts. Four students attended state universities and eight attended private universities. Campus size varied from 1,396 undergraduate students to 27,876 undergraduate students (U.S. News and World Report, 2019). Tuition varied from $7,204 annually to $53,744 annually for an undergraduate bachelor's degree. Four of the 12 students attended Tier I universities. One student attended an open enrollment university. Five attended an HBCU and seven attended a PWI. Two students had transferred from a PWI to an HBCU after their freshman year.

Instrumentation

The data protocol included a 1-hour semistructured interview that generated responses to 11 open-ended questions about the participant's college experience, specifically as a high performing African American college student. Hays and Singh (2012) defined a semistructured interview as "an interview protocol that serves as a guide and starting point for the interview experience" (p. 239). Creswell (2014) suggested advantages for this type of data collection, stating that the interview allowed the researcher to gain information when the participant could not be observed in the setting directly and allowed the interviewer to gather historical data and elicit "control" over the direction of the research.

Participants were told at the beginning of the interview that 11 questions would be asked, one opening question for baseline information, nine research-related questions, and one closing question inviting final remarks (Appendix E). The interview began by requesting factual information that provided standard data across participants. The participants were asked to provide a pseudonym to be used during the interview and recorded in the notes. The participants were also asked to provide their year in school, their gender, and their cumulative GPA to date. The participants were asked to share the name of their university and their major. These initial questions served as the opening to the interview and provided baseline data.

After baseline data were collected, participants answered nine open-ended questions that invited them to describe their experience as a high-performing African American college student as it related to college persistence challenges, grit,

conscientiousness, race, and overall experience. The first question asked participants to share unique challenges that Black or African American students face in attending and persisting in college. Each question was read to the participant to ensure continuity, then followed with probing if needed to gather more details, to generate a more complete response, or to clarify responses. Probing questions/statements included, “Please tell me more; would you like to explain further; what do you mean by; please give me an example of, or would you like me to repeat the question.” Participants were informed that I would take typewritten notes during the interview and that I would repeat back answers as needed to ensure accuracy during the note-taking process. Oral verification of responses to each question was done by reading the question and the response to the participant and asking whether information had been captured accurately. There were pauses during the interview process to ensure that all notes were gathered. Participants were told before the interview began to anticipate brief moments of silence.

At the conclusion of the semistructured interview, participants were asked whether they wanted to share anything more regarding how personality traits affect African American students’ ability to attend and persist through college. After participants responded, they were again given an opportunity, as they had in the beginning of the interview, to ask questions regarding the research. Most participants expressed gratitude at the opportunity to share their college success. Participants were thanked for their time.

Data Collection Measures and Procedures

Purposive, criterion sampling was used to select participants for the individual interviews. Hays and Singh (2012) stated, "Criterion sampling refers to when researchers sample participants who are selected because they meet an important, predetermined criterion" (p. 176). Creswell (2014) stated that, when study participants are purposefully selected, they help to address research questions explicitly. Similarly, Bogdan and Biklen (2007) stated that purposive sampling allows participants to help expand the developing theory. The 12 participants chosen for this study supported the goal of purposive sampling. They were chosen only if they met the specific study criteria of being an undergraduate student, attending a 4-year university full time, and had a GPA of 3.0 or higher (self-reported). The criteria for students selected for participation in the qualitative portion of this research matched the criteria of students who participated in the quantitative section. Like students in the MSL 2015 database, these students varied in majors and types of universities attended.

Once criteria were established, several Facebook postings, emails, and fliers approved by the university's Institutional Review Board (IRB) were distributed to personal acquaintances and nonprofit organization leaders who managed programs that supported academic achievement by students of color, such as the local chapter of the National Black MBA college preparation program, Posse and Inroads, and several African American fraternities and sororities. Fliers were distributed at Texas A&M University, where IRB permission had been granted. No participants volunteered for the study from that university.

Most personal acquaintances introduced me to colleagues who worked directly with high-achieving African American students. I recruited former students through senior personnel at college and career counseling services in a large charter organization and in a very large public school district in Houston, Texas. Only one participant in the sample had attended a charter organization in high school. Most had attended public schools and two had attended private high schools before college. Most adults who recommended student participants were African American themselves. As leaders generated names, they reached out to students using the flier and email. Interested participants contacted me by telephone, generally by text, or through email to express their interest.

After the participants had given permission to be contacted, I reached out three times. First, I emailed the informed consent form and requested a time to call for the interview. Second, I called each participant. During the call, I allowed the participant to ask questions about the research, reviewed the consent form, informed the participant that it was permissible to stop the interview at any time, and then conducted the hour-long interview. At the conclusion of the interview, study participants were thanked for their time and asked whether they knew of others who would be willing to participate in the study. Only one potential participant, found through snowball sampling (Creswell, 2014), contacted me. The informed consent process with this student revealed that he was enrolled in a 2-year academic program. Program leaders, mentors, and other random adults recommended all other study participants. In total, 28 students were recommended

for the study through this method. Thirteen students contacted the researcher and 12 were eligible.

Data were collected by telephone for 11 of the 12 participants. I conducted the semistructured interviews and took notes. This was one of the five interview methods by which qualitative data could be collected, according to Creswell (2014). This practical method allowed the participants to remain in their collegiate environment and prevented me from being required to travel. A downside to this data collection method was the inability to observe participants in their natural environment. Only one participant, who was local, was interviewed in person in the student affairs office where he worked. Creswell (2014) suggested that phenomenological research generally uses 3 to 10 ten participants to reach saturation. Twelve participants were interviewed to reach saturation (i.e., representation across majors, genders, university types, and year of study) and yielded a robust presentation of viewpoints.

The final point of contact occurred after all interviews had been completed. A draft of the manuscript was sent to the participants, who were invited to provide feedback, additional thoughts, and corrections. Participants were able to identify themselves in the manuscript according to the pseudonyms that they had chosen during the interview process.

Data Analysis and Interpretation

Data Analysis

Data collected from the interviews were analyzed and interpreted through a multistep process (Appendix F). First, the field notes for each interview were read and

reread immediately after the interview. Small notations were made to capture ideas that presented during the interview. For instance, participant Masamusa shared that he had been sent to an alternative school during his freshman year from the predominantly Caucasian high school that he had attended. He stated that he believed that he was subjected to harsh disciplinary punishment instead of receiving support, mentoring, or recognition of his talents. By hand, I wrote next to this statement, "Black male student experiences of stringent disciplinary practices." Ultimately, this did not link with other small notations from the other participants to form a broader code of disciplinary concerns, but this example represented the first level of becoming familiar with the collected data. Creswell (2014) recommended, "While interviews are going on researchers may be analyzing an interview collected earlier, writing memos that may ultimately be included as a narrative in the final report, and organizing the structure of the final report" (p. 195). Small notations were written during the first iteration of field note review after each interview.

Once all interviews had been completed, the data were reread collectively. This was the second step of data analysis. I read each interview, moving from interview to interview to gain a larger sense of the data and to build awareness of connecting ideas and patterns. Anfara, Brown, and Mangione (2002) stated, "The purpose of analysis is to bring meaning, structure and order to data" (p. 31). These researchers emphasized the importance of being intimately aware of the data. By reading and reading the stories, patterns emerged.

The third step of data analysis involved creating the first of two spreadsheets. The first spreadsheet organized participants' responses according to interview questions. Columns across the top of the table were labeled by pseudonyms. This formed the X-axis. In each participant's box, the raw data for each question were transferred next to the question. In this manner, the first table formed a chart that simply put all responses to the same interview questions side by side. The reconfiguring of the data in this manner allowed me to see answers to each question simultaneously and assisted in the constant comparison technique that ultimately yielded codes.

The constant comparative coding technique (Hays & Singh, 2012) was used to analyze the data and develop codes in the fourth step of data analysis. The interviews were compared to each other and codes were assigned to distinct topics and clusters of data. The small notations made during the field note review phase informed some codes. Similarities and differences in interview stories and terminology were examined deeply and new codes were generated. I looked for evidence of any personality traits or skills that participants had stated were related to their college success. Race-related ideas emerged frequently during the interview process. Consequently, I looked for data that represented concepts of racial identity or race-related experiences in college, both good and bad. I specifically looked for examples of grit and/or conscientiousness in alignment with the theories behind these two constructs. Finally, I looked at the data for detailed evidence that revealed how the participants had become high achieving students. In the fifth step of data analysis, another table was created with the list of codes generated in the fourth step. Data were repositioned on the new spreadsheet under each code, by

participant. If no data existed for that code for a participant, the box was left empty. This process made it clear which codes contained a large sampling of data and which codes had only a few pieces of data. Once the chart was completed, codes containing fewer than four pieces of evidence (examples, phrases, or words) were removed.

Data Interpretation

The sixth iteration of data analysis produced interrelating subthemes. The notes in the new spreadsheet formatted by code were reread. Codes were then collapsed and categorized on the spreadsheet to provide orientation for the theme-generating process. Codes with only a few pieces of data were removed.

Multiple iterations of this process included marking the notes and circling words and connecting phrases that supported broader ideas or themes. Data were collapsed into major themes that had evidence from at least eight student participants. Four significant themes emerged through this process (Appendix G). The themes closely aligned to concepts investigated through this study. Throughout the course of the writing the dissertation, I studied the field notes for theme confirmation.

Data Validity and Reliability

Accuracy and credibility in data analysis were top priorities. To that end, triangulation of the data was one method of trustworthiness used to verify the data. To triangulate the data after coding, I used only themes where at least two thirds of the participants had provided evidence, ideas, or examples belonging to that theme. For example, one of the themes stated that participants saw themselves as conscientious but were not familiar with that term. For the participants, being conscientious was more

important than knowing what that behavior was called. To validate this idea, the data were mined for multiple examples per participant of conscientious behavior toward college studies. Only one participant did not give explicit examples of conscientious behavior, such as studying before a test or using a calendar to schedule tests and extracurricular activities. All other participants gave multiple examples of conscientious behavior when solicited indirectly (e.g., "Can you tell me the five most important personality traits a person must have to attend and persist in college?") or directly (e.g., "In your opinion, is conscientiousness important for college attendance and persistence? Why or why not?").

Another method of trustworthiness was used. Member checking is the process of allowing the participant to check the data and its interpretation for accurate representation of the experience (Creswell, 2014). Lincoln and Guba (1985) submitted, "The member check, whereby data, analytic categories, interpretations and conclusions are tested with members of those stockholding groups from whom the data were originally collected, is the most crucial technique for establishing credibility" (p. 314). A draft of the qualitative analysis was sent to the participants. Participants had an opportunity to review the document to ensure that it reflected their thoughts and experiences. Participants recognized examples of themselves in the draft through the pseudonym that they had provided at the beginning of the interview.

Rich, thick description was used as the final method of trustworthiness. According to Denzin and Lincoln (1985), providing a thick description of the data allows the reader "to reach a conclusion about whether transfer [of the data to other

situations] can be contemplated as a possibility" (p. 316). The reader was provided with the participant's thoughts about the context of their collegiate experience so that elements of the college environment affirmed their identity (or not). Explicit examples were given of the participant's experiences and ideas.

Creswell (2014) warned of particular dangers with regard to validity that should be taken into consideration when conducting an explanatory sequential mixed-methods study. Two were applicable to this study. First, it was important to ensure that the demographics of the participants did not overshadow elements of their story that needed to be probed. In this study, the fact that the students were high performing did not get in the way of how they explained their college success. Also, specific attention was given to sample size and saturation of the research topic to ensure that adequate representation was given to the voice of the students.

Chapter Summary

In this chapter, the purpose of the research was restated. A rationale for the mixed-methodology design was set forth and the methodology for both the quantitative and qualitative research questions was described. A description of the participant selection, instrumentation, and data collection methods was provided (Appendices I through M). Issues of reliability and validity, as well as validity triangulation and trustworthiness of data, were reviewed and addressed as needed. The methods of data analysis for the quantitative questions were presented, followed by a discussion of statistical power analysis for the quantitative design portion. The methods of theme extraction and data interpretation for the qualitative research question were described.

Results of the quantitative data are presented in Chapter IV and results for the qualitative data are presented in Chapter V. The merged results of the quantitative and qualitative data are presented in the Discussion section of Chapter VI.

CHAPTER IV

PRESENTATION AND ANALYSIS OF QUANTITATIVE DATA

The purpose of this mixed-methods study was to examine grit and conscientiousness, two personality traits that have been shown to play a significant role in academic achievement, including college attainment (Duckworth et al., 2007; Komarraju et al., 2009). A sequential explanatory design was used because it allowed the quantitative findings to be more fully understood within the context of qualitative research results. The quantitative portion of this study had two purposes: (a) examine the relationship between grit and conscientiousness and college persistence, and (b) investigate the role of racial identity and racialized campus experiences as they pertain to personality traits and the college persistence process. Secondary data of 2,280 high-achieving African American college students from the MSL dataset were used to answer the quantitative research questions. In this chapter are presented the quantitative results of the data analysis for three of the four research questions.

Descriptive statistics, correlation (Pearson), and MRA were used to address each of the three quantitative research questions.

1. Is there a correlation between college persistence in high-achieving African American students and grit and/or conscientiousness?

2. Which noncognitive personality attribute, grit and/or conscientiousness predicts college persistence among high-achieving African American students?

3. Is grit and/or conscientiousness, impacted by factors such as racial identity, discrimination and a sense of belonging in high-achieving African American college students?

The chapter is organized as follows. Descriptive statistics of the study participants and institutional characteristics of the colleges and universities attended by those participants are presented. This is followed by a presentation of the correlation and MRA for each of the study's dependent variables (college persistence [GPA], racial identity, racialized campus environment) and the study's independent variables (grit and conscientiousness).

Descriptive Statistics

Institutional Characteristics

In the MSL dataset, only 2, 280 surveyed participants fit the criteria of the current study (full-time African Americans student with a GPA ≥ 3.0). Of that number, 57.4% attended publicly controlled institutions and 42.6% attended privately controlled institutions. While most of the institutions were located in urban areas (69.1%), 22.5% were located in the suburbs and 8.3% were located in small towns.

The institutional size also varied, with the majority (33.4%) indicating student populations of 20,000 students and more, followed by institutions with a student population of 5,000 to 9,999 (30.2%) and institutions with a student population of 10,000 to 19,999 (23.0%). Only 13.4% of the institutions represented in the surveyed sample had a student population size of 1,000 to 4,000. Similarly, of those institution represented in the MSL dataset, 80.8% (competitive = 25.0%, very competitive = 24.6%,

highly competitive = 16.2%, most competitive = 15%) had a competitive to highly competitive admissions policy, while 10.7% indicated that they had a less competitive selection process and 8.5% had an unclassified selection process.

The Carnegie classification framework of the various institutions that participated in the MSL survey showed that 41.5% offered a master program, followed by institutions with very high research activity (24.4%), institutions with high research activity (15.3%), baccalaureate only institutions (9.6%), and doctoral/research institutions (9.2%).

Demographic Characteristics of Participants

Of the 2,280 African American full-time participants surveyed, 96.6% belonged to at least one ethnic group (Black Americans, African, West Indian, Brazilian, Haitian, Jamaican), with 3.4% not listing any ethnic group. Most of the respondents (72.7%) were female, 27.1% were male, and 0.2% were transgender/nongender conforming. The majority of the survey participants (79%) belonged to the traditional college-age group of under 24 years old (57.9% female, 21.5% male, and 0.2% transgender/gender nonconforming), while total nontraditional college-age group participants (20.3%) were 24 years old and above (14.8% were female and 5.5% were male). All year classifications were represented in the study sample. There were 31.9% classified as seniors (4th year and beyond), 25.3% juniors, 20.2% sophomores, and 22.6% freshmen/first-year students. Of those who participated in the survey, 34.7% had a GPA of 3.5 or above (26.6% female, 8.0% male, and 0.1% transgender/gender

nonconforming), compared to 65.3% with a GPA between 3.00 and 3.49 (46.1% female, 19.0% male, and 0.1% transgender/gender nonconforming).

The immigration status of respondents varied, with the majority indicating that they or their immediate family members (at least a grandparent/parent) had been born in the United States. There were 9.6% of the respondents who were foreign-born naturalized citizens, 6.0% were foreign-born resident aliens/permanent residents, and 4.8% were international students attending school in the United States.

Most participants (78.3%) were non-first-generation college students. The highest level of formal education obtained by parent(s) or guardian(s) varied, with 38.5% indicating that their parents had less than a college degree. For this group 17.2% had some college, 16.5% had a high school diploma/GED (16.5%), and 3.8% had no high school diploma (3.8%). Of the 52.9% indicating that a parent had some college, 10.5% had an Associate degree, 23% had a bachelor's degree, and 19.4% had a master's degree (19.4%). Only 6.9% of respondents indicated that parent(s) or guardian(s) had a doctorate or professional degree (PHD, JD, MD), and 1.8% did not know their parent(s)/guardians' formal level of education.

Combined total income estimates of parent(s) or guardian(s) varied, with 9.4% indicating a parent/guardian's combined income of $12,500 and under, compared to 31.6% at $12,500 to $54,999, 10.1% at $12,500 to $24,999, 10.9% at $25,000 to $39,999, 10.6% at $40,000 to $54,999, 19.3% at $55,000 to $99,999, 9.4% at $100,000 to $149,999, 3.7%% at $150,000 to $199,999, and 3.2% at $200,000 or above; 17.9% did not know their parent/guardian's combined total income.

Pearson Correlation and Regression Analysis Results

Results are presented for the dependent and independent variables. Preliminary analysis was performed for all statistical procedures to ensure that there was no violation of the assumptions of normality, linearity, and homoscedasticity.

GPA (Dependent Variable) and Grit (Independent Variables)

Indicators of grit (represented by prehope, hope, resiliency, and commitment; Appendix B) were used in a stepwise MRA to predict college persistence (GPA). Except for the correlation between resiliency and GPA (r = .034, n = 2,257, p =.054) and hope and GPA (r = .019, n = 2,253, p = .188), correlations between the other indicators of grit and GPA were statistically significant (commitment: r = .080, n = 2,253, p < .001; prehope: r = .066, n = 2,258, p = .001).

The prediction model (Table 1) contained only one of the four predictors (indicators of grit). Three variables were removed from the model. The model was statistically significant, $F(1, 2248) = 14.441$, $p < .001$) and accounted for approximately 0.6% of the variance of GPA (R^2 = .006, Adjusted R^2 = .006). The null hypothesis that having grit was not a useful predictor of college persistence (GPA) was rejected.

GPA (Dependent Variable) and Conscientiousness (Independent Variables)

Similarly, facets of conscientiousness (industriousness, reliability/responsibility, and competence; Appendix B) were used in a stepwise MRA to predict a proxy for college persistence (GPA). Results of the correlation are shown below. All correlations were statistically significant (industriousness: r = .056, n = 2,270, p < .05; reliability/ responsibility: r = .076, n = 2,269, p < .001; competence: r = .064, n = 2,268, p = .001).

Table 1

Model Summary of Grade Point Average and Grit

Model	b	SE b	β	Pearson's *r*
Model 1				
Constant	0.979	0.097		
Commitment	0.082	0.022	.08***	.08

Note. R^2 = .006, Adjusted R^2 = .006.

***p < .001.

All correlations showed a weak positive effect between the conscientiousness predictors and GPA.

The prediction model (Table 2) contained only one of the three predictors (facets of conscientiousness). Three variables were removed. The model was statistically significant, $F(1, 2266) = 13.231$, $p < .001$) and accounted for approximately 0.6% of the variance of GPA (R^2 = .006, Adjusted R^2 = .005). The null hypothesis that being conscientious was not a useful predictor of college persistence (GPA) was rejected.

