"I REFUSE TO DIE": EXPLORING THE RELATIONSHIP BETWEEN SPIRITUALITY AND

PERSISTENCE AMONG AFRICAN AMERICAN PH.D. STUDENTS AND GRADUATES

by

Kerley Perminio Most

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree of

Doctor of Philosophy

Liberty University

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APPROVED BY:

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ABSTRACT

African American doctoral students experience the highest levels of attrition (60%) in the nation and the most social and academic challenges in higher education. Concurrently, research supports that African Americans are among the most spiritual people in America. This study applied hierarchical logistic regression to investigate the relationship between spirituality and persistence among African American doctoral students ($N = 179$). Tinto's model of attrition, a systematic framework to predict degree completion based on suicide theory, was employed. Reliable instruments, the Institutional Integration Scale and the Spirituality Scale, were utilized. Results revealed that (a) different levels of spirituality were related to Tinto's central elements to degree completion; (b) African Americans with high levels of spirituality were three times more likely to finish their program than those with low levels of spirituality; (c) spiritual attribution, a dimension of spirituality, was positively related to degree completion; and (c) holding a leadership position in one's faith community was negatively related to degree completion.

Keywords: African Americans, persistence, spirituality scale, minority PhD students, Tinto's attrition model, spirituality and higher education, faith and African Americans.

Dedication

To Maria Juliana and Ines, in memoriam.

Vozinha (granny) Maria Juliana, I honor your dedication to family, wonderful sense of humor, strength, resilience, and unwavering faith.

Mamae (mom) Ines, I honor your acceptance of all, contagious presence, creativity, focus on community, and hounding persistence.

I dedicate this work to you. I imagine you are dancing in heaven as you celebrate!

"Three things will last forever—faith, hope, and love—and the greatest of these is love."

—Apostle Paul

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This work explores the power of spirituality. As such I want to first thank you, God, for your transformative love. Thank you, Jesus, for your redeeming sacrifice. Thank you, Holy Spirit, for your powerful inspiration.

I have tried to be concise, yet my heart is so full of thankfulness! For this reason, I have divided this acknowledgments section in three parts: family, mentors, and community. You can find your special corner and read how you have blessed my life.

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List of Abbreviations

Demographic Survey (DS)

Historically Black Colleges and Universities (HBCU)

Institutional Integration Scale (IIS)

Institutional Review Board (IRB)

Predominantly White Institution (PWI)

Spirituality Scale (SS)

CHAPTER ONE: INTRODUCTION

The journey to receive a PhD has been described as one of many complexities and challenges regarding stress, identity, agency, and relationship management within the academic community (Aitchison, Catterall, Ross, & Burgin, 2012; McAlpine & Amundsen, 2009; Pyhältö, Toom, Stubb, & Lonka, 2012; C. M. Roberts, 2010). Thus, doctoral students are more likely than any other graduate students to leave their programs (Ross et al., 2012). Consequently, the present completion rates of 45%–55% are low among doctorate students in general (Cochran, Campbell, Baker, & Leeds, 2014; Lovitts, & Nelson, 2000), but few researchers have addressed the fact that racial minorities struggle to graduate from predominantly White institution (PWI) doctoral programs at a higher rate than the general population (King, 2008).

For instance, for doctoral degrees awarded in the United States, underrepresented ethnic groups comprise only 3% of Ivy League graduates and 20% of graduates of other institutions (Lundy-Wagner, Vultaggio, & Gasman, 2013). America's social, financial, educational, and emotional ability to thrive for the next several decades might be threatened by the deficit in racial minorities' completion of their graduate degrees (Sowell, Allum, & Okahana, 2015). Accordingly, the prosperous future of the United States of America depends on its ability to effectively educate minority groups (King, 2008) because 44.2% of millennials—people born between 1982 and 2000—are minorities. Since, in the United States, 50.02% of children under age five and 50.5% of elementary students are minorities, (National Center for Education Statistics, 2017; United States Census Bureau, 2015), in 15 years, half of all college-age Americans will be minorities.

Nature of the Problem

The core problem of the above-presented data is that future minority college students depend on the availability of competent supervisors and professors to acquire necessary innovation and social adaptability (Kuznets, 1960), excellence and scholarship required to replace aging faculty (Austin, 2002), and talent to train lucid mental health professionals (Woo, Storlie, & Baltrinic, 2016). One of the main issues compounding the problem is the social and economic disparity promoted by the lack of minorities with doctoral degrees. In their study on graduate education and social stratification, Posselt and Grodsky (2017) observed that a doctoral degree is related to median earning advantages ranging from 25% to 108% over