Racial Identity (Dependent Variable) and Grit (Independent Variable)

The relationship between perceptions of racial identity (private and public collective racial esteem and identity salience) and grit was investigated using Pearson product-moment correlation coefficient. All relationships between indicators of grit and private collective racial esteem were statistically significant (commitment: r = .279, n = 1,100, $p < .001$; hope: r = .254, n = 1,100, $p < .001$; prehope: r = .187, n = 1,102, $p <$

Table 2

Model Summary of Grade Point Average and Conscientiousness

Model	b	SE b	β	Pearson's *r*
Model 1				
Constant	1.011	0.093		
Reliability/Responsibility	0.076	0.021	.076***	.076

Note. R^2 = .006, Adjusted R^2 = .006.

***p < .001.

.001; resiliency: r = .228, n = 1,101, p < .001). There was a weak positive relationship between proxies of grit and private collective racial esteem.

Stepwise MRA was conducted to determine whether indicators of grit predicted perceptions of private collective racial esteem. In Step 1 of the analysis, commitment (predictor) was entered into the regression equation and was significantly related to private collective racial esteem, F(1, 1098) = 92.5, p < .001. The multiple correlation coefficient was .078, indicating that approximately 8% of the variance of the private collective racial esteem variable could be accounted for by the commitment variable. In Step 2, hope was entered into the regression equation, which significantly improved the ability of the equation to predict the outcome variable, F(2, 1,097) = 60.090, p < .001). Model 2 accounted for approximately 10% of the variance of private racial collective esteem (R^2 = .099, Adjusted R^2 = .097). The standardized beta value for commitment was 0.207 and for hope was 0.162, indicating that commitment had slightly more impact

in the model than did hope (Table 3). The null hypothesis that grit was not a useful predictor of perceptions of private collective racial esteem was rejected.

Table 3

Model Summary of Private Collective Racial Esteem and Grit

Model	b	SE b	β	Pearson's *r*
Model 1				
Constant	3.146	0.298		
Commitment	0.076	0.021	.279***	.279***
Model 2				
Constant	2.708	0.307		
Commitment	0.471	0.073	.207***	.279***
Hope	0.178	0.035	.162***	.187***

Note. For Step 1, $R^2 = .078$, $\Delta R^2 = .021$.

***$p < .001$.

For the first model the value of R^2 is .078 or 7.8%, which means commitment accounts for 7.8% (~ 8%) of the variation of private racial collective esteem. However, for the final model (Model 2), this value increases to .099 or ~ 10% of the variance of private collective racial esteem. Therefore, whatever variables enter the model in Block 2 account for an extra (.099 - .078 = .021(ΔR^2) of the variance in private collective racial esteem scores

All correlations, except the correlation between hope and public collective racial esteem, were statistically significant (hope: r = -.008, n = 1,104, p =.395; commitment: r = -.054, n = 1,104, $p < .05$; prehope: r = .053, n = 1,106, $p < .05$; resiliency: r = .059, n = 1,105, $p < .05$). Except for commitment, which had a weak negative relationship with public collective racial esteem, all other indicators of grit that were statistically significant showed a weak positive relationship with public collective racial esteem.

Similarly, a stepwise MRA was conducted to evaluate whether all indicators of grit were necessary to predict perceptions of public collective racial esteem. In Step 1 of the analysis, resiliency (predictor) was entered into the regression equation and was significantly related to public collective racial esteem, $F(1, 1{,}102) = 3.914$, $p < .05$. The multiple correlation coefficient was .004, indicating that approximately 0.4% of the variance of the public collective racial esteem could be accounted for by the grit proxy commitment. In Step 2, commitment (predictor) was entered into the regression equation and significantly improved the ability of the equation to predict the outcome variable, $F(2, 1{,}101) = 6.993$, $p = .001$). Model 2 accounted for approximately 1.3% of the variance of public collective racial esteem (R^2 = .013, Adjusted R^2 = .011). The standardized beta value for resiliency was .112, and for commitment was -.109. Resiliency had slightly more impact in the model than did commitment (Table 4). The null hypothesis that grit was not a useful predictor of public collective racial esteem was rejected.

The relationship between identity salience and grit was investigated using Pearson product-moment correlation coefficient. There was a weak positive relationship

Table 4

Model Summary of Public Collective Racial Esteem and Grit

Model	b	SE b	β	Pearson's *r*
Model 1				
Constant	2.896	.241	.059*	.059*
Resiliency	0.117	.059		
Model 2				
Constant	3.890	.395		
Resiliency	0.221	.067	.112	.059*
Commitment	-0.314	.099	-.109	-.054*

Note. R^2 = .004 for Step 1, R^2 = .001 for Step 2 ($p < .01$).

*$p < .05$.

between two indicators of grit and identity salience (prehope: $r = .057$, $n = 1{,}107$, $p < .05$; commitment: $r = .077$, $n = 1{,}105$, $p = .001$). The relationship between hope and identity salience (hope: $r = .047$, $n = 1{,}105$, $p = .058$), and the relationship between resiliency and identity salience (resiliency: $r = .015$, $n = 1{,}106$, $p = .311$) were not statistically significant.

A stepwise MRA was conducted to predict identity salience based on the indicators of grit. The overall *F* test determined that only the relationship between identity salience and commitment was statistically significant. Results of the regression model (Table 5) indicated that commitment explained 0.6% of the variance in

Table 5

Model Summary of Identity Salience and Grit

Model	b	SE b	β	Pearson's *r*
Model 1				
Constant	3.669	0.407		
Reliability/Responsibility	0.056	0.409	.077*	.077*

Note. R^2 = .006, Adjusted R^2 = .005.

*p < .05.

respondent's score on identity salience (R2 = .077, Adjusted R2 = .005, F(1, 1103) = 6.659, and p <.05). No other indicators of grit were added to the model. The null hypothesis that grit was not a useful predictor of identity salience was rejected.

The relationship between racial identity (private and public collective racial esteem, and identity salience) and conscientiousness was investigated using Pearson product-moment correlation coefficient. All relationships between facets of conscientiousness and private collective racial esteem were statistically significant (industriousness: r = .305, n = 1,104, p < .001; reliability/responsibility: r = .248, n = 1,104, p < .001; competence: r = .288, n = 1,103, p < .001). There was a weak positive relationship between facets of conscientiousness and private collective racial esteem.

A stepwise MRA was conducted to determine whether all facets of conscientiousness were necessary to predict perceptions of private collective racial esteem. In Step 1 of the analysis, industriousness (predictor) was entered into the

regression equation and was significantly related to private collective racial esteem, $F(1, 1,101) = 112.524$, $p < .001$). The multiple correlation coefficient was .093, indicating that approximately 9% of the variance of the private racial collective esteem could be accounted for by the industriousness facet. In Step 2, competence was entered into the regression equation and significantly improved the ability to predict the outcome variable, $F(2, 1,100) = 64.198$, $p < .001$). Model 2 accounted for approximately 11% of the variance of private collective racial esteem ($R^2 = .105$, Adjusted $R^2 = .103$). The standardized beta value for industriousness was 0.202 and for competence was 0.150, indicating that industriousness had slightly more impact in the model than did competence (Table 6). The null hypothesis that conscientiousness was not a useful predictor of perceptions of private collective racial esteem was rejected.

With regard to public collective racial esteem, all correlations, except for the correlation between competence and public collective racial esteem, were statistically significant (competence: $r = -.008$, n = 1,101, $p = .389$; industriousness: $r = .065$, $n = 1,102$, $p < .05$; reliability/responsibility: $r = -.053$, $n = 1,102$, $p < .05$). There was a weak negative relationship between reliability/responsibility and public collective racial esteem and a weak positive relationship between industriousness and public collective racial esteem.

A stepwise MRA was computed to determine whether facets of conscientiousness significantly predicted perceptions of public collective racial esteem. In Step 1 of the analysis, industriousness (predictor) was entered into the regression

Table 6

Model Summary of Private Collective Racial Esteem and Conscientiousness

Model	b	SE b	β	Pearson's *r*
Model 1				
Constant	3.250	.260		
Industriousness	0.564	.053	.305***	.305***
Model 2				
Constant	3.000	.267		
Industriousness	0.374	.073	.202***	.305***
Competence	0.279	.073	.150***	.288***

Note. R^2 = .093 for Step 1, Δ R^2 = .012 for Step 2 (p < .01).

***p < .001.

equation and found to be significantly related to public collective racial esteem, F(1, 1,099) = 4.594, p < .05. The multiple correlation coefficient was .004, indicating that approximately 0.4% of the variance of perceptions of public collective racial esteem could be accounted for by industriousness (R^2 = .004, Adjusted R^2 = .003). In Step 2, reliability/responsibility (predictor) was entered into the regression equation and it significantly improved the ability to predict the outcome variable, F(2, 1,098) = 10.084, p < .001. Model 2 accounted for approximately 2% of the variance of public collective racial esteem (R^2 = .018, Adjusted R^2 = .016). The standardized beta values for industriousness was 0.157 and for reliability/responsibility was -0.15. Therefore, industriousness had slightly more impact in the model than did reliability/responsibility

(Table 7). The null hypothesis that conscientiousness was not a useful predictor of public collective racial esteem was rejected.

Table 7

Model Summary of Public Collective Racial Esteem and Conscientiousness

Model	b	SE b	β	Pearson's *r*
Model 1				
Constant	2.621	.349		
Industriousness	0.153	.071	.065*	.065*
Model 2				
Constant	3.451	.406		
Industriousness	0.373	.090	.157***	.065*
Reliability/Responsibility	-0.426	.108	-.150***	-.05*

Note. R^2 = .004 for Step 1, Δ R^2 = .014 for Step 2 (p < .01).

*p < .05. ***p < .001.

The relationship between identity salience and facets of conscientiousness was investigated using Pearson product-moment correlation coefficient. There was a weak positive relationship between industriousness and identity salience and between competence and identity salience (industriousness: r = .051, n = 1,107, p <.05; competence: r = .091, n = 1,106, p = .001). The relationship between reliability/responsibility and identity salience was not statistically significant (reliability/responsibility: r = .041, n = 1,107, p = .09).

Stepwise MRA was conducted to determine whether facets of conscientiousness predicted identity salience. The overall *F* test determined that only the relationship between identity salience and competence was statistically significant. Results of the regression model (Table 8) indicated that competence explained 0.8% of the variance in respondents' score on identity salience (R^2 = .008, Adjusted R^2 = .007, $F(1, 1{,}104)$ = 9.124, $p < .05$). No other facets of conscientiousness were added to the model.

Table 8

Model Summary of Identity Salience and Conscientiousness

Model	b	SE b	β	Pearson's *r*
Model 1				
Constant	3.775	.313		
Competence	0.223	.074	.091*	.091*

Note. R^2 = .006, Adjusted R^2 = .005.

*$p < .05$.

Racialized Campus Environment and Grit

Correlation and MRA were conducted to examine the relationship between experiences of the racialized campus environment (sense of belonging and nondiscriminatory campus climate) and indicators of grit. The results demonstrated a significant correlation between sense of belonging and all indicators of grit

(commitment: r = .197, n = 2,243, p < .001; hope: r = .203, n = 2,243, p < .001; prehope: r = .103, n = 2,248, p < .001; resiliency: r = .260, n = 2,247, p < .001).

The multiple regression model included three predictors (R^2 = .077, Adjusted R24 = .076, F(3, 2,239) = 62.532, p < .001). As shown in Table 9, although resiliency was the strongest contributor to a sense of belonging, students with high resiliency, commitment, and hope scores collectively were expected to have a higher sense of belonging overall. Prehope did not contribute to the multiple regression model. The null hypothesis that grit was not a useful predictor of a sense of belonging was rejected.

Pearson correlation was conducted to measure the relationship between nondiscriminatory campus climate and indicators of grit. There was a statistically significant correlation between two indicators of grit and nondiscriminatory climate (commitment: r = .065, n = 2,232, p = .001; prehope: r = -.038, n = 2,237, p < .05). There was a weak positive significant relationship between commitment and nondiscriminatory climate and a weak negative significant relationship between prehope and nondiscriminatory climate. Analysis did not show a significant relationship between hope and nondiscriminatory campus climate (hope: r = -0.031, n = 2,232, p =.074), and between resiliency and nondiscriminatory climate (resiliency: r = .007, n = 2,236, p = .370).

The MRA model included three predictors (R^2 = .012, Adjusted R^2 = .010, F(3, 2,228) = 8.851, p < .001). As shown in Table 10, commitment had a significant positive regression, indicating that students with high commitment scores were expected to experience a higher nondiscriminatory climate (or less discrimination). The significant

Table 9

Model Summary of Sense of Belonging and Grit

Model	b	SE b	β	Pearson's *r*
Model 1				
Constant	2.286	0.105		
Resiliency Scale	0.328	0.026	.26***	.26***
Model 2				
Constant	1.751	0.173		
Resiliency Scale	0.271	0.030	.215***	.26***
Commitment	0.170	0.044	.091***	.197***
Model 3				
Constant	1.620	0.178		
Resiliency Scale	0.234	0.032	.186***	.26***
Commitment	0.136	0.045	.073**	.197**
Hope	0.065	0.022	.072**	.103**

Note. R^2 = .006 for Step 1, Δ R^2 = .006 for Step 2 (p < .001), Δ R^2 = .003 for Step 3 (p < .001).

**p < .01. ***p < .001.

negative regression indicates that students with higher hope and prehope scores were expected to experience a reduced nondiscriminatory campus climate (more discrimination). The null hypothesis that grit was not a useful predictor of a nondiscriminatory campus climate was rejected.

Table 10

Model Summary of Nondiscriminatory Climate and Grit

Model	b	SE b	β	Pearson's *r*
Model 1				
Constant	2.843	0.211	.065***	.065***
Commitment Scale	0.143	0.047		
Model 2				
Constant	1.751	0.173	.099***	.065***
Commitment Scale	0.143	0.047		
Prehope	-0.132	0.038	-.081***	.097***
Model 3				
Constant	1.620	0.178	.117***	.065***
Commitment Scale	0.259	0.054		
Prehope	0.108	0.040	-.066**	.097***
Hope	-0.059	0.026	-.056**	.109***

Note. R^2 = .004 for Step 1, Δ R^2 = .005 for Step 2 (p < .001, Δ R^2 = .001 for Step 3 (p < .001.

**p < .01. ***p < .001.

Racialized Campus Environment and Conscientiousness

Correlation and MRA were conducted to examine the relationship between experiences of a racialized campus environment (sense of belonging and nondiscriminatory campus climate) and facets of conscientiousness. There was a weak statistically significant correlation between all facets of conscientiousness and sense of

belonging (industriousness: r = .234, n = 2,260, p <.001; responsibility/reliability: r = .162, n = 2,260, p <.001; competence: r = .248, n = 2,259, p <.001).

The stepwise multiple regression predictive model included two predictors (R^2 = .069, Adjusted R^2 = .068, F(2, 2,256) = 83.549, p < .001). Higher levels of competence and industriousness collectively resulted in an even stronger sense of belonging (Table 11). Competence contributed more to the predictive model (β = .166) than Industriousness (β = .12). The null hypothesis that conscientiousness was not a useful predictor of a sense of belonging was rejected.

Table 11

Model Summary of Sense of Belonging and Conscientiousness

Model	b	SE b	β	Pearson's *r*
Model 1				
Constant	2.013		.248***	.248***
Competence	0.378			
Model 2				
Constant	1.663	0.155		
Competence	0.252	0.043	.166***	.248***
Industriousness	0.181	0.042	.120***	.234***

Note. R^2 = .061 for Step 1, Δ R^2 = .008 for Step 2 (p < .001).

***p < .001.

Similarly, correlation analysis was conducted to determine the relationship between facets of conscientiousness and nondiscriminatory campus climate. There was a weak positive statistically significant relationship between reliability/responsibility and nondiscriminatory campus climate (r = .088, n = 2,257, p < .001). The relationship between competence and nondiscriminatory campus climate (r = .009, n = 2,256, p = .327) was not statistically significant. Similarly, the relationship between industriousness and nondiscriminatory campus climate was not statistically significant (r = -.010, n = 2,257, p = .324).

The stepwise multiple regression model included two predictors (R^2 = .014, Adjusted R^2 = .014, F(2, 2,253) = 16.503, p < .001). As shown in Table 12, reliability/ responsibility and industriousness collectively was the best predictor of nondiscriminatory campus climate, with reliability/responsibility contributing more to the model (β = .152). Based on the model, students with lower reliability/responsibility and higher industriousness are expected to experience a reduced nondiscriminatory campus climate (more discrimination).

Chapter Summary

This chapter began with an introduction that stated that the analysis and results would be presented for the first three research questions. This was followed by demographic statistics from the MSL dataset and the correlation and multiple regression results of the dependent study variables by facets of conscientiousness and indicators of grit. Outcomes of the effect size and null hypotheses were presented for each dependent variable.

Table 12

Model Summary of Nondiscriminatory Climate and Conscientiousness

Model	b	SE b	β	Pearson's *r*
Model 1				
Constant	2.647	.200	.088***	.088***
Reliability/Responsibility	0.187	.045		
Model 2				
Constant	2.934	.212		
Reliability/Responsibility	0.324	.057	.152***	.088***
Industriousness	-0.184	.047	-.104***	.324

Note. R^2 = .008 for Step 1, Δ R^2 = .006 for Step 2 (p < .001).

***p < .001.

The results for the Research Question 1 were that college persistence (GPA) was significantly related to all facets of conscientiousness and two indicators of grit. In response to Research Question 2, data indicated that college persistence (GPA) was predicted by the reliability/responsibility facet of conscientiousness and by the commitment indicator of grit. Data were presented that demonstrated a statistically significant relationship between aspects of racial identity and conscientiousness, as well as grit, in response to Research Question 3. Other data related to Research Question 3 indicated that conscientiousness and grit linearly predicted campus racial experiences, sense of belonging, and a nondiscriminatory climate.

CHAPTER V

PRESENTATION AND ANALYSIS OF QUALITATIVE DATA

Present Study

This mixed-methods study was designed to present an examination of grit and conscientiousness as two personality traits that hold significant potential to support the college persistence process of high-achieving African American students (Komarraju et al., 2009; Poropat, 2009). The qualitative portion was achieved by analyzing expressions of grit and conscientiousness from 12 high-achieving African American college students. Through a one-on-one semistructured interview process, the students demonstrated, in their own words, that these personality attributes had an impact on their ability to persist in college. This chapter presents results of the qualitative data collected for the research question, "What are the perceptions of high-achieving African American students in regards to (a) fundamental beliefs about achieving success in college, (b) grit and conscientiousness and whether these attributes impact their college persistence process, and (c) the relationship, if any, between race, grit and/or conscientiousness and their college persistence process?"

The standard "college type" personality, according to Lundberg (2013), is generally one that is highly conscientious. "A large literature in psychology and education finds that conscientiousness and behaviors related to conscientiousness, such as persistence and self-control, are strongly predictive of grades in school, and other measures of educational success" (p. 9). However, Lundberg posited that conscientiousness, the most commonly recognized personality trait associated with

academic achievement, is not significantly present in African American male students, those with a low SES (arguably a significant portion of African American college attendees), or those whose mother had low education levels.

> Conditional on mother's education, being Black appears to be an additional dimension of disadvantage in terms of the marginal effects of personality traits. For each SES group, the positive effect of conscientiousness on educational attainment is weaker for Black men and women, and the marginal effect of openness is stronger. (Lundberg, 2013, p. 11)

Lundberg concluded that African Americans rely on other personality traits, such as openness, to support their college-going behavior. Lundberg's findings and subsequent recommendations regarding the ideal college type are based heavily on the family background of the student and race.

According to Lundberg (2013), African Americans mirror the behavior of recent immigrants in college. Instead of relying on an innate drive, a strong goal orientation, a sense of capability, responsibility self-control, discipline, and organizational skills, among other conscientiousness facets, African Americans rely more on curiosity and imagination to help them to succeed in college. Lundberg implied that policy investments to increase college attainment in this group of students should not foster conscientiousness skills because skills of this nature do not pay off. "Many interventions, proposed and actual, focus on skills related to conscientiousness, such as focus and persistence, and yet, for young men from disadvantaged backgrounds in this cohort, there was no apparent educational payoff to this trait" (p.14). However, it should

not be surprising that many African Americans do not fit within Lundberg's perception of the ideal college type. In the area of academic achievement, researchers have argued that African Americans and other people of color fall short of the norm (Valencia, 2010).

The Duckworth et al. (2007) research on grit might be used to reveal some of the shortcomings in Lundberg's research because, as she argued, conscientiousness, as has been traditionally defined, is an incomplete construct. Duckworth and her research associates posited that conscientiousness might have a subfacet grit—the passion and commitment toward long-term goals. It bears considering that conscientiousness in its expanded conception (one that includes the subcomponent grit) may be more inclusive of all people, cultures, and classes. If this is the case, it could only strengthen the hypothesis that the reimagined college persona leverages the strengths of racial identity in combination with both conscientiousness and grit to help African Americans to persist through college.

The results of the qualitative portion of the study demonstrated that the conclusions drawn about college type using only the traditional definition of conscientiousness that Lundberg used potentially changed when student voices were considered. A new, more robust, college persona for African Americans emerges when conscientiousness, grit, and race-related variables are studied collectively.

Twelve students (Table 13) participated in this study (seven females and five males). Study participants all self-identified as African American. Four students (three males and one female) were student athletes attending the university on an athletic scholarship. All participants reported a college GPA of at least 3.0, with seven reporting

Table 13

Participant Profiles

Pseudonym	Class	Gender	GPA	University	Major	Remark
Masamusa	Senior	Male	3.66	HBCU	Political Science	Must be able to block out the negative stereotypes that are out there in the media.
Calvin	Senior	Male	3.30	HBCU	Finance	Know what it takes to reach their goals . . . must have discipline, a sense of accountability, and organization skills to be successful. It helps to prioritize.
Ace	Senior	Male	3.20	PWI	Biomedical Engineering	Minority students have to work ten times as hard to achieve. My work ethic was developed by doing this and just because I started to achieve doesn't mean it went away. I made my start towards my goal (of being a doctor) long before starting college.
Pam	Sopho-more	Female	3.00	HBCU (transfer)	Civil Engineer	If you lose sight of your goal you are in trouble. Four years of college is a long time. You've got to see past the 4 years.
Danielle	Sopho-more	Female	3.17	PWI	Respiratory Therapy	I've noticed that there is a prefer-ence at times by certain professors. Sometimes it's subtle. The tutors [at the tutoring center] looked at me and then didn't say anything but another white student walked and they greeted them. We can be overlooked and they pretend like you are not even there.
Christine	Senior	Female	3.45	PWI	Biochem-istry	I went to the best high schools in the city, but I was not prepared for college. Went to cultural mixed high school and [still] experienced culture shock by the racism in college.

Table 13 (continued)

Pseudonym	Class	Gender	GPA	University	Major	Remark
Marie	Fresh-man	Female	3.20	PWI	Computing and Information Studies	You must be resilient. There are going to be times when you hit rock bottom, when you think you've figured out something and you have a project and it's hard. Don't just give up. You must be determined. You have a goal and you stick with it and you are going to do it no matter what. You just keep going.
Simone	Sopho-more	Female	3.50	HBCU	Nursing	Don't be shy about who you are, your skin color, or ethnicity. Don't be embarrassed. Your skin color is gold. You will worry less about things that are so irrelevant if you know who you are. You can focus on things [that] are so important, like actually graduating
Nikki	Senior (2nd year)	Female	3.42	PWI	Communi-cations	You have to have a really good understanding of self. You know if you can study for exams 3 weeks prior or the night before. You have to have an understanding of how you work to be successful. I learned I can read it but I have to write it down two to three times in order to retain information.
Sophie	Sopho-more	Female	3.26	PWI	Biology	To do well in college you have to have passion. You must care about learning so bad. You must also be goal oriented. Know that some-thing is hard but being conscious that this will pay off. The mindset that sacrifices will be rewarded in like 10 years or so.

Table 13 (continued)

Pseudonym	Class	Gender	GPA	University	Major	Remark
Jabari	Senior (2nd year)	Male	3.00	PWI	General Business	Determination is important because college is hard. You have to be willing to do whatever it takes to get where you want to be. My long term career goals is going to take a lot. College is just one of those necessary steps. Even if I'm not determined for school, I'm determined for that latter point in life and this will help me get down that road.
Roger	Senior	Male	3.25	HBCU (transfer)	Business Marketing	I started at [university] my fresh-man year but transferred because it was a PWI. At [university] the Black community was excluded. It was pretty much the whole feel of it. The full body of the African American community was athletes. If you didn't do a sport you weren't acknowledged.

Note. GPA = grade point average, HBCU = Historically Black College/University, PWI = Predominately White Institution. Students with the designation HBCU (transfer) began college at a PWI but transferred to a HBCU.

a GPA of ≥ 3.25. The highest GPA reported was 3.66. Every student was enrolled full time, carrying a minimum of 12 credit hours. The participants were not evenly distributed across classification years; there were no juniors in the study (Appendix H). Only one student was a freshman (second semester), four were sophomores, seven were seniors, including two fifth-year seniors.

Results

The purpose of the qualitative portion of this mixed-methods study was to understand the nature of the relationships among grit, conscientiousness, and race on

college persistence through the perceptions of 12 high-achieving African American students. These students articulated how these attributes had influenced their college persistence, particularly within the context of racial identity.

Every participant stated that being African American had made attending college challenging in many ways but noted that their identity made facing these challenges possible. Jabari found a way to reinforce his identity to battle stereotypes often attributed to African American athletes at a PWI. "Playing sports always put a stereotype that that's all you could do. I take offense because I've always seen myself as smart . . . someone who will be successful and not just a jock." He had pledged an African American fraternity in order to be around peers who were both African American and focused on school.

Every student stated that grit had played a major role in his or her college-going experience and most shared that it extended to a dream career, often established before college began. Sophie shared her passion and drive to be a midwife.

> During high school my parents didn't even know that I had tests. It wasn't my parents pushing me. I'm doing all of these [things in college] that are hard but when it's time to be a midwife, I will be an excellent one. I want to be a really good midwife. The hard things will benefit me latter.

Seven of the 12 students stated that conscientiousness was an important trait that they relied on to see them through college. However, when students were asked for concrete examples of the behaviors that they relied on to help them to be successful in college, 11 of the 12 students gave illustrations of behaviors that fell within the

conscientiousness domain of the Big Five personality spectrum. Marie shared her system of success: “I use a planner and mark in my day what I will do. If I write it down and cross it off then I feel accomplished. That holds me accountable.” Marie’s propensity to be organized and dutiful toward her assignments helped her to achieve a 3.2 GPA at one of the nation’s top liberal arts universities in the mid-Atlantic.

Four broad themes emerged from the analysis of the data (Table 14). First, students made it clear that race affected everything about college at PWIs and a little even at HBCUs. Second, the participants agreed that just being a successful African American college student took grit. Third, the students were intentional about daily actions that led to their success, many of which were behaviors of conscientiousness. Fourth, the students agreed that external forces, as well as an innate predisposition, in high-achieving African American college students created their personal grit, making quitting impossible.

The Inescapable Context of Race and Its Impact on College Persistence

One of the most marked observations to emerge from the study centered on just how much impact being an African American college student had on the participants’ ability to attend persistently and to perform well in the collegiate environment. The participants shared that their racial identity, particularly at PWIs, made attending college difficult (Strayhorn & Terrell, 2010). Even participants who attended an HBCU were aware of being a college student within a larger societal context that they sensed questioned their intellectual legitimacy (Steele et al., 2002). They conceded that, while they were able to press through racial issues, both racism and microaggressions were

Table 14

Major Themes and Study Subthemes

Major theme	Subtheme	Definition
The Inescapable Context of Race and Its Impact on College Persistence	Insidious Nature	Microagressions are painful
	Discrimination	Participants' experiences of racial discrimination in the college atmosphere
	Isolation	A low sense of belonging on the college campus, largely because of race
	Racial Pride	Racism affects their experience but they counter it with identity
To Be a Successful African American College Student Is to Have Grit	Unfair Odds	African American peers/friends face unfair odds that affect college completion
	Beating the Odds	Strategies that participants use to stay gritty
	Grit Is Important	What grit means to them
	Focused on Goals and Passion	Demonstrate passion and persistence
Actions, Not Words	Organization	Examples of the "order" facet of conscientiousness
	Understanding Self as Learner	Examples of achieving striving, and competence facets of conscientiousness
	Hard Work Inspires Pride	Propensity toward hard work and pride in the work
Social Capital: They Just Won't Let Me Quit	Family	Direct or indirect expectations for college completion from persons related to the participant
	Peers/Other	External support from members other than the family who expect college graduation
	Societal Pressures/Expectations	Low expectations from "society" spurs hard work

pronounced enough to cause very capable students to drop out. All 12 participants knew talented African American college students who had begun college but eventually had dropped out, some because they had felt that they did not fit in. Eight of the participants pointed to very specific personal experiences of racism and microaggression that had made them uncomfortable.

Almost all of the participants agreed that they had to go out of their way to be successful in college, sometimes due to feeling unwelcomed because of their race. Roger and Pam, student athletes at small, liberal arts universities, had transferred from a PWI to an HBCU after their freshman year. For Roger, it was discouraging to attend a small PWI. “The Black community was excluded. It was pretty much the whole feel of it. The full body of the African American community was athletes. If you didn’t do a sport, you weren’t acknowledged.” Roger, now a senior, wanted to be in a place where “the faces of Black people are more diverse.” Roger said that he was not the only African American athlete who had transferred after the freshman year; however, some of his friends just did not enroll in another school. Marie, a freshman in the technology department, noted that, when capable African American students dropped out of college, “they don’t have the resources to figure out how to drop back in.”

Pam, a sophomore engineering student, had also transferred to an HBCU after her freshman year, partly due to what she had perceived was a financial aid department that was willfully reducing the aid that she received after she had secured outside scholarships. As an athlete, Pam deliberately planned to secure outside scholarships in addition to her aid so that she could play college sports for 5 years. Pam and her family

were hoping to avoid student loans. Despite this explanation and a request to the university, the private university reduced her financial support, which frustrated her. Pam was proud of the fact that she had maintained her major when she transferred from a PWI to an HBCU. She was from a family of engineers; her mother was a civil engineer and her brother is a mechanical engineer. Pam noted that African American women college students in STEM can sometimes find it doubly difficult to be successful in college. "Engineering is already hard for minorities and women. It is isolating. . . . When I was at [the PWI] I was the only Black female in engineering my freshman class. There were two Black sophomores in the classes above me." Upon transfer to the HBCU, Pam said felt more "welcomed." There was more emphasis on hard work and less emphasis on competition and proving that she belonged.

Christine, a senior majoring in biochemistry at a Tier 1 mid-size private university in the South, shared the emotional burden of feeling left out.

> For me and my school it's not having a lot of people that look like us and it's hard to feel supported when you don't know who you can talk to. I think I didn't realized how big of a deal it was to be surrounded by people who culturally understood me. Everyone else fits and everyone else feels like it's their home. In the high school I went to, the school was half minority and half Caucasian. But it was magnified at college from high school. If you are going through something . . . it's like a cultural shock. Academically, I wasn't prepared as I could have been.

Jabari, a senior and an athlete, chose to stay at a small private liberal arts college.

> Some of the things I noticed is that there are not that many of us here. Only a handful and the large majority play sports. There are very few that don't play sports, maybe four or five. There are very few professors that are African American on campus. Sometimes you kind of feel like you are alone. There are just not many people like you. There aren't that many people on the faculty side that are pushing you to stay in school. No one shows you that you can do greater things once you graduate.

Jabari shared that he had a very smart friend who had dropped out because he felt that people were against him.

Danielle, a sophomore at a state university, expressed a lifelong goal to be a respiratory therapist.

> There are some people that just don't like Black people. Professors too. People don't want to be your lab partner or don't want to work on a paper with someone African American because they think they don't know what they are doing. . . . I've notice that there is a preference at times by certain professors. Sometimes it's subtle. The tutors [at the tutoring center] looked at me and then didn't say anything but another White student walked in and they greeted them. We can be overlooked and they pretend like you are not even there.

Nikki reflected on experiences of racism and microaggressions at the large PWI on the West Coast. She was left feeling frustrated and moved to action. "I can be only Black girl in my classes or just one of two. Then there are Blacks that don't have Black friends." She shared that, during her freshman year, she had a particularly troubling

experience in class. “They [White students] don’t get it. They just don’t understand. In my group a guy said ‘we play ghetto jeopardy. The questions are hella ratchet’.” Nikki chose to confront the student about his language and found that the student could not explain it. She told the classmate to “do some research so that you know what you are saying,” to which the classmate responded that he was not a racist and walked away. According to Nikki, African American college students suffer microaggressions not just from White students but from faculty as well. She recalled standing in a long line to submit a form to change her major from sociology to communication. When the White student in front of her submitted her form, it was received with no questions. However, when Nikki submitted form, it was handed back with the statement that she needed to have a 2.5 GPA. Nikki said she responded by pointing out that her GPA on the form was well above the required standards. “I took her name and reported her.” Nikki was not clear that anything had changed as a result of her actions.

Ace had adverse experiences with being African American at one of the nation’s elite universities on the East coast.

> Small microaggressions make you feel lesser than your peers. People make you feel like you can’t reach the level of success like people around you. It seems like you have the same playing field but you dig into the microaggressions, things like not being chosen to be in study groups and the interactions in class and on campus the lack of support and resources, all play off of one another especially as a person of color.

There were not many African American people at Ace's university. "Lack of people that look like you, all of that plus lack of resources, adds up." For Ace, resources at the university were not targeted to African Americans and other students of color. He commented that African Americans were put at a disadvantage because of this. For instance, he shared that professors' office hours often clashed with student athletic responsibilities and were flooded with people. For him, the frustration of having to share tutorial services with students who had had years of private tutoring exacerbated the disadvantage that African American students faced. He described his strategy for staying focused: "I contextualize everything, put racism in its place." He also sought affirmation and support for his identity as an African American male by pledging an African American fraternity and seeking African American friends.

By far the most difficult issue affecting African American college students, according to the participants, was the issue of racial injustice. When asked about other issues that impeded success by many African American college students, the participants included economic distress, the real tension between familial obligations and personal aspirations and the struggle to delay gratification by going to college first versus working immediately after high school.

Some of the participants stated that financial aid had a significant impact on Black students' ability to complete college. Nikki, a 5th-year senior on the West coast, shared that she worked three jobs and still struggled to keep up. In her junior year, she had to pay an unexpected $1,500 out of pocket because her student loans had been reduced. She said that her parents had helped her to get through this trying experience.

> I cried in my room. How am I going to pay for this semester of college? Where is my financial aid? . . . They told me to call Sally Mae to get a loan. But, if I didn't have two parents who really loved me and cared about my success, I wouldn't have finished.

Eventually Nikki's parents stepped in to help her. However, according to Nikki, her situation was not atypical.

Other study participants identified the emotional distress of the cost of college on African American students. At least six participants shared that the cost of college had deprived very capable friends of the opportunity to persist. Roger, an HBCU transfer student, shared,

> Family issues cause people to dropout. They don't want to take out loans but don't have enough money. Or they get reduced money as time goes on. The family depends on the kid to work. I feel like the majority of African American students are stuck with trying to work their whole lives.

The lack of financial resources, coupled with additional financial obligations to the family, was a recurrent theme. One participant shared that her brother had dropped out of college due to having a child and needing to support his new family. Another shared that he had friends who had dropped out when they found that they could not take care of siblings and tuition simultaneously.

It has been well understood generally that college is not easy. Some students do not return after their first year (Hurtado, Milem, Clayton-Pedersen, Allen, & Milem, 1998). College imposes novel experiences and requires a level of emotional maturity and

academic discipline that many students, of any race, struggle to develop. These stresses, combined with the time commitment and cost of college, have caused many students to drop out (Rodgers & Summers, 2008). The *U.S. News and World Report* (as cited in U.S. Census Bureau, 2018) suggested that 1 in 3 college freshmen do not return to college for their sophomore year. Study participants clearly demonstrated that African American college students face more than the common trials associated with college persistence. African American students who have managed to stay in college and thrive despite these challenges possess an unusually strong constitution and a solid support structure that has allowed them to prevail. Perhaps, this is where grit and conscientiousness come in.

To Be a Successful African American College Student Is to Have Grit

The interviews with the students were designed to gain insight into how grit and conscientiousness play a role in college persistence by high-achieving African American students. The first theme to emerge during the interviews was a sense that being successful in college was difficult due to challenges (sense of belonging, lack of financial resources, etc.), amplified by the complexities of racism. The examples that the students provided about being in college have been supported by research that demonstrates the unique forces that students of color, low-income students, and/or first-generation students face in college (Cabrera & La Nasa, 2001; Perna, 2006). The students' testaments of their experiences have also been undergirded by research that has demonstrated that racism and microaggressions are a real part of the educational

experience for many African American students (Harper et al., 2018; Solórzano & Yosso, 2000; Strayhorn, 2015).

In spite of these many challenges, the participants were arguably even more successful than the average college attendee, regardless of race. To understand how these students managed despite their racialized campus experiences, the researcher asked questions about personality traits, including grit and conscientiousness. Before being asked directly about grit and conscientiousness, each participant was asked to list the top five personality traits that had influenced his or her success in college. Seven participants mentioned determination, six mentioned perseverance, five mentioned optimism, and at least five mentioned discipline. These results suggest that this group of high-achieving African Americans had a strong predisposition toward principles of grit and conscientiousness as a daily function of college persistence. Other words and phrases (some were skills, others were attributes) were used with less frequency included leadership, communication, kindness, resourcefulness, adaptability, accountability, open mindedness, self-sufficiency, competitiveness, empathy, and faith.

Participants were asked about the direct role of grit in their college experience. Grit has been defined as the passion and perseverance toward long-term goals (Duckworth et al., 2007). Each of the participants supported the concept of grit and stated that the word described them. All participants reported that they were passionate about graduating from college and that they were persistent in this effort. Eight went further by articulating the need to graduate from college in order to pursue a long-held aspiration or goal.

Masamusa had decided in high school that he wanted to be a judge and an activist working to transform the penal system in America. He recounted that he had almost dropped out of his predominantly White high school because he was a troublesome student; he had received 31 discipline referrals during his freshman year. He did not have family who had attended college and his father and stepfather were both in jail. Through a chance encounter, an elderly Black man outside a barbershop told him that "the mixed rap tapes that he was selling was poison to his own people." He learned of authors such as Malcolm X and Marcus Garvey and developed a passion for activism. His passion led him from being sent to alternative school twice, barely finishing high school with a GPA of 2.4 (after failing his freshman and sophomore years) to college, where he currently held a GPA of 3.6 and was pursuing a chance to study in Spain for a year before beginning law school. "I was underperforming but I always knew I was gifted." His major accomplishment in college was organizing a sit-in at city hall in a major city, forcing the mayor to postpone a city council meeting by 15 minutes while they addressed him and other students about the recent killing of an unarmed Black man. Masamusa pointed out that the protest was reported in the local newspaper. A senior at an HBCU, Masamusa stated that, even at an HBCU, he is aware that people "out there" do not expect him to do well, so he feels an internal pressure to prove them wrong. "You have to be aware of your history and you know what you are capable of. . . . must be able to block out the negative stereotypes that are out there in the media." He knows that the odds are stacked against him in college but he has used his pride as an African American man to drive his success.

Ace, a senior biomedical engineering major attending an Ivy League university with hopes to attend medical school, also displayed grit. Ace shared that he had learned that he was good in mathematics even in preschool. In elementary school, the ease of course work in Gifted and Talented classes confirmed that he would use his mathematics skills in life.

> I enjoyed the process of working hard and seeing it payoff for myself. . . . In high school, I was able to gain momentum but it became a self-fulfilling thing because I got awards. Similar to kids who play video games and keep going because they were good at it, school was a video for me.

Once he was accepted to one of the nation's most competitive universities, his goal of using mathematics and pursuing medicine began to materialize. He had a setback in his freshman year when, playing football for the university, he suffered a concussion and had to leave the team. Suddenly, he felt displaced and lost his main support system. His grades dropped from A/Bs to Ds. "It was a shock to my confidence; 'Maybe, I don't have it to be here.' I was not seeing a lot of people that were Black." Ace now has a 3.2 GPA and said that his "main goal is to do well academically."

> Minority students have to work 10 times as hard to achieve. My worth ethic was developed by doing this and just because I started to achieve doesn't mean it went away. I made my start towards my goal (of being a doctor) long before starting college.

Ace has dealt with the microaggressions that he has faced as a student.

> Your value framework as a person is important. You have to be principled and have an internal dialogue so you don't blow in the wind. You must have a firm and concrete space internally. You won't let the other things become personal and [you will] contextualize them. Let's you grow stronger as a person quicker.

Ace found connection and support by pledging an African American fraternity and working with a mentor, both of which have helped him to maintain a sense of self and focus in an unsympathetic environment.

Both Masamusa and Ace used a strong sense of identity and cultural connection to persevere through a challenging atmosphere. Passion for their personal dreams served to motivate them. They were aware that others imposed limits on them as African American men. But for themselves, ethnic pride is one of the main reasons their grit is so strong. For these gentlemen, grit to pursue their passion grew stronger through their most difficult experiences.

Simone, a sophomore biology major, shared that she had known prior to college that she wanted to open her own nursing school. There were nursing books in her home as she grew up and she looked at them from time to time, although no one in her family was a nurse. To pursue her dream, she decided to major in biology. She experienced firsthand that people in her university did not believe that she would succeed.

> I know people that are not colored don't expect people of color to know certain things. They don't expect Black Americans to put forward that extra effort extra humph. Whites don't expect Black Americans to take that extra step. I've witnessed it.

But in response to those low expectations, Simone, like Masamusa and Ace, relied on her sense of identity to give her the grit to focus on her dream.

> Don't be shy about who you are, your skin color, or ethnicity. Don't be embarrassed. Your skin color is gold. You will worry less about things that are so irrelevant if you know who you are. You can focus on things [that] are so important, like actually graduating.

Simone shared that she had learned the concept of grit first from her mother and then in high school, and she worked to apply it daily.

> Grit is important 100%. I went to KIPP for high school and it was a huge word. If there is something that you really want, you have to stick with it. If you keep changing your mind over and over, you can waste time and money in school. Once you have a goal it's so much easier to keep reaching for it.

Simone combined her prior knowledge of grit with the pride that she feels in her racial identity; she has used it to help her to do well in college.

Jabari, a 5th-year senior enrolled at a small PWI in the South, also relied on racial pride to bolster the grit that he has used to get through college.

> I want to be a serial entrepreneur. I want to invest in other people's business. For as long as I can remember I have never liked people telling me what to do. I want people to give me guidance and I can go with it. I never want anyone to gain more from my skills and abilities than myself.

To support his passion, Jabari quit the basketball team to pursue school. He chose to minor in entrepreneurship and began a club called the Game Changers Society for

students who wanted to pursue entrepreneurial dreams. He even selected a mentor, whom he considers to be a serial entrepreneur. He expressed frustration with the perception of Black athletes on primarily White campuses.

> Playing sports always put a stereotype that that's all you could do. I take offense because I've always seen myself as smart. I tried to separate myself so that people would see me as a smart guy and someone who will be successful once I graduate and not just a jock. I know people who have transferred from [here] to other [universities]. It's the financial aid and the environment. Sometimes you kind of feel like you are alone. Even being the smartest and greatest personality doesn't matter.

Jabari's motivation for pressing through college in an unreceptive environment was due to his dream to start a business. It was underscored by the desire for African American students like himself to be recognized as smart, too.

For the participants in this study, the conversation about grit could not be separated from the concept of identity. They saw themselves as gritty, particularly because of the daily uphill fight for visibility, legitimacy, and academic recognition. The grit displayed by these students—the depth of their passion and strength of their perseverance—was influenced, if not enhanced, by their struggle. Calvin, a senior finance major with a 3.3 GPA, put it this way, "As I go through more and more, my grit grows." In short, for the participants, survival in racialized campus environments took grit. Doing exceptionally well in classrooms that challenged their academic self-concept

was the very essence of being gritty. To be an accomplished African American college student was to have grit.

Actions, Not Words

Interviews with high-achieving African American college students yielded insights concerning the impact of discrimination, stereotype threat, a stifled sense of belonging, and microaggressions on the ability to get through college. Within this context, participants demonstrated how and why grit was important to the college-going process. Participants associated grit and racial identity with their ability to persist through race-related challenges. However, grit was not the only personality attribute that affected their ability to persist in college. The concept of conscientiousness provided additional insight into how personality traits support college persistence among high-achieving African American students. Komarraju et al. (2009) stated that conscientiousness, a trait central to educational achievement, was important for college success as well. Researchers such as Lundberg (2013) agreed but suggested that it did not have a payoff for everyone, especially African American men and people from low-income backgrounds. The findings of the current study offered a different perspective. The results demonstrated that conscientiousness was useful for all African American college students, including males.

During the interviews, the term *grit* strongly resonated with participants. They were enthusiastic about giving examples of the concept. The word *conscientiousness* did not provoke the same reaction. It was familiar to some participants but not to others. All participants required a definition of the word. When asked which trait had greater

influence on their college success, most participants chose grit. But when asked what important skills and behaviors helped them to navigate college, all participants except one gave vivid examples of conscientiousness. Only one student was unable to articulate concrete behaviors that had made him successful in college. When asked what personality traits influenced his college attendance, he spoke of faith, developing a support system, and having "command" of his situation. Ten of the 12 participants identified tactics such as organization techniques, ways that they maintained self-discipline, belief systems that demonstrated their desire to do well in class and be a good teammate for projects, and their drive to achieve for family and others in their personal network who were counting on them. Several students were painfully aware of the pressure to be better than others in order to be taken seriously. One student, a senior biochemistry major with a 3.5 GPA at a Tier 1 private university in the South, planned to attend medical school after graduation. She stated that one of the most important things about college was studying.

> I get exam anxiety. I have to personally study before I reach out to a professor or attend a study group. There are levels of preparation. Last time I didn't fully finish studying for myself and I went to the group, I felt like I cheated.

In short, for the majority of participants, while the term *conscientiousness* may have been unfamiliar, the belief system and accompanying behaviors were present.

Several students described how they stayed organized for successful assignment completion. Their attentiveness to grades and preparation highlighted that they cared about doing well. Calvin, a senior finance major, said that time management was one of

the most important skills for college students. “You can’t get involved in everything right away.” For Calvin, the successful African American college student must “know what it takes to reach their goals, must have a sense of discipline, a sense of accountability and organization skills to be successful. It helps to have priorities.” Calvin said that he lived by his calendar.

Ace, a senior biomedical engineering major with his sights set on medical school, stated, “My main goal is to do well academically, figure out how to do my best work, keeping confidence and drive.” Pam said that organization skills were “everything.” For this engineering major, being organized was a “big deal.” She shared that being proactive kept her prepared. She always looked ahead at the work needed in each class and made it a point “to do the pre-reading then it will make sense before going to study group or tutoring.” Further, “I rely on a planner that is color coded and I’m super busy because I’m an athlete.”

In addition to organization, Nikki and Jabari, 5th-year seniors at different universities, went into detail about understanding self as a student. Nikki said,

> You have to have a really good understanding of yourself. You know if you can study for exams three weeks prior or the night before. You have to have an understanding of how you’re to be successful. I learned I can read it but I have to write it down two to three times in order to retain information. I can’t have phone or TV. Must have silence. I have to have flash cards. I learned this about how my brain works my junior year of high school because I struggled with reading comprehension.

Jabari echoed this view, describing himself as a learner,

> I am a very hands-on, visual learner and I am someone who needs quiet to study. I have to separate myself. I also learned to talk with my professors a lot more. You have to do what's right for you and understand why you are doing what you are doing.

On the whole, the participants expressed heavy reliance on conscientious behaviors to make them successful.

Social Capital and Grit: "They Just Won't Let Me Quit"

The idea of grit resonated strongly among these students. All claimed that they had it. Most could articulate how they had developed it and what held it in place through the difficult times. On the other hand, none of the participants readily identified with the word *conscientiousness,* although 11 recalled behaviors that would suggest that they exhibited this trait throughout their matriculation. Participants had identifiable techniques for organizing their work and were very aware of living up to group responsibilities and being good students.

The sum of the interviews suggested that noncognitive personality attributes influenced college success among high-achieving African American students. Grit and conscientiousness served as internal mechanisms that enabled them to attend by persevering and employing important academic behaviors. The participants also spoke of external forces such as family and community expectations that helped them to succeed. Each participant had a network of people who would not let them quit. In this sense, it

appeared that grit and conscientiousness function in tandem with external support for high-achieving African Americans, not independently.

Several participants had come close to dropping out of college. Noncognitive personality traits, long-term goals, a clear sense of racial identity, as well as a solid support system, had made them resilient. Roger, the senior who had transferred to an HBCU after a disappointing freshman year, was homeless for a time during his sophomore year. He learned that his father had been diagnosed with a serious illness and he struggled in watching his grandmother die. Somehow, Roger persevered in spite of personal tragedy. His endurance came from a community of support that included friends who let him sleep on their couch until he could afford an apartment, a mentor who pushed him to stay in school, younger brothers and sisters who were watching him, and his parents' desire for him to finish college, as they had dropped out when he was born. Roger, who sometimes felt like quitting, could not do so because he was accountable many people, not just himself.

Like Roger, Nikki relied on a strong support system. "I just can't quit. I have a niece that is like a child to me. I have her in my graduation photo." She stated that she took inspiration from a quote that she paraphrased: "I thought about giving up but then I remembered who was watching."

Sophia's support system was helping her to fulfill her dream. Sophia She stated that she dreamed of becoming a midwife. She shared that she had come to college knowing that she would someday be a midwife and had "felt this way as long as I can remember. I like reproductive health and took a class on it in high school." When she

shared her dream with her mother, her mother looked for a midwifery clinic for her to visit. During a summer month, her mother drove her to watch a birth in action and to shadow midwives. Watching the birth confirmed that this was her life's calling. Sophia's mother went out of her way to make Sophia's dream tangible, which fueled her passion and perseverance to be a midwife.

Calvin was eager to be the first in his family to graduate from college. Not only did he have his family pulling for him, but a high school counselor and teacher said that they would "come back and kick my butt if I messed up."

Having made it so far from his alternative high school days, Masamusa stated that he felt that his family was watching, that his community from his old neighborhood was watching, and that even the college president, professors, and a dean whom he had befriended while at his HBCU were watching and waiting for him to graduate. His sense of self, his community, and his goals intertwined to keep him in college. He said that the people in his life had led him to understand, "Knowing who you are and your sense of purpose matters. You have to have a goal and know what you are trying to do. That way when times get tough you have something to keep you in it."

Christine, who attended a very affluent PWI and who often felt isolated on her campus, said that at times she had wanted to leave. She shared how she handles it. "I go home a lot to reground myself and remember what's important to me, my family." Knowing that she has some place to turn in low moments has helped her grit to grow.

> College is hard. But it's even harder when you go to a PWI and you don't know anyone. My faith pushes me through. So many people want [me] to succeed—

family and professors—they say, “You are going to do this; you have to do this; you can do this.” It lights a fire and helped me to keep pushing.

Christine’s social capital is strong. It includes family, university members, and the church. It holds her grit in place.

Ace worked hard to maintain his focus at his Ivy League university. He stated, “I want to be in a position to thank people who came before me and make a way for those coming after me.”

Taken together, the data from the participant interviews suggested a relationship between the noncognitive personality traits, grit and conscientiousness, and the existence of a strong social support network. It is plausible that high-achieving African American college students have been leveraging important personality traits cultivated by experiences and racial identity and reinforced by a valuable social support system.

Chapter Summary

In this chapter, qualitative data obtained from the semistructured interviews of 12 high-achieving African American college students were presented and analyzed. Demographic data of the participants and their universities were offered. This was followed by an exploration of the four themes generated through the analysis of the data.

Results related to the qualitative research question revealed that high-achieving African American college students faced a college environment that did not affirm their identity or intelligence. Despite these challenges, the participants allowed pride in their racial identity to galvanize the grit that they already possessed. The results suggest that, in addition to grit, these participants relied on their conscientiousness to help them to

achieve. They articulated the behaviors and skills that they used that had led to their strong academic performance and persistence. They acknowledged that their college persistence and achievement were supported by a strong social support network. This support network, in tandem with strength derived from racial identity, reinforced both grit and conscientiousness in a culturally specific way.

CHAPTER VI

SUMMARY, DISCUSSION, AND CONCLUSIONS

This dissertation study was an analysis of how noncognitive personality traits, grit and conscientiousness, have influenced college persistence for high-achieving African American students. The analysis also included an investigation of racial identity and race-related campus experiences as potentially useful mediators of these achievement orienting traits and college persistence. A multi-institutional dataset provided a significant amount of quantitative data about grit and conscientiousness from a sample of high-achieving African American students attending colleges across the nation. Twelve participants' stories collected via semistructured interviews provided rich insight into the authentic college persistence experience for this population. Three concepts—human capital theory, the noncognitive factors model by Farrington et al. (2012), and Rodgers and Summers's (2008) revised form of the psychosocial model for college student retention—were used to form the conceptual framework that supported the findings.

Quantitative and qualitative data were presented and analyzed in Chapter IV and Chapter V. This chapter presents a summary of the study, discussion of findings, recommendations for further research, and a conclusion. The purpose is to extend the utility of noncognitive personality attributes to high-achieving African American college students by presenting a holistic assessment of how and why they are associated with college persistence (as measured by GPA) and race-related variables. Interview data from a small cohort of high-achieving African American students broadened this

understanding. This chapter concludes with recommendations for policymaking and further research, an important outcome of the trifold dialogue among theory, data, and the lived experiences of students.

Summary of the Study

This chapter reiterates the purpose and structure of the study, followed by major findings regarding college persistence related to noncognitive personality attributes, grit and conscientiousness, as well as race. Conclusions from the findings are discussed in relation to the study's ultimate purpose: to add to the body of research that helps to increase college persistence toward graduation by African American students. The discussion addresses the question: Do the data from the qualitative portion of the study align with, explain, or refute the data in the quantitative portion of the study? Finally, implications for practice and recommendations for further research are presented and discussed.

The primary purpose of this study was to determine whether noncognitive personality attributes, grit and conscientiousness, predicted college persistence for high-achieving African American students. Indicators of racial identity (public and private collective racial esteem and identity salience) and race-related campus experiences (discrimination in the college climate and a sense of belonging) were examined based on the influence of grit and conscientiousness. The study was structured by examining the relationships between conscientiousness and GPA, grit and GPA, conscientiousness and race-related variables, and grit and race-related variables.

Research on conscientiousness has indicated that it is made of multiple facets (Costa et al., 1991; Roberts et al., 2014). While there has been some disagreement on what actually constitutes these facets, it has been generally accepted that industriousness, orderliness, self-control, and reliability are included. Some researchers have also included competence, decisiveness, formality, punctuality, virtue, and persistence/ perseverance (Roberts et al., 2014). In this study, the MSL dataset containing data for 2,280 full-time high-achieving (GPA ≥ 3.0) African American college students was mined for survey responses aligned to the multiple facets of conscientiousness. Data were found for the facets of industriousness, reliability, perseverance, and competence. The data were supported by descriptors of the facets as captured by Costa et al. (1991), Roberts et al. (2014), and the BIC by Jackson et al. (2010). The validity and reliability for the MSL dataset was established across multiple studies. Dugan et al. (2012) stated, "Convergent validity was established between socially responsible leadership and theoretically congruent measures associated with transformational leadership, while discriminant validity was established with transactional and avoidant leadership measures" (p. 178). Mean data scores were calculated for each of the identified facets of conscientiousness and tested for statistical significance, using GPA as the dependent variable. GPA served as the proxy for college persistence.

The qualitative viewpoint of conscientiousness was gathered via semistructured interviews with 12 high-achieving African American college students who were recruited through criterion sampling. The group of 12 students included 5 males and 7 females and universities such as Prairie View A&M, Harvard University, Washington

and Jefferson University, Rice University, Duke University, California State University Sacramento, and Texas Southern University, among others. These students were asked to describe the personality traits that they found essential to their college success. They were also asked to identify specific skills and strategies that they used in college. Students were asked directly about conscientiousness and were invited to provide examples of how the trait had influenced their college-going process. Finally, they were asked to identify the traits that they would advise high school students to develop before going to college. Data collected from these interview questions were coded for themes and aligned with descriptors and examples from the research on conscientiousness. Triangulation was used to ensure reliability and validity.

Research on grit has indicated that it is made up of three facets: perseverance, ambition and consistency of interest. For this study, the survey statements of the 17-item Grit Scale were aligned with survey statements extricated from the same MSL dataset used for the investigation of conscientiousness. The survey statements were coded and aligned with four indicators of the perseverance facet of grit. These indicators were represented as prehope (e.g., "I knew I could find ways to solve complex problems even when others gave up"), hope (e.g., "I energetically pursue my goals"), commitment (e.g., "I am focused on my responsibilities"), and resiliency (e.g., "I am not easily discouraged by failure"). None of the data from the MSL database aligned with the consistency of interest and ambition subfacets. The validity and reliability of the MSL dataset were established across multiple studies. Mean data scores for each indicator of the

perseverance facet of grit were tested for statistical significance against persistence (GPA), as well as against race-related variables.

The qualitative perspective of grit was reflected in data received during the semistructured interviews of 12 high-achieving African American college students. The students were asked to describe the personality traits that they considered to be critical for college success. In addition, they were asked to identify specific skills and strategies used in daily matriculation. The students shared their understanding of grit, where it came from, and whether it was used in the process of college attendance and persistence. Data collected from the interviews were mined and coded into themes and aligned with descriptors and examples from the research on grit. Triangulation was used to ensure reliability and validity.

Race-related variables, specifically racial identity and campus racial experiences, were examined in multiple ways in this study. Quantitative data were used from the MSL database, which collected mean scores for the nondiscriminatory climate scale, sense of belonging scale, private collective racial esteem scale, public collective racial esteem scale, and identity salience. These data were juxtaposed with each noncognitive personality attribute. Findings were analyzed to determine whether there was a relationship between racial identity and race-related campus experiences and the noncognitive personality attributes.

Qualitative data on perceptions of racial identity, as well as racialized campus experiences, were gathered through the semistructured interviews with the 12 high-achieving African American participants. The students were asked to identify and

describe significant challenges that they and other African American peers experienced as college students. They were asked to describe ways in which these encounters affected their college persistence. They spoke frequently about racialized experiences, even when asked questions not directly related to race, such as "What are some of the reasons African American students drop out, or fail to persist, in college?"

The study posed three quantitative research questions:

1. Is there a correlation between college persistence in high-achieving African American students and grit and/or conscientiousness, noncognitive personality attributes linked to strong academic performance?

2. Which noncognitive personality attribute, grit and/or conscientiousness, predicts college persistence among high-achieving African American students?

3. Are the noncognitive personality attributes, grit and/or conscientiousness, influenced by race related factors such as racial identity, discrimination in the college environment, and a sense of belonging, in high-achieving African American college students?

The study also included a qualitative research question:

1. What are the perceptions of high-achieving African American students in regards to (a) fundamental beliefs about achieving success in college, (b) the potential impact of grit and conscientiousness on the college persistence process, and (c) the relationship, if any, between race, grit and/or conscientiousness and college persistence?

Questions 1 and 2 were addressed quantitatively from mean data scores obtained using the MSL survey database. Question 1 was addressed using the results from

Pearson product-moment correlation analysis. To address Question 2, MRA was performed to compare the means of the grit indicators and GPA, the means of the multiple conscientiousness facets and GPA, and the means of race-related variables and grit and conscientiousness. All three parts of the qualitative research question were addressed from the data collected during the interviews. In this chapter, the qualitative data is used to explicate the data collected in the quantitative portion.

Discussion of Findings

Previous researchers have argued that noncognitive attributes are critical for school success, including enrolling in college and persisting to completion (Cabrera & La Nasa, 2001; Duckworth et al., 2007; Farrington et al., 2012; Harper, 2012; Sanchez-Ruiz et al., 2016; Strayhorn, 2010; Tracey & Sedlacek, 1987). The goals of this study were (a) to determine whether two of those noncognitive personality attributes, grit and conscientiousness, predicted college persistence for high-achieving African American students, and (b) to determine whether these attributes influenced racial identity or race related college experiences. To meet these goals, I studied grit and conscientiousness from quantitative and qualitative perspectives using a sequential explanatory design. Each noncognitive attribute statistically predicted college persistence. The qualitative data confirmed and helped to explain the quantitative findings. The data indicated that race played a mediating role in the way in which African American colleges students used noncognitive attributes to support their college persistence efforts. Therefore, the findings are merged and presented as a collective dialogue.

Grit and College Persistence

The concept of noncognitive traits was one of the contributions of human capital theory to the field of education (Almlund et al., 2011). Farrington et al. (2012) used this idea and developed it into a system of traits called the noncognitive factors model. The model is a network of five traits that are influenced by the student's characteristics and background and situated within a societal context. According to the model, when students purposefully practice specific traits, learning strategies, social skills, and academic self-concept in the academic setting, it leads to development of the most essential noncognitive trait, called academic perseverance. Academic perseverance then translates into academic behaviors, such as completing schoolwork, which directly affects academic performance. College persistence, according to the authors, happens through academic perseverance. The variables studied in this paper, grit and the persistence/perseverance facet of the conscientiousness domain, fit into the academic perseverance part of the model. Academic perseverance in the model also included self-control and a mindset of hard work (industriousness; Farrington et al., 2012).

Grit predicted college persistence (as measured by GPA) for the students in the MSL dataset through the commitment indicator, although all indicators of grit studied (except for resiliency) were positively correlated. Students exhibiting grit agreed to survey statements such as, "I generally met the goals I set," or "I was not easily discouraged when I experienced failure," or "I hold myself accountable for responsibilities I agree to." According to the model, grit led to the types of academic behaviors that influenced performance.

The qualitative interview findings indicated that the model potentially worked as posited. For instance, Masamusa, who had a strong passion for activism and who desired to be a judge, chose to apply for a study abroad program and organized a sit-in at Houston City Hall to protest the killing of an unarmed African American man. Having barely graduated from high school, Masamusa applied to an open enrollment university and set his sights on becoming a college graduate. This student did not let past failures discourage him. Danielle, who wanted to go to medical school, talked about using the tutorial center at school and reaching out to friends when she did not understand assignments. Her goal of going to medical school pushed her to exhibit academic self-help behaviors leading to her success. Danielle stated,

> You've got to be resourceful in college. You got to go to tutoring, look up work that you don't understand and text people. You've got to figure it out. I know a lot of people that don't understand an assignment and they just don't do it.

Jabari, whose long-term desire to be a "serial entrepreneur" led him to find a mentor to support his dream, quit athletics and started an entrepreneurship club. He dedicated time to learning how to develop a business, found quiet places to study, and talked with his professors. All of his academic behaviors were driven by a deeply held commitment to become an entrepreneur. Jabari declared,

> I want to be a serial entrepreneur. I want to invest in other people's businesses. For as long as I can remember, I've never like people telling me what to do. I want people to give me guidance and I can go with it. I never want anyone to gain more from my skills and abilities than myself.

These students had grit (a passion that started early in life) that led to specific academic behaviors that boosted their college persistence. All had strong GPAs (3.0 to 3.66).

The research on grit is not conclusive (Credé et al., 2017; Gutman & Schoon, 2016). The narrative about grit has become so skewed (Ris, 2015) that it has gotten ahead of the research (Thomas, 2014), leading some to generate interventions to impart this presumed missing character trait on students in inner city schools, most of whom are African American or Latinx. Ris (2015) argued that this is merely "an updated version of the cultural deficit theory of the 1960s" (p. 10).

This study offered a different perspective on grit. Results indicated that grit was demonstrated both quantitatively and qualitatively. It was not a missing character trait in African American students, including males (Strayhorn, 2014). Further, when the interviewed students were asked how they had developed grit, only one student, Simone, stated that she had learned it from her mother and that it was reinforced at school. The other students shared that personal tragedy, family, friends, and their spirituality had taught them how to be gritty. For example, Roger was determined to "become something better than what I am now." Dealing with being homeless, watching friends drop out of school and make money, and pressing through his father's and grandmother's illnesses had helped to make him even more resolute. "I feel like a lot of African Americans start college but we stop because our support system. We don't see family finish." Roger wanted to do something different. Students such as Roger stated that their grit had helped to keep them focused, had strengthened their work ethic, and had helped them to

be resilient. According to Jabari, “Without a doubt, grit is everything.” Calvin insisted, “As I go through more and more, my grit grows.”

Conscientiousness and College Persistence

Unlike grit, the research on conscientiousness is fairly definitive and conscientiousness has been identified as a strong indicator of college persistence (Poropat, 2009; Roberts et al., 2014). This study confirmed that high-achieving African American students also possessed conscientiousness. Conscientiousness researchers, as discussed in Chapter II, have identified up to eight facets of the trait. The multi-institutional database used in this study contained only three of those facets: competence, industriousness, and responsibility/reliability. Only the responsibility/ reliability factor was significantly predictive of college persistence (GPA). The remaining facets were positively correlated to GPA. Students in the dataset who were rated as conscientious agreed to MSL survey statements such as: “I can be counted upon to do my part,” “I am seen as someone who works well with others,” “I am focused on my responsibilities,” “I am able to articulate my priorities,” and “I know myself pretty well.”

Data from the qualitative interviews contained more examples of conscientiousness. When the interviewed students were asked whether they possessed conscientiousness, all responded with a request for a definition of the word. But when they were asked what strategies they used to be successful in college and what skills they would encourage high school students to develop before going to college, most shared behaviors captured within the conscientiousness domain. For instance, Pam stated that she was organized to the point of color-coding her calendar weekly and mentally

managing distractions. Nikki planned her study schedule for tests and actively chose where she would study to minimize television noise and other sounds. Pam and Nikki's academic behavior would fall under the order and achievement-striving facets of conscientiousness. Marie mentioned that she had to be prepared before going to a study group. This was an example of the conventionality (or propensity to be dutiful) facet of conscientiousness. Calvin talked about time management, limiting his involvement in extracurricular activities in order to stay focused on goals and working hard. This behavior would be characterized by industriousness. Ace talked about taking pride in his work and monitoring his growth. He stated, "I enjoy the process of working hard and seeing it pay off for myself." The description of the achievement-striving facet of conscientiousness by Costa et al. (1991) would capture this behavior adequately. All students, except for one, articulated examples of various facets of conscientiousness in their college-going behavior. Many of these facets were not identified in the MSL dataset, underscoring the need for mixed-method studies such as this.

The findings of this study differed from those in the Lundberg (2013) study, which found that conscientiousness was a trait used most commonly by affluent White men, not by African American men and only sparingly by African American women. One of the shortcomings of the Lundberg study was that it collected data on conscientiousness in a singular manner: quantitatively. As with many research studies, the fullness of a phenomenological experience is not always captured in numerical data. Such was the case with Lundberg's work.

In this study, African American men were conscientious. Ace stated, “It takes discipline to get through college; I mean do what you have to do even if you don’t feel like it.” This African American male student clearly linked hard work (the industriousness facet of conscientiousness) with college persistence. He provided evidence of the actual academic behaviors that had led to his 3.2 GPA. Unlike the Lundberg (2013) study, African American men and women in this study possessed conscientiousness and actively used this trait to support their college persistence. In the noncognitive factors model, conscientiousness was part of the learning strategies (noncognitive traits) section (Farrington et al., 2012).

Race, Noncognitive Attributes, and College Persistence

Researchers have argued that African American students are unduly affected by racism during college (Harper et al., 2018; Solórzano et al., 2000; Strayhorn, 2015). Yet, few theories and models expressly connect the experiences of racism and the development of racial identity to the use of noncognitive personality traits. In an addendum to the noncognitive factors model, Farrington et al. (2012) briefly provided an explanation for how academic perseverance and behaviors could be affected by stereotype threat. The researchers acknowledged that the model was situated in a larger social context; however, they offered little explanation of that social context or how changes within that context modified the actual system’s pathway of noncognitive traits leading to academic perseverance and then academic behaviors. The failing of the model to incorporate the impact of context on the network of noncognitive traits has reduced its application to students of color.

Rodgers and Summers's (2008) revision of Bean and Eaton's (2000) psychological model of college student retention was used as part of the conceptual framework for this research to provide a structure for how African American students maneuvered the college persistence process differently. According to the original Bean and Eaton (2000) model, the college persistence process is affected by the student's cognitive and noncognitive entry factors, as well as the student's ability to adjust and become well integrated in the college setting. The positive feedback loop between characteristics that students brought to college and the students' experience on the campus would lead to strong psychological processes such as goal orientation and motivation; that would eventually lead to good psychological outcomes such as increased confidence and learning enjoyment, which would ultimately lead to persistence. The revised model stated that there were specific ways students of color adjusted and became integrated to college given the nature of racism within the college setting.

The revised model was overlaid onto Cross's Nigrescence model of identity development. In the revised model, after arriving to college with cognitive and noncognitive entry characters (Cross's pre-encounter phase), the interactions that African American students had on the campus (bureaucratic, academic, social, etc.) informed institutional fit or the decision that students made about whether they could get their needs met academically and socially (Cross's immersion/emersion phase; Rodgers & Summers, 2008). A negative fit experience could negatively impact the characteristics with which African American students entered the university, including self-efficiency

beliefs, coping strategies, and personality leading to poor academic outcomes (Cross's internalization phase). The model suggested that culturally specific beliefs, such as having a strong sense of ethnic identity, along with culturally specific strategies, such as being part of affinity groups, helped African American students to adjust to the campus environment and become integrated.

Racial Identity and Noncognitive Attributes

Evidence of some of the culturally specific beliefs used by high-achieving African American students was found in the MSL dataset. According to the current study, students who had positive perceptions about their racial identity and who had positive beliefs about what others thought of their race exhibited stronger presence of noncognitive traits. Luhtanen and Crocker (1992) developed the private collective racial esteem and public collective racial esteem scales, an extension of the social identity theory, to measure how the individual felt about membership in social groups and to measure how the individual felt about the public's perceptions of the person's social group. Mean scores for each of these scales were provided in the MSL dataset. Statistically significant findings were found for private collective racial esteem and each noncognitive independent variable measured. These findings were that students high in the grit commitment indicator (e.g., "I can be counted upon to do my part") or high on the conscientiousness industriousness facet (e.g., "I am not easily discouraged when I experience failure") were also high in private collective racial esteem and more likely to agree with statements such as "I feel good about the racial group I belong to" or to disagree with statements such as "Overall my racial group is not worthwhile."

Statistically significant findings were seen between public collective racial esteem and grit and conscientiousness. These findings were that students who were high in the grit resiliency indicator (e.g., "I can deal with whatever comes my way") and high again on the conscientiousness industriousness facet (e.g., "I am not easily discouraged when I experience failure") were also high in public collective racial esteem and more likely to agree with statements such as "Overall my racial group is considered good by others" or to disagree with statements such as "In general, others think that my racial group is unworthy." Feeling good about one's race and how one's race is perceived were aligned with grit and conscientiousness.

Statistically significant findings indicated a positive linear relationship between identity salience and grit and conscientiousness. Stryker and Burke (2000) defined *identity salience* as "the probability that an identity will be invoked across a variety of situations, or alternatively across persons in a given situation" (p. 296). Hurtado, Alvarado, and Guillermo-Wann (2015) defined identity salience as "the frequency in which individuals think about their group membership" (p. 128) and argued that identity was an important part of the achievement process. These authors shared that, in college campus settings, the more students of color were affected by discrimination and microaggressions, for instance, the more frequently they thought about their race. At least 59% of the African Americans in their study thought about race frequently. In the present study, high-achieving African American students were likely to agree strongly to survey statements such as "The group I belong to is an important reflection of who I am" and "In general, belonging to my racial group is an important part of self-image" when

the grit commitment indicator was present and when the competence facet of conscientiousness was present.

Correlations between racial identity variables and both grit and conscientiousness were confirmed by the experiences of the interviewed students. The high-achieving African American students maintained a strong work ethic and focus partly because of the pride that they took in their racial identity. As in the quantitative findings, positive racial pride led to strong academic performance. Masamusa attended an HBCU but, as he put it, still felt the societal effects of stereotype threat "out there in the media." He stated that his sense of identity helped him to battle the stereotypes. He was able to press through college because of "Black pride," knowing his history, and understanding what he was capable of. Nikki also had pride, stating, "Your skin is gold. Don't be shy about who you are, your skin color or your ethnicity." Cokley and Chapman (2008) found in their research that "students with more positive ethnic identities had higher academic self-concepts which were predictive of higher grades" (p. 13).

Racialized Campus Experiences and Noncognitive Attributes

This study confirmed what others have already established: Positive racial identity coupled with individual strengths, in this case, noncognitive personality attributes, have the potential to support academic achievement and college persistence (Cokley & Chapman, 2008). These same noncognitive personality attributes were also correlated with racialized campus experiences. Mean scores for a sense of belonging and nondiscriminatory climate represented the racialized campus experiences of students.

Several researchers have posited that college persistence is adversely affected by a low sense of belonging by African American students (Allen, Robbins, Casillas, & Oh, 2008; T. M. Freeman, Anderman, & Jensen, 2007; Harper et al., 2018; Hausmann, Schofield, & Woods, 2007; Strayhorn, 2019). Harper et al. (2018) reported that students who were interviewed in their study stated that they felt regularly "stereotyped, invalidated, and disrespected" (p. 13) and that did not belong on campus. Strayhorn (2015) found that the African American male STEM majors in his research emphasized the importance of a sense of belonging, stating, "When satisfied, belonging engenders other positive outcomes such as good grades, satisfaction and reduced departure intentions" (p. 60).

Quantitative and qualitative study findings corroborated the importance of a sense of belonging. The quantitative data indicated a positive linear relationship between a sense of belonging and all indicators of grit and two facets of conscientiousness. Students with grit and conscientiousness were likely to agree with survey statements such as, "I feel valued as a person at this school" and "I feel accepted as a part of the campus community." Qualitative examples highlighted the struggle that students experienced with a sense of belonging. Marie stated it well: "Feeling out of place can make you drop out. You walk around and don't see people that look like you." Nikki lamented, "I can be the only Black girl in my classes or just one of two." Jabari, who attended a very small liberal arts college in the south, shared,

> Some of the things I noticed is that there are not that many of us here. Only a handful and the large majority play sports. Sometimes you kind of feel like you

> are alone. There are just not that many people like you. There aren't that many people on the faculty side that are pushing you to stay in school. No one shows you that you can do greater things once you graduate.

Feeling integrated into the college campus is a determinant of college persistence, according to some of the participants.

Strong experiences of discrimination, inclusive of stereotypes and microaggressions, made the college persistence process more difficult, according to the study findings. Steele and Aronson (1995) argued that threats of judgment about academic performance and the fear of confirming those judgments or stereotypes could adversely affect student achievement outcomes. Some of the students relayed their experiences of campus discrimination. Ace, the attendee at Harvard stated, "People make you feel like you can't reach the level of success like people around you. Minority students have to work ten times as hard to achieve." Jabari spoke of wanting African Americans to be seen as something more than athletes and wanting to be personally recognized for his intellect. Danielle said, "I've noticed that there is preferences at times by certain professors. Sometimes it's subtle." Despite these experiences, these students were willing to work hard, exhibiting both industriousness and perseverance to support their persistence and to dispel stereotypes. Other students combated the experiences of racism by transferring to universities that increased their sense of belonging and reduced their exposure to racism. For example, two students had transferred from a PWI to an HBCU and one student stated that he had wished to do so but that was too late. All three

of these students stated that the experiences of microaggression and discrimination had prompted their desire to change.

The use of noncognitive attributes to resist stereotypes has been confirmed in other studies. Baber (2012) used the Multidimensional Model of Racial Identity (MMRI) to study the role of identity on college persistence in 15 African American freshmen at PWIs and learned that the students used resiliency developed from leaning on peer support networks to ward off the impact of stereotypes experienced in the campus. The students in Baber's study continued to achieve partially because of their personal assets. Quantitative data in the present study showed similar results. The industriousness and competence facets of conscientiousness and three indicators of grit (resiliency, hope, and commitment) combined, predicted nondiscriminatory climate, suggesting that with increased noncognitive traits, students were likely to perceive more nondiscrimination and disagree with statements such as "I have encountered discrimination while attending this institution" and "I would describe this campus as negative/hostile." Unfortunately, not all high-achieving African American students are able to inoculate themselves against racism so effectively.

Fostering Persistence and Noncognitive Attributes Through Culturally Informed Strategies

Much value comes from understanding how the African American college students in this study were able to do well under circumstances that caused others to fail to persist. Students such as Jabari, Danielle, Ace, and Nikki relayed the effect of challenges in a racialized campus environment on their college-going experiences. Yet

these students, like the others who were interviewed, were steadfast in their articulation that grit and conscientiousness undergirded their academic success. Naturally, the question of how these students were able to succeed in a sometimes unwelcoming campus environment arises; however, a larger question also arises. Were specific culturally responsive strategies (Gay, 2002) used by the students that could be replicated by other African American students to sustain their college persistence? A reexamination of the students' responses revealed that there were such strategies. As was stated earlier in this chapter, racial identity supported students' academic self-concept and grounded most of the students in an intrinsic pride that energized their press toward degree completion. However, availing themselves of a strong sense of racial identity was not the only culturally informed strategy that facilitated college persistence. Another was an emphasis on a community of supports or relationships.

Diverse relationships. Steele et al. (2002) reported that *diverse* relationships assisted African American college students to transcend a threatening environment. They argued that having White friends while attending a PWI was associated with improved GPA. Their explanation was that these relationships might make the college environment appear less hostile, thereby reducing the experienced stereotype threat and increasing the opportunity for African American students to focus on performing better. "Nonetheless, the findings can be seen to be an interesting principle of remedy: safety in relationships, especially those that reveal the environment to be less threatening than it might rationally be expected to be" (Steele et al., 2002, p. 426).

The strategy of relying on a diverse community of friendships for academic support, although not explicitly stated in terms of relying on a *White* friend, was invoked by the interviewed students. Initially, Ace reported a sense of belonging as part of the football team at the large Ivy League university. In this space he undoubtedly had White, Asian, Latinx, and African American friends. However, after his concussion and subsequent departure from the team, he expanded his community of support to include a new set of relationships found through the African American fraternity that he pledged. The fraternity offered social support and a focus on achievement and community service (Guiffrida, 2003). Pam stated that she had moved from an engineering school at a PWI, where she was one of a few African Americans and the only female African American, to an engineering school at an HBCU, where there were more African Americans and, just as important, more women. Her effort to enter what she perceived to be a more welcoming learning space allowed her to develop same-gender relationships that were academically centered.

Success-affirming adults. Steele et al. (2002) also suggested that having "success-affirming, role models and mentors" (p. 428) could serve to reduce the perceived stereotype threat in a campus environment. Jabari started a club, Game Changers Society, to explore his entrepreneurship interests and asked a White professor and faculty advisor to guide his exploration. "You don't always have to look to other African Americans to put you in the right spot." Jabari advocated looking for "opportunities everywhere." After Pam transferred from the PWI to the HBCU, she found that she had greater access to the dean of the college and other professors. She

stated that, before "If I wanted to meet the department head at [PWI], there would be a lot of work. I would have to set up a meeting and go through multiple steps." In her new school, she experienced faculty who were "more helpful" and more accessible. Masamusa intentionally sat in the front row of classes so the professors could see him. He went out of his way to make sure that they knew his name. He stated that his academic confidence came from "professors taking interest in me." These experiences supported the idea that the students used role models and mentors as an important strategy for supporting their college persistence.

Reframing grit. In addition to racial identity, a community of diverse friendships, and the use of role models and mentors, participants demonstrated that their college persistence was supported through a culturally specific framing of the concept of grit. For the students in this study, a fundamental part of their grit involved both struggle and commitment to others outside of self. Duckworth et al. (2007) defined *grit* as "perseverance and passion for long-term goals" (p. 1087). However, grit researchers such as Duckworth et al. (2007) have not offered an explanation of how passion and persistence are fueled or sustained.

The students in this study included this fundamental notion as they discussed grit within the broader sociocultural context. For them, grit might be better defined as *duty-inspired* perseverance and *mission-driven* passion for long-term goals *refined* through struggle. The students understood that struggle was inherent in that persistence process. Calvin stated, "As I go through more and more, my grit grows." Sophie stated, "College can be hard if you can't see good in the struggle."

The students were also *compelled* by familial and communal duty to persist through college. Nikki included her niece in her graduation photo because she knew that her niece looked up to her. Jabari knew that he had supporters from his high school who were holding him accountable to graduate. Roger felt community pressure not to be that "Black kid that dropped out." Masamusa, whose father and stepfather were in jail, wanted to be a judge so he could change the rate of "Black male incarceration." Ace said, "My main goal is to do well academically, figure out how to do my best work academically, keeping confidence and drive. I want to be in a position to thank people who came before me and make a way for those coming after me." The motivation for persisting through college was not self-interest alone but included a sense of responsibility to family and community who were counting on them to finish. The grit that students spoke of was situated in a sense of mission and duty. That is why it supported their college persistence.

Resourcefulness. The interviews with the students revealed a clear link between college persistence and resourcefulness. Nikki found a resource in her family when she was faced with an unexpected financial challenge. She chose to ask her family for help even though she knew that it would put a strain on them. Ace and Calvin found their fraternity to be a resource of support and power. They joined African American fraternities so they could be around like-minded men who believed as they did. Jabari and Danielle found a resource in the on-campus tutoring center. Both described how they used tutoring when they needed help. Griffin (2006) stated that the students in her study were resourceful, which added to their success.

> Students frequently acknowledged widely held social stereotypes about the abilities of Blacks, and some expressed that they continue to be subject to discrimination and stereotyping in and out of the classroom. Despite these barriers, respondents saw themselves as agents of their own success and relied on their will, effort, and resourcefulness to overcome the barriers. (Griffin, 2006, p. 398)

The manner in which students in this study experienced success is suggestive of specific cultural strategies that fostered noncognitive attributes, such as grit and conscientiousness, thereby increasing college persistence. First, the students relied on a strong sense of racial pride. Second, the students relied on diverse relationships for support. Third, the students were intentional about finding "success-affirming" mentors and role models within their collegiate space. Fourth, the students relied on a nuanced definition of grit that was mission driven and beholden to family and community. Fifth, the students were resourceful in getting their needs met. The aggregation of culturally specific strategies explained a significant part of the success that these high-achieving students experienced.

Implications for Practice

The impact of college completion on earnings over a lifetime cannot be overstated. A study conducted at Georgetown University entitled "The College Payoff" used data from the 2002 census to show that college graduates earned an average of 84% more over their lifetime than those with only a high school diploma (Carnevale, Rose, & Cheah, 2013). The potential benefit to the individual, their family, and their community

is significant. For African Americans, this benefit is crucial for transforming daunting economic and health forecasts. However, college completion begins with college enrollment and then college persistence. For all students, regardless of race or ethnicity, the rate of enrollment is stronger than the rate of persistence. For African American students, this common lag is larger than for most groups. Thus, the implications of this study for increasing the number of high-achieving African American students who persist toward graduation are urgent.

The quantitative findings of this study confirmed that noncognitive personality attributes play a role in student achievement and college persistence for high-achieving African American students. Indeed, the qualitative findings suggested that students used grit and conscientiousness, impelled by a sense of racial pride and responsibility to their community and despite adverse racialized experiences, to support their persistence process. This news may have the potential to reshape some of the misguided efforts of current secondary school personnel and policymakers who have focused on teaching African American students grit in an effort to fill in what they believe has been an essentially missing character trait. This is a dangerous deficit-based approach.

A better approach exists. A much deeper institutional focus on increasing well-funded quality access to advanced courses such as AP, international baccalaureate, Advancement Via Individual Determination (AVID) or Socratic seminars, is warranted. Such course work supports development of conscientiousness and grit and may give high-achieving African American students the opportunity to practice and adjust their personal achievement style. In this way, personal agency (Zimmerman & Cleary, 2006)

and metacognitive strategies (Gutman & Schoon, 2016) could be worked out in high school, prior to college. An asset-based approach founded on the idea that students who fundamentally possess conscientiousness and grit can be explicitly guided to leverage these traits and cultivate them through rigorous coursework and as part of their articulated sense of personal agency; this should be on the agenda of secondary school personnel and policymakers. The high-achieving African American students who were interviewed in this study thrived in college, partially because they possessed some of the noncognitive college persistence-supporting skills before arriving and because they were prepared.

In addition to the charge for secondary school leaders and policymakers to reconceptualize how conscientiousness and grit could be explicitly nurtured through rigorous courses and embedded academic supports as part of the high-achieving African American student's articulation of personal agency prior to college, nonprofits and civic organizations that offer high school college preparatory programs targeting African Americans have an opportunity to influence college persistence. Many such programs have supported the technical side of college preparation, such as finding the right college, completing the FASFA, and choosing a major.

Findings from this study suggested that, once in college, students connected their racial identity, in light of a racialized college campus environment, to their college success and persistence. Precollege preparatory programs, sponsored by nonprofits such as Posse and civic organizations such as African American fraternities and sororities, have the opportunity to provide an open and safe forum for high-achieving African

American students to explore how grit and conscientiousness, as part of the college persistence process, may be challenged by racism while in college. Within such programs, students can begin to anticipate how their tool bag of noncognitive attributes can be used to help them to be successful in college and to advocate for their needs in the face of microaggressions and discrimination.

In no way are noncognitive personality attributes a buttress for the racial ills that are too often found in the PWI environment. The responsibility for creating racism-free inclusive environments must be assumed by college and university administrators. College preparatory programs, can help students to continue to develop their noncognitive strengths, as well as demystify how such strengths can be applied and maintained in spite of difficult collegiate encounters.

Efforts in higher education administration to ensure that high-achieving African American students thrive persistently in college should be better informed. The fullness of this effort was not within the scope of this research. This study, like many studies before, simply reinforced that high-achieving African American students are faced with insidious challenges of microaggressions and a limited sense of belonging due to a racialized campus atmosphere. It may be important for university officials to understand that such experiences potentially stymie the ability of high-achieving African American students to use their noncognitive personality attributes actively in the collegiate setting. As university administrators continue to develop ways to address the structural impediments to campus inclusivity and academic support for their African American students, they should take into account the potential usefulness of simultaneously

fostering racial identity and noncognitive personality attributes in the college persistence process.

Recommendations for Further Research

The primary goal of this research was to examine the effect of noncognitive personality attributes, grit and conscientiousness, on college persistence for high-achieving African American students. Also, variables of racial identity and racialized college experiences were examined for their relationship to both noncognitive attributes. Data were collected to address the four research questions supporting these goals. From the results, it is plausible to conclude that high levels of racial identity and low levels of racialized campus experiences mediate noncognitive traits to enhance the college persistence process. One limitation is that, although the findings indicated a connection between these variables, the variances were small and did not explain how the variances were related to the variables or why. The simplistic design of this study's statistical analysis only established that the reviewed variables were related. The qualitative data were representative of a glimpse into the mechanism of grit and conscientiousness from an African American college student perspective. Much more information is needed to draw a conclusive link between these two noncognitive variables and college persistence.

Quantitative Recommendations

There are several recommendations for how the quantitative portion of this study can be strengthened. First, this study used a rich preexisting national dataset that was primarily intended to understand leadership behaviors in college students. While the

study contained survey statements that could be used as proxies for grit and conscientiousness, it did not directly or comprehensively identify these traits in the student sample. A survey expressly designed to inspect both attributes, along with other additional noncognitive traits, would have provided evidence of more facets of conscientiousness than the three found in this study and might have provided a more complete picture of grit, as well. As it stands, the MSL survey yielded survey statements representative of competence, reliability/ responsibility, and industriousness. Other core facets of conscientiousness, such as orderliness, achievement striving, and punctuality, were not found in the database. It is possible that a statistical mean that more fully represented the complete construct of conscientiousness would have yielded more accurate findings.

In the same vein, Duckworth et al. (2007) devised the Grit Scale to generate information regarding a participant's sense of perseverance, consistency of interest over time and level of ambition. Survey statements found in the dataset aligned only to the perseverance aspect of grit. A significant part of the definition of grit, that students pursed the same interest (in this case, college) consistently over time, was not directly tested, as no MSL survey statements aligned to grit scale questions assessing that particular factor. Again, a significant shortcoming of the study is that only truncated evidence of grit and conscientiousness could be collected from the MSL database.

Second, regarding grit, as with many self-report scales, some researchers have argued that participant bias (the need to demonstrate a desirable trait) may skew the results. While this study did not administer the grit scale, it considered MSL survey

questions to which students may have wanted to respond in a way that made them appear strong. To avoid this conundrum, researchers such as Zamarro, Cheng, Shakeel, and Hitt (2018) have argued that there are more objective ways to assess grit, such as survey item response rate and careless answering. The MSL database collected evidence of grit in this manner but, because the data could be triangulated back to the individual student, it was not provided publicly (J. Dugan, personal email communication, January 10, 2018). A study designed specifically for collecting behaviors of grit and conscientiousness from national databases (not initially designed to collect this information) but that relied on survey response as a proxy for such traits could yield substantially more evidence of the existence of this important attribute.

Over all, a study that examines all facets of conscientiousness and indicators of grit in high-achieving African Americans, while simultaneously avoiding common pitfalls of self-reported data, would strengthen findings. Shared variances between variables in this study were small, which suggests that other noncognitive personality attributes might play a role in the college persistence process or that there might even be more facets of conscientiousness (orderliness, punctuality, achievement striving, etc.) and more indicators of grit (consistency of interest and ambition) that should be considered.

Qualitative Recommendations

Just as the quantitative portions of this study could be augmented to provide more sophisticated and robust research findings representative of the complexity of the college persistence process, changes are recommended for the qualitative portion of this

study. First, research could include a different qualitative research design and more participants. Morgan (2005) indicated that it is more than a knowledge gap when it comes to understanding college attainment; it was a fundamental lack of tools that reduced researchers' ability to examine the problem well.

> The general problem that weakens our capacity to inform policymakers is that we do not have a good mechanistic model that enables us to model students' beliefs about their futures and how these beliefs affect effort in schooling in the present and enrollment decisions in the future. (Morgan, 2005, p. 19)

Harper et al. (2018) went a step further:

> Our case study findings suggest that Black student success is considerably more complex than theorists, researchers, and administrators often acknowledge. Theory advancement demands fuller considerations of the historical and current racialization of policies, practices, and institutional cultures. (p. 21)

Therefore, it is recommended to use research designs that would help to build a new model of college persistence for African Americans and other students of color.

Second, the grounded theory research design (Corbin & Strauss, 1990) could be an important extension of this study because it could possibly generate a theoretical framework to capture all factors pivotal to the college persistence process specific to African American students. These factors include, but are not limited to, the students' cognitive and noncognitive attributes and the university's psychosocial and institutional support structures (Caplan & Ford, 2014). Many factors affect college persistence for African American students; to study them in isolation, such as this research has done,

provides limited information. Through a grounded research approach, perhaps a theory could be generated that explains how conscientiousness, grit, and race-related variables are intertwined to increase persistence in a sociocultural ecosystem involving many other dynamics, including factors such as financial aid and institutional quality. No one theory weaves together the two main parts of the college persistence dynamic: the intersection between institutional factors and individual factors.

A grounded research design has other uses as it relates to this topic. This study highlighted that the grit narrative is far ahead of the actual research on grit and that the construct is often misused in discourse on public school education. Grit interventions are applied to students of color with the assumption that this will solve the ills of low student achievement. The problem with this approach is that it is deficit in nature (Ris, 2015). No one really understands how grit is developed and there is little concrete evidence that the interventions work. Another danger is that the great effort to apply grit intervention to students of color masks the real need to fix an inequitable education system. Grounded research could be vital in reclaiming and right sizing the narrative on grit. Grounded research theory that is designed to uncover the ways in which grit and conscientiousness develop could perhaps lead more meaningfully to systems for embedding the exercise of these traits into rigorous high school curricula for high-achieving African American students in an equitable manner.

Recommendations for the Study Sample and Variables

First, this study was limited in its population scope by focusing only on high-achieving African American students. Because of this, only the data from the 2,280

African American students who met the study criteria could be used. There were many more students whose college persistence habits and perspectives were absent. The full MSL dataset included data for 5,444 African American college attendees, 34.9% of whom had GPAs between 2.0 and 2.99. They could offer a different perspective on grit, conscientiousness, and race. It is not understood whether the correlation findings can be extrapolated to a more heterogeneous population (e.g., part-time, community college attendees or students with GPAs $\leq$ 2.9). Therefore, it is recommended to include the quantitative and qualitative data for moderate to low-achieving African American students, as well as nontraditional students (e.g., part-time students, students with families, or online students). It is equally important that they too complete college.

Second, this study explored only two noncognitive traits. There was no mention of the role of other variables, such as religious beliefs, metacognitive reflection, self-efficacy, and family support, for instance, in mitigating grit and conscientiousness and the college persistence process. An additional research opportunity could include a wider spectrum of noncognitive personality attributes to determine which ones have the greatest impact on college persistence for African American students.

Third, a future mixed-methods study should strive to use a sample that is more balanced. On the qualitative side, there were only three HBCU attendees of the 12 participants and 7 of the 12 participants were female. On the quantitative side, the MSL database collected student information from only one HBCU. All other universities in the study were PWIs. Although 85% of African Americans matriculate at a PWI (J. L. Carter, 2018), overrepresentation of PWIs in the dataset may have skewed the role of

racial identity and racialized campus experiences in supporting the use of noncognitive factors in the college persistence process. In addition, 72% of the population sample used from the MSL database was female. This inherent flaw based on the preexisting dataset should be corrected in future research. The qualitative data used in this study were collected from a balanced representation between HBCUs and PWIs, as well as gender. As sample sizes grow larger in future studies or instance, careful attention to maintain such balance will be important.

Conclusions

The goal of much of the research on college persistence has been to increase the college completion rates of traditionally underrepresented groups, such as African Americans, Latinx, and American Indians. Thompson et al. (2006) stated that, since the Civil Rights Act of 1964 and The Higher Education Act of 1965, college completion rates for African Americans have not improved significantly. As has been argued throughout this paper, there is much research about African Americans and college attainment but asset-based studies offering concrete policy recommendations are still needed (Hurtado et al., 1998). Wood, Kurtz-Costes, and Copping (2011) declared, "Given their continuing underrepresentation among the college population of the United States, it is critical that researchers continue to develop knowledge about predictors of African Americans' postsecondary outcomes" (p. 967). This study served to examine grit and conscientiousness as one response to the call for research for knowledge about predictors of college success. The hope was to explain how these important forms of

human capital aided in supporting college persistence with the assistance of racial identity and inclusive campus environments.

In addition to the overall gap in assets-based knowledge, some researchers have argued that research designs used to understand the total college persistence challenge have lacked the balanced input of both participant voice and empirical findings (K. Freeman, 1997; Melguizo, 2011). Perna (2006) observed, "Both quantitative and qualitative approaches have strengths and weaknesses. Therefore, qualitative research should be informed by the findings of quantitative research and vice versa" (p. 124). The mixed-methods design of this study was an explicit effort to strike such a balance while examining the assets that high-achieving African American students used to support their path through college. A quantitative effort was a logical place to begin exploring the relationship between the noncognitive traits and college persistence. The qualitative findings underscored the existence of noncognitive traits, conscientiousness and grit, with rich, tangible evidence and revealed how their relationship to college persistence was influenced by race-related variables.

An Enriched Perspective

Earlier in this paper, a study by Lundberg (2013) entitled "The College Type" was reviewed. That study concluded that conscientiousness, the personality trait most closely associated with college success, was not found in African American males and African American females (of limited financial means). Instead, it was claimed that conscientiousness was found most prevalently in affluent White men. Unlike her study, this study did not compare African American students to middle-class or affluent White

students, which is common in most behavior science studies (Keough & Maertz, 2011). Through the mixed-methods examination of conscientiousness and grit, I have attempted to question the conclusion of the Lundberg study and extend and enrich the literature by redefining what it takes to be the type of student who completes college successfully.

For high-achieving African American students, the narrow scope of this study was suggestive of a college type that could be documented quantitatively and that was inclusive of student voice providing evidence of conscientiousness, grit, and racial identity that thrived in spite of a racialized college environment. Students in this study attended a variety of colleges and universities, including Tier 1 schools. Students were industrious and explained how they used their calendars to keep themselves organized. African American men, specifically, spoke of using the tutoring center on campus and explained that Ace kept an intense focus on the main goal, which was "to do well academically." Calvin enjoyed contributing to campus life. This form of conscientiousness, conventionality, was demonstrated through his service as a student ambassador at his university. In direct contrast to the Lundberg (2013) study, African American men in this study possessed the personality trait conscientiousness. They also had the grades to prove it.

Another noteworthy difference in the Lundberg (2013) study and the findings of this study was that race was positively associated in this study with college success, while in the Lundberg study it was a disadvantage.

> In race-specific models of educational attainment, being Black acts as an additional dimension of disadvantage, reducing the payoff to conscientiousness

> and increasing the returns to openness. Variations in school quality and interactions between personality and cognitive ability do not appear to be important drivers of the relationship between family background and returns to conscientiousness and openness. (Lundberg, 2013, pp. 1-2)

In this study, students' sense of racial pride and responsibility to their communities and families served as motivation to persist in college and employ traits such as conscientiousness and grit to their college work.

The effect sizes of the Lundberg (2013) study were larger than the effect sizes for this study. Ultimately, this study would benefit from a more robust research design (as described in the recommendations for further research), allowing it to document findings that are sufficiently large enough to have practical and clinical significance, not just statistical significance (Onwuegbuzie & Leech, 2004).

During President Obama's 2009 first address to the Joint Sessions of Congress, he challenged Americans to become a nation with the greatest number of college-educated adults in the world by 2020 (Obama, 2009). This will not happen without African American students. African American youth (18- to 24-year-olds) are currently 14.9% of the nation but only 9.8% of full-time undergraduate students at public colleges (Harper & Simmons, 2019). Increases in college completion rates benefit the nation and the African American community directly. It has been the catalysis for growth in the African American middle class in the past (Lacy, 2007; Pattillo, 2013). It stands to reason that, without an upsurge in the rate of completion by African Americans, many in the community will become permanently ensnared in a quagmire of desperate poverty.

The situation is urgent. College completion by African American students must be a vital part of the larger socioeconomic transformation of the African American community. This change begins with ensuring that those students who are currently in college persist to graduation. Nikki, a fifth-year senior who sees graduate school in her future, echoed this sense of urgency. Her advice to future African American college students: "Don't quit, no matter how hard it may be. It's a light at the end of the tunnel. Keep going and keep pushing. Determination and persistence is the most important thing." She has decided that she must keep "fighting until the end," proudly declaring, "I'm almost done."

Final Thoughts

As undergraduate students at Washington University in St. Louis, my African American peers and I understood intuitively that something was amiss with the racial composition of the university. Although we fell in love with our campus and took great pride in the privilege of earning a degree at such a fine institution, we were troubled by the lack of diversity in the student body and the faculty. We talked with each other frequently about race. Some of our interactions were fraught with microaggressions and discrimination. However, much like the students in this study, most of us finished successfully because of (a) our cognitive prowess, (b) support from a familial community at home, (c) the university's commitment to financial aid and inclusiveness, (d) the noncognitive attributes that we brought to the learning process that helped us to persist academically and surmount racism, and (e) our activism. I even led a racially

diverse group as part of the campus YMCA called STAR: Students Together Against Racism.

As a researcher, I share Nikki's sentiment to keep "fighting until the end." Many students of color belong in college and should be graduating. Until African Americans (and Latinx) students are entering and graduating from 4-year colleges and universities at ample rates, there is work to be done. My goal as a researcher is to increase college completion by African American students by helping them to cultivate their conscientiousness and leverage their culturally informed grit along the college persistence pathway toward degree completion.

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APPENDICES

APPENDIX A

CONCEPTUAL FRAMEWORK

The conceptual framework is supported by three concepts: human capital theory, the Farrington et al. (2012) noncognitive factors model, and Rodger and Summers's (2008) version of the psychological model of college student retention modified for African American college students. The central concept of the framework is that people assess the benefits of education for their future endeavors (human capital theory). From an assessment that finds educational attainment beneficial comes the application of noncognitive traits (such as grit and conscientiousness) that support development of academic persistence, which leads to important academic behaviors (noncognitive factors model) that influence college persistence. College persistence practices do not occur in a vacuum. Indeed, they can be adversely affected by experiences of racism, discrimination, and a low sense of belonging and affirmed by strong racial identity. If these experiences are positive, academic self-concept is strengthened. If these experiences are not positive, academic self-concept suffers, including the use of noncognitive traits and, eventually, college persistence. This is the central idea of the conceptual framework assembled for this study (Figure A1).

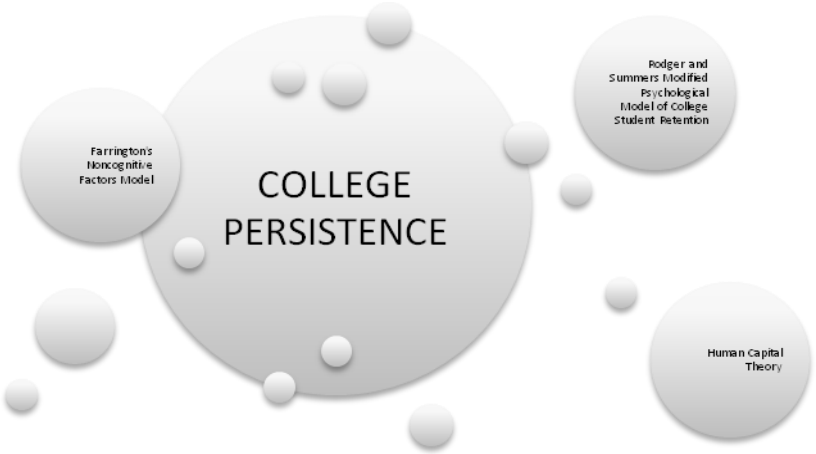


Figure A1. Conceptual framework.

APPENDIX B

Variables by MSL Survey Statements

Category	Variable	MSL codebook survey statement	Both
Conscien-tiousness	Industriousness	I generally met the goals I set for myself	▲
		I was not easily discouraged when I experienced failure	
		I knew I could find ways to solve complex problems when others gave up	▲
		I am willing to devote time and energy to things that are important to me	▲
		I am focused on my responsibilities	▲
		I can think of many ways to get out of a jam	
		I energetically pursue my goals	
		There are lots of ways around any problem	
		Even when others get discouraged, I know I can find a way to solve a problem	▲
		I am not easily discourage by failure	
	Responsibility/ Reliability	I held myself accountable for responsibilities I agreed to	
		I am seen as someone who works well with others	
		Others would describe me as a cooperative group member	
		I can be counted on to do my part	▲
		I follow through on my promises	▲
		I hold myself accountable for responsibilities I agree to	▲
	Competence	I am able to articulate my priorities	
		I am usually self-confident	
		I know myself pretty well	
		I've been pretty successful in life	
		I can deal with whatever comes my way	
		I believe I can achieve my goals even if there are obstacles	
Grit	Prehope	I knew I could find ways to solve complex problems even when others gave up	
		I pursued my goals with great energy	
		I generally met the goals I set	
	Hope	I can think of many ways to get out of a jam	
		There are a lot of ways around any problem	
		I can think of many ways to get the things in life that are important to me	
		Even when others get discouraged, I know I can find a way to solve a problem	
		I energetically pursue my goals	
		I meet the goals that I set for myself	
	Commitment	I am willing to devote the time and energy to the things that are important to me	

		I follow through on my promises	
		I am focused on my responsibilities	
		I am willing to devote the time and energy to the things that are important to me	
		I stick with others through difficult times	
		I can be counted on to do my part	
		I follow through on my promises	
		I hold myself accountable for responsibilities I agree to	
	Resiliency	I believe I can achieve my goals, even if there are obstacles	
		I am not easily discouraged by failure	
		I can deal with whatever comes my way	
Racial Identity	Private Collective Racial Esteem	I often regret that I belong to my racial group	
		In general, I'm glad to be a member of my racial group	
		Overall, I often feel that my racial group is not worthwhile	
		I feel good about my racial group I belong to	
	Public Collective Racial Esteem	Overall, my racial group is considered good by others	
		Most people consider my racial group, on the average, to be more ineffective than other groups	
		My race is unimportant to my sense of what kind of a person I am	
		In general, other think that my racial group is unworthy	
	Identity Salience	Overall my race has very little to do with how I feel about myself	
		The racial group I belong is to an important reflection of who I am	
		My race is unimportant to my sense of what kind of a person I am	
		In general, belonging to my racial group is an important part of my self-image	
Racialized Campus Environ-ment	Sense of Belonging	I feel valued as a person at this school	
		I feel belong on this campus	
		I feel accepted as a part of the campus community	
	Nondiscrimina-tory Campus Climate	I have encountered discrimination while attending this institution	
		I feel there is a general atmosphere of prejudice among students	
		I would describe the environment on campus as negative/hostile	
		Faculty have discriminated against people like me	
		Staff members have discriminated against people like me	
		Other students have discriminated against people like me	

Note. Survey statements used to calculate mean scores for both conscientiousness and grit are denoted with ▲ in the Both column.

APPENDIX C

QUANTITATIVE DATA CROSSWALK BETWEEN FACETS OF CONSCIENTIOUSNESS AND MSL DATASET

Past Facets of Conscientiousness (Roberts et al., 2012)		Six Facets of Conscientiousness (Costa et al., 1991)		Behavioral Indicators of Conscientiousness (BIC) Scale (Jackson et al., 2010 and Jackson et al., 2009)		MSL Codebook Indicators of Conscientiousness (Dugan, 2015)		
Facet	Description	Facet	Description	Facet	Description	Code Name	Code	Survey Statement
Orderliness	To be prepared, tendency towards neatness, cleanliness and planfulness	Order	The tendency to keep one's environment tidy and neat; organized	Organization	The propensity to be organized and neat versus being messy Ex. Uses a planner to plan the events of the day	Not measured on database	n/a	n/a
Industriousness	To work hard; desire to accomplish, persist in the face of challenge	Achievement Striving	The need for achievement; the desire for excellence	Laziness/ Industriousness	The propensity to work hard versus being lazy Ex. Completes the projects I start Does extra hard on a project to make sure it is done right Perseveres hard when meeting setbacks or failures	Prehope 2	Hope Pre Test	I generally meet the goals I set.
						PREHE.S2	Resilience Pre Test	I do not easily recognize when I experience failure
						Prehope 3	Hope Pre Test	I pursued my goals with great energy
						Prehope 1	Hope Pre Test	I tended to find ways to solve complex problems even when others gave up
						SKILS28	Commitment Scale	I am willing to work over the same time and energy as things that are important to me
						SKILS26	Commitment Scale	I am focused on my responsibilities
						HOP1	HOPE Pathways	I can think of many ways to get out of a jam
						HOP2	HOPE Agency	I energetically pursue my goals
						HOP3	HOPE Pathways	There are lots of ways around any problem
						HOP 5	HOPE Pathways	Even when others get discouraged, I know I can find a way to solve a problem
						RES 8	Resiliency Scale	I am not easily discouraged by failure
Self-Control	Propensity to control impulses	Self-Discipline	In terms of persistence; the ability to complete tasks a task despite boredom or other distractions	Impulse Control	Control of current goals at the cost of rewards			
Responsibility	To follow through on promises to others; follow rules; make social groups work; enable productivity			Reliability	The propensity to be responsible and dependable versus being careless Ex. Breaks promises Meets my promises	PreSe	Commitment Pre Test	I feel myself accountable for responsibilities I agreed to
						SKILS10	Collaboration Scale	I am seen as someone who works well with others
						SKILS48	Collaboration Scale	Others would describe me as a cooperative group member
						SKILS51	Commitment Scale	I can be counted on to do my part
						SKILS53	Commitment Scale	I follow through on my promises
						SKILS54	Commitment Scale	I feel myself accountable for responsibilities I agree to
Conventionality or Traditionalism	Reflects a tendency to emulate and uphold rules and conventions found in society	Dutifulness	Strict adherence to conscience or standard	Conventionality	The propensity to follow socially proscribed norms and resist being unconventional	Not measured on database		n/a
Decisiveness	Propensity to act timely and consistently	Deliberation	Caution, planning and thoughtfulness			Not measured on database		n/a
Formality	Tendency to follow rules of decorum such as keeping up one's appearance			Formality	Ex. Upheld cultural traditions	Not measured on database		n/a
Punctuality	The precise tendency to show up on time or meet scheduled appointments			Punctuality	Ex. Always arrives on time for meetings Is late when going to new places	Not measured on database		n/a
Virtue	The propensity to be honest and to live one's word					Not measured on database		n/a
		Competence	The sense that one is capable, sensible and accomplished			SKILS4	Conscientiousness of Self Scale	I am able to achieve my priorities
						SKILS9	Conscientiousness of Self Scale	I am usually self-confident
						SKILS22	Conscientiousness of Self Scale	I know myself pretty well
						HOP 7	Hope Agency	I've been pretty successful in life
						RES2	Resiliency Scale	I can deal with whatever comes my way
						RES6	Resiliency Scale	I believe I can achieve my goals, even if others are contrary

APPENDIX D

QUANTITATIVE DATA CROSSWALK BETWEEN 17-ITEM

GRIT SCALE AND MSL DATASET

Ambi-tion Scale	**Consis-tency Scale**	**Perse ver-ance Scale**	**Grit Scale**	**17-Item Grit Questions**	**MSL Codebook Database Indicators of Grit (Dugan, 2015)**	**Code Name**	**Scale**
X				1. I aim to be the best in the world at what I do.	Not measured	**N/A**	
		X	X	2. I have overcome setbacks to conquer an important challenge.	I knew I could find ways to solve complex problems even when others gave up	**PreHop1**	Hope Pretest
					I can think of many ways to get out of a jam	**HOP1**	Hope: Pathways
					There are a lot of ways around any problem	**HOP 3**	Hope: Pathways
					I can think of many ways to get the things in life that are important to me	**HOP 4**	Hope: Pathways
					I believe I can achieve my goals, even if there are obstacles	**RES6**	Resiliency Scale
	X		X	3. New ideas and projects sometimes distract me from previous ones.	Not measured in the database	**N/A**	N/A
X				4. I am ambitious.	Not measured in the database	**N/A**	N/A
	X		X	5. My interests change from year to year	Not measured in the database	**N/A**	N/A
		X	X	6. Setbacks don't discourage me.	I knew I could find ways to solve complex problems even when others gave up	**PreHop1**	Hope Pretest
					I was not easily discouraged when I experienced failure	**PRERES 2**	Resiliency Pretest
					Even when others get discouraged, I know I can find a way to solve a problem	**HOP 5**	Hope: Pathways
					I am not easily discouraged by failure	**RES 8**	Resiliency Scale
					I can deal with whatever comes my way	**RES 7**	Resiliency Scale

Ambi-tion Scale	Consis-tency Scale	Perse ver-ance Scale	Grit Scale	17-Item Grit Questions	MSL Codebook Database Indicators of Grit (Dugan, 2015)	Code Name	Scale
	X		X	7. I have been obsessed with a certain idea or project for a short time but later lost interest	Not measured in the database	**N/A**	N/A
		X	X	8. I am a hard worker	I pursued my goals with great energy	**PreHop3**	Hope Pretest
					I am willing to devote the time and energy to the things that are important to me	**SRLS23**	Commit-ment Scale
					I energetically pursue my goals	**HOP2**	Hope: Agency
	X		X	9. I often set a goal but later choose to pursue a different one	Not measured in the database	**N/A**	N/A
	X		X	10. I have difficulty maintaining my focus on projects that take more than a few months to complete.	The time element of perseverance was not measured in the database	**N/A**	N/A
		X	X	11. I finish whatever I begin.	I generally met the goals I set	**PreHop2**	Hope Pretest
					I follow through on my promises	**SRLS53**	Commit-ment Scale
					I meet the goals that I set for myself	**HOP 8**	Hope: Agency
X				12. Achieving something of lasting importance is the highest goal in life	Not measured in the database	**N/A**	N/A
X				13. I think achievement is overrated	Not measured in the database	**N/A**	N/A
		X	X	14. I have achieved a goal that took years of work	The time element of perseverance was not measured in the database	**N/A**	N/A

Ambi-tion Scale	Consis-tency Scale	Perse ver-ance Scale	Grit Scale	17-Item Grit Questions	MSL Codebook Database Indicators of Grit (Dugan, 2015)	Code Name	Scale
X				15. I am driven to succeed	Not measured in the database	**N/A**	N/A
	X		X	16. I become interested in new pursuits every few months	Not measured in the database	**N/A**	N/A
		X	X	17. I am diligent	I am focused on my responsibilities	**SRLS28**	Commit-ment Scale
					I am willing to devote the time and energy to the things that are important to me	**SRLS23**	Commit-ment Scale
					I stick with others through difficult times	**SRLS24**	Commit-ment Scale
					I can be counted on to do my part	**SRLS51**	Commit-ment Scale
					I follow through on my promises	**SRLS53**	Commitm ent Scale
					I hold myself accountable for responsibilities I agree to	**SRLS54**	Commit-ment Scale

APPENDIX E

QUALITATIVE INTERVIEW QUESTIONS

Redefining the College Persona: Semi-Structured Interview Guide

Question 7 - Grit

- The word "grit" has become very popular in recent years. The formal definition is "perseverance and passion towards a long-term goal". In your opinion, is grit important for college attendance and persistence? Why or why not?

Question 8

- Do you have grit? Give me an example of how it has helped you so far? How did you develop it?

Question 9 - Conscientiousness

- The word "conscientiousness" means -. In your opinion, is conscientiousness important for college attendance and persistence? Why or why not?

Question 10

- Are you conscientiousness? Can you give me an example? How did you become that way?

Question 11 – Final Remarks

- Is there anything more you would like to share with me regarding how personality traits impact an African American's students' ability to attend and persist through college?

APPENDIX F

QUALITATIVE DATA ANALYSIS PROCESS

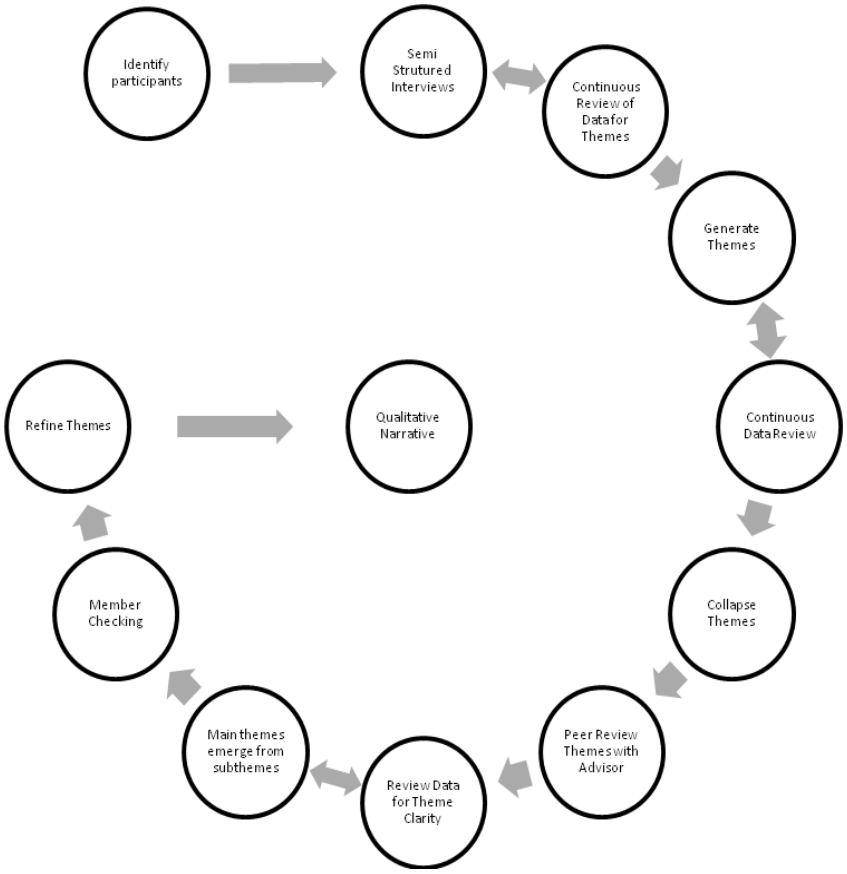


Figure F1. Qualitative data analysis process.

APPENDIX G

QUALITATIVE THEMES WITH SAMPLE QUOTES

Major Theme	Subthemes	Definition	Sample Quotes
The Inescapable Context of Race and Its Impact on College Persistence	Insidious Nature	Microagressions – Participants share that microaggressions are painful	"They [white students] don't get it. They just don't understand. In my group a guy said 'we play ghetto jeopardy. The questions are *hella* ratchet'."
			"Playing sports always put a stereotype that that's all you could do. I take offense because I've always seen myself as smart."
	Discrimination	Participants experiences of racial discrimination within the college atmosphere	"There are some people that just don't like Black people. Professors too. People don't want to be your lab partner or don't want to work on a paper with someone African American because they think they don't know what they are doing."
	Isolation	Participants spoke a lot of having a low sense of belonging within the college campus largely because of race	"The Black community was excluded. It was pretty much the whole feel of it. The full body of the Black American community was athletes. If you didn't do a sport, you weren't acknowledged."
			"Engineering is already hard for minorities and women. It is isolating…. When I was at [the PWI] I was the only Black female in engineering my freshman class. There were two Black sophomores in the classes above me."
			"…it's hard to feel supported when you don't know who you can talk to. I think I didn't realized how big of a deal it was to be surrounded by people who culturally understood me."
			"There are very few professors that are African American on campus. Sometimes you kind of feel like you are alone."
	Racial Pride	Participants know that racism impacts their experience but counter it with identity.	Don't be shy about who you are, your skin color, or ethnicity. Don't be embarrassed. Your skin color is gold. You will worry less about things that are so irrelevant if you know who you are. You can focus on things [that] are so important, like actually graduating

Major Theme	Subthemes	Definition	Sample Quotes
To Be a Successful African American College Student *is* to Have Grit	Unfair odds	African American peers/friends face unfair odds that impact college completion	"They don't have the resources to figure out how to drop back in."
			"Lack of people that look like you, all of that plus lack of resources, adds up."
			"The family depends on the kid to work. I feel like the majority of African American students are stuck with trying to work their whole lives."
	Beating the Odds	Strategies participants use to stay gritty	"…contextualizes everything, put racism in its place"
			"I was underperforming but I always knew I was gifted."
			"Your value framework as a person is important. You have to be principled and have an internal dialogue so you don't blow in the wind."
			"Must be able to block out the negative stereotypes that are out there in the media."
	Grit is important	Thoughts participants have about what grit means to them	"Grit is important 100%. I went to KIPP for high school and it was a huge word. If there is something that you really want, you have to stick with it. If you keep changing your mind over and over, you can waste time and money in school. Once you have a goal it's so much easier to keep reaching for it."
			"Having drive without passion, is better than having passion without drive. College is hard though. You have to care about what you are doing be motivated to push through a lot."
	Focused on Goals and Passion	Participants demonstrate passion and persistence	During high school my parents didn't even know that I had tests. It wasn't my parents pushing me. "I'm doing all of these [things in school] that are hard but when it's time to be a mid-wife I will be an excellent one. I want to be a really good midwife." The hard things will benefit me later.
			"If you lose sight of your goal you are in trouble" Four years of college is a long time. You've got to see past the four years."

Major Theme	Subthemes	Definition	Sample Quotes
Actions Not Words	Organization	Participants share examples of the "order" facet of conscientiousness	"I rely on a planner that is color coded and I'm super busy because I'm an athlete."
			"Organizational skills - being organized is a big deal" "Proactive - making sure you have to look at your work, pre-read then it will make sense before going to study group or tutoring."
			"be social, responsible, manage time, be organized"
	Understanding Self as learner	Participants share examples of achievement striving, and competence facets of conscientiousness.	"Your value framework as a person is important. You have to be principled and have an internal dialogue so you don't blow in the wind."
			"Playing sports always put a stereotype that that's all you could do. I take offense because I've always seen myself as smart.
			"You have to have a really good understanding of self. You know if you can study for exams three weeks prior or the night before. You have to have an understanding of how you work to be successful."
			"I rely on a planner that is color coded and I'm super busy because I'm an athlete."
			"I am a very hands-on, visual learner and I am someone who needs quiet to study."
	Hard Work Inspires Pride	Participants demonstrated a propensity towards hard work and pride in the work	"I enjoyed the process of working hard and seeing it payoff for myself."
			"…main goal is to do well academically."
			It takes discipline to get through college; I mean do what you have to do even if you don't feel like it."

Major Theme	Subthemes	Definition	Sample Quotes
Social Capital: They Just Won't Let Me Quit	Family	Direct or indirect expectations for college completion from Individuals related to participant	"But, if I didn't have two parents who really loved me and cared about my success, I wouldn't have finished."
			"I just can't quit. I have a niece that is like a child to me. I have her in my graduation photo."
			"I don't want to be another statistic. No one in my family graduated from college except mom and dad. Don't want to be another black kid that just dropped."
	Peers/Other	External support from members other than the family that expect college graduation	"I wanted to go to college and be the first person in the family to be a college graduate." My high school counselor and teachers said they'd come back and kick my butt if I messed up."
	Societal Pressures/Expectations	Low expectations from "society" spurs hard work	"Minority students have to work 10 times as hard to achieve. My work ethic was developed by doing this and just because I started to achieve doesn't mean it went away. I made my start towards my goal (of being a doctor) long before starting college."
			"Must be able to block out the negative stereotypes that are out there in the media."

APPENDIX H

DEMOGRAPHIC DATA FOR PARTICIPANTS BY YEAR CLASSIFICATION

Characteristics	Freshman	Sophomore	Junior	Senior
Male	-		-	5
Female	1	4	-	2
University Athlete	-	1	-	3
PWI Student	1	2	-	4
HBCU Student	-	1	-	4
Public University	-	2	-	2
Private University	1	2	-	5
GPA $\leq$ 3.49	1	3	-	5
GPA $\geq$ 3.5	-	1	-	2

APPENDIX I

IRB APPROVAL LETTER

DIVISION OF RESEARCH

TEXAS A&M UNIVERSITY

EXEMPTION DETERMINATION

July 21, 2017

Type of Review:	Initial Review Submission Form
Title:	Redefining the College Persona: A Mixed Methods Examination of Personality Attributes that Influence College Attendance among High Achieving African American Students.
Investigator:	Dr. Gwendolyn Carol Webb-Hasan
IRB ID:	IRB2017-0230M
Reference Number:	052289
Funding:	None
Documents Reviewed:	Redefining the College Persona Information Sheet Redefining the College Persona-Oral Consent Script IRB Recruitment Flyer Revised Redefining the College Persona, Semi-Structured Interview Questions
Risk Level of Study:	Not Greater than Minimal Risk under 45 CFR 46 / 21 CFR 56

Dear Dr. Gwendolyn Carol Webb-Hasan:

The HRPP determined on 07/21/2017that this research meets the criteria for Exemption in accordance with 45 CFR 46.101(b) under Category 2: Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior unless, the information is obtained in an identifiable manner and any disclosure of the subjects responses outside of research could reasonably place the subject at risk..

Your exemption is good for five (5) years from the Approval Start Date. At that time, you must contact the IRB with your intent to close the study or submit a continuing review form through iRIS.

If you have any questions, please contact the IRB Administrative Office at 1-979-458-4067, toll free at 1-855-795-8636.

Sincerely,
IRB Administration

750 Agronomy Road, Suite 2701
1186 TAMU
College Station, TX 77843-1186

Tel. 979.458.1467 Fax. 979.862.3176
http://rcb.tamu.edu

APPENDIX J

IRB APPROVED ORAL CONSENT SCRIPT

Redefining the College Persona: Securing Oral Consent Script via Information Sheet

Introduction

Interviewer: Hello, my name is Anastasia Anderson and I am a fifth year graduate student in the college of Educational Administration and Human Resource Development at Texas A&M University. With the help of Dr. Gwen Hassan-Webb, a professor of education at Texas A&M and my graduate advisor, I am conducting a survey research study to understand how high performing black and/or African American college students attend and persist through college.

To collect data on how high performing black college students attend and persist through college, I am talking with students whom self identify as black and who are in college full time. If you agree to participate, I will ask you questions about what it takes to attend college and persist in college as a black student and what personality traits matter the most in this process as it relates to grit and conscientiousness. This will take about 60 minutes of your time.

I would like to go through the information sheet consent process with you and have you ask questions before agreeing to the study. Would you be willing to do that?

Establishing Confidentiality

Interviewer: Several steps will be taken during the course of this research experience to make sure that this research is confidential.

1. Your privacy is important to me. What that means, is that no identifiable information will be included in the dissertation, transcript or reports that result from this interview. You and I will determine a pseudonym that will serve as your identifier for the transcripts and paper. I plan to use your pseudonym, your university's geographic region, and year in school and GPA in my report and attribute quotations to you. But your real name will not be used. Please let me know if you would you like any of your comments to be off the record.

2. Additionally all interview notes associated with this research will be kept under lock and key in primary investigator's office – my chairperson - at Texas A&M University in the Harrington Building.

3. I will be using our interview to write a paper on this topic and I plan on using our agreed upon pseudonym and what you tell me in our interview in my report. It is not essential to have your name, your story is much more important to me, so please don't feel that my research will damage your reputation in any way by the use of a pseudonym.

Redefining the College Persona: Securing Oral Consent Script via Information Sheet

Sharing Risks and Benefits

> Interviewer: I do not anticipate any risks to study participants.
>
> There will be no benefits for people participating in this study but we hope to learn more about how to increase the number of black/African American students who attend and persist through college.
>
> I will ask questions about your experiences as a college student. It is up to you to decide which questions you want to answer. You may provide brief answers or go into detail as you choose. It is entirely up to you.
>
> It is completely up to you whether to participate. You may withdraw at any time and you may skip questions you would prefer not to answer.

Contact Information

- Interviewer: My advisor is Gwen Webb-Hasan, Ed.D., the Principal Investigator. You may contact her if you have any concerns or complaint about this research at 979-825-2225 or gwebbj@tamu.edu.
- For questions about your rights as a research participant; or if you have questions, complaints, or concerns about the research, you may call the Texas A&M University Human Subjects Protection Program office at (979) 458-4067 or irb@tamu.edu
- Additionally, My name is Anastasia Anderson and you my contact me at 713-806-8236 or email me at alindo@tamu.edu if you concerns or questions.

Securing Consent

> Interviewer: "Do you have any questions about me, my research, the information sheet, or our interview before we begin?"

After the interview:

Thank you for sharing your thoughts and insights with me. I would like to ask permission to follow up with you if there are any of your responses that I need clarificatin on. If I follow up with you, it will take no more than 30 minutes of your time. Do I have your permission to do that?

Redefining the College Persona: Securing Oral Consent Script via Information Sheet

Also, I would like to remind you that my contact information and the information of my supervisor and the IRB subject protection office is on the information sheet I gave you at the beginning of the interview. You can contact take any of us with questions after this interview. Can I answer any final questions for you now?

IRB NUMBER: IRB2017-0230M
IRB APPROVAL DATE: 07/21/2017
IRB EXPIRATION DATE: 07/20/2022

APPENDIX K

IRB APPROVED INFORMED CONSENT INFORMATION SHEET

TEXAS A&M UNIVERSITY HUMAN RESEARCH PROTECTION PROGRAM

INFORMATION SHEET

Project Title: Redefining the College Persona: A Mixed Methods Examination of Personality Attributes that Influences College Attendance Among High-Achieving African American Students.

You are invited to take part in a research study being conducted by Anastasia Anderson, a researcher from Texas A&M University. The information in this document is provided to help you decide whether or not to take part. If you decide to take part in the study, you will be asked to read this information sheet in its entirety and ask questions before participating. If you decide you do not want to participate, there will be no penalty to you, and you will not lose any benefits you normally would have. You may choose to withdraw from the study at any time without penalty. The researcher can be contacted at anytime during the study at alindo@tamu.edu or 713-806-8236.

Why Is This Study Being Done?
The purpose of this study is to learn how the personality traits, conscientiousness and grit, impact high-achieving African American/Black students college attendance.

Why Am I Being Asked To Be In This Study?
You are being asked to be in this study because you self-identify as an African American/Black college student who has at least a 2.5 GPA in your college studies, is English speaking and a full-time undergraduate student. Before you can enroll in the study, the researcher will ask you to provide some information about your history to determine whether or not you can continue in the study. Ask your study doctor for more information about whether you fit the criteria detailed in this section.

How Many People Will Be Asked To Be In This Study?
15 people (participants) will be invited to participate in this study locally.

What Are the Alternatives to being in this study?
The alternative to being in the study is not to participate.

What Will I Be Asked To Do In This Study?
You will be asked to answer interview questions. The interview will include questions about different personality types and what you believe impacts your college journey to this point. You will also be asked to describe how these attributes work for you and perhaps other African American students in moving through college towards graduation. The interview will take no more than 60 minutes. Follow up contact via telephone or email will occur for clarification of interview responses if needed and will last no more than 30 minutes.

Are There Any Risks To Me?
The things that you will be doing (answering interview questions) are no more than risks than you would come across in everyday life. No physical, criminal, social, financial, or economic or psychological risk will be part of the study. Minimal risks associated with breach of privacy or confidentiality will be taken.

Although the researchers have tried to avoid risks, you may feel that some questions that are asked of you will be stressful or upsetting. You do not have to answer anything you do not want to.

Are There Any Benefits To Me?
There are no benefits to you. I hope to learn how to increase the number of high-achieving African American students who graduate with a degree. By participating in this study, you can help

IRB NUMBER: IRB2017-0230M
IRB APPROVAL DATE: 07/21/2017
IRB EXPIRATION DATE: 07/20/2022

contribute to the body of research that seeks to increase college graduation rates among African American/Black individuals.

Will There Be Any Costs To Me?
Aside from your time, there are no costs for taking part in the study.

Will I Be Paid To Be In This Study?
You will not be paid for being in this study.

Will Information From This Study Be Kept Private?
The records of this study will be kept private. No identifiers linking you to this study will be included in any sort of report that might be published. Data may be used for additional analysis.

If you consent to taking part in this study, you will be asked to provide a pseudonym code link. This code link information about you will be stored in an encrypted computer file protected with a password. Notes from the interview will be filed securely in a locked file cabinet in the primary investigator's office. The code link document will be destroyed once the follow-up process is complete.

People who have access to your information include the Principal Investigator and research study personnel. Representatives of regulatory agencies such as the Office of Human Research Protections (OHRP) and entities such as the Texas A&M University Human Research Protection Program may access your records to make sure the study is being run correctly and that information is collected properly.

Information about you and related to this study will be kept confidential to the extent permitted or required by law.

Who may I Contact for More Information?
You may contact the Principal Investigator, Gwendolyn Webb-Hasan, Ed.D, to tell her about a concern or complaint about this research at 979-825-2225 or gwebbj@tamu.edu.
You may also contact the Protocol Director, Anastasia Anderson at 713-806-8236 or alindo@tamu.edu.

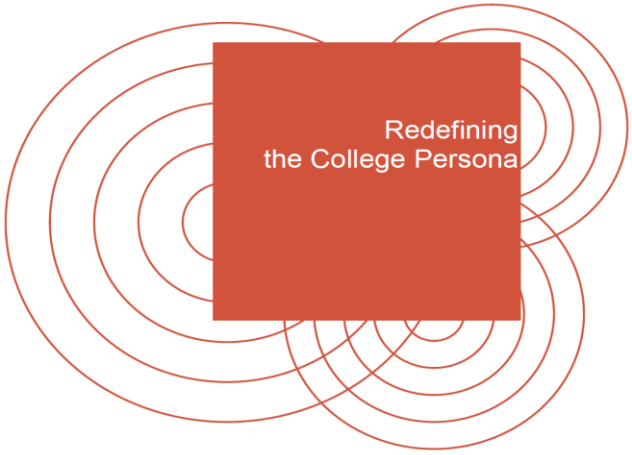
For questions about your rights as a research participant, to provide input regarding research, or if you have questions, complaints, or concerns about the research, you may call the Texas A&M University Human Research Protection Program (HRPP) by phone at 1-979-458-4067, toll free at 1-855-795-8636, or by email at irb@tamu.edu. The information sheet and all study materials should include the IRB number, approval date, and expiration date. Please contact the HRPP if they do not.

What if I Change My Mind About Participating?
Your participation in this research is voluntary, and you have the choice whether or not to be in this research study. You may decide to not begin or to stop participating at any time. If you choose not to be in this study or stop being in the study, there will be no effect on your academic standing. Any new information discovered about the research will be provided to you. This information could affect your willingness to continue your participation.

IRB NUMBER: IRB2017-0230M
IRB APPROVAL DATE: 07/21/2017
IRB EXPIRATION DATE: 07/20/2022

APPENDIX L

IRB-APPROVED RECRUITMENT MATERIALS



Do you know someone who should be in college but is not?

➔ If so, we want you to participate in a study to help discover what it take to increase the number of African Americans who go to and through college. You must be an African American/Black undergraduate student, English-speaking, currently attending college full time, with a GPA of at least 2.5 to participate in this study.

➔ It will take up to 60 minutes to answer interviews questions by phone, email or in person about this important topic.

To participate CONTACT

Anastasia Anderson, Protocol Director

alindo@tamu.edu or 713-806-8236

Gwendolyn Webb-Hasan, Principal Investigator

Texas A&M University, College Station –Harrington I

979-825-2225 or gwebbj@tamu.edu.

IRB NUMBER: IRB2017-0230M
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APPENDIX M

RECRUITMENT AND ENROLLMENT SCRIPT

Recruitment and Enrollment Scripts

This document contains the scripts that will be used to support the recruitment and enrollment efforts of this study. These script tools include:

1. Email to the participant that has reached out expressing interest in the study,
2. Recruitment email to the civic organization asking them to forward a recruitment flyer to potential study participants,
3. The script of the social media post
4. Verbal script used to directly approach students.

1. EMAIL TO THE PARTICIPANT:

Greetings.

Thank you for reaching out to me to express your interest in this study.

My name is Anastasia Anderson and I am a graduate student researcher working on my dissertation with Dr. Gwendolyn Webb-Hasan at Texas A&M University in the College of Education. I am conducting a research study about high-performing African Americans, personality traits (grit and conscientiousness) and college attendance. I would like to ask if you would be willing to take about 60 minutes to complete an interview for this research project. Participation is completely voluntary and your identity will be kept confidential.

If you are interested, please let me know when a good time would be to schedule it and if you would like to talk by phone, in person or by email.

If you have any questions, please do not hesitate to contact me at alindo@tamu.edu or 713-806-8236, or Dr. Gwendolyn Webb-Hasan (gwebbj@tamu.edu.).

Thank you for your time.

Anastasia Lindo Anderson

2. RECRUITMENT EMAIL TO CIVIC ORGANIZATIONS:

Dear _____:

I'm emailing you today because we share an interest in a very important mission. That mission is to increase the number of African-Americans/Blacks that go to and through college.

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Recruitment and Enrollment Scripts

My name is Anastasia Anderson and I am a graduate student researcher working on my dissertation with Dr. Gwendolyn Webb-Hasan at Texas A&M University in the College of Education. I am conducting a research study about high-performing African Americans, personality traits (grit and conscientiousness) and college attendance. I would like to ask if you would be willing to take about 60 minutes to complete an interview for this research project. Participation is completely voluntary and student identity will be kept confidential.

Would you be willing to help me? If so, I would like to ask you to forward this email and the attached flyer to student members of your organization that might be willing to be interviewed.

As students contact me, I will ask them to let me know if I can schedule a conversation with them about this research. I will ask them if they would be willing to talk by phone, in person or by email. As the 3rd party, your organization will not be affiliated with the content or outcome of this research study.

All students can contact me at alindo@tamu.edu or 713-806-8236, or Dr. Gwendolyn Webb-Hasan (gwebbj@tamu.edu.), my research supervisor.

Thank you for your time.

Anastasia Lindo Anderson

3. SOCIAL MEDIA POST RECRUITMENT SCRIPT

Are you interest in helping to increase the number of African American that go to and through college? Do you know someone who might be? A research study about high-performing African Americans, personality traits and college attendance is currently being conducted. We would like your participation in this important project. If you are African American, currently in college with a GPA of 2.5 or higher or know someone who is, and would like to take about 60 minutes to complete an interview for this research project, we want to talk with you.

Participation is completely voluntary and your identity will be kept confidential.

You can contact me through PM, or email alindo@tamu.edu or call 713-806-8236.

Thank you,

Anastasia Lindo Anderson
Graduate Student Researcher
Texas A&M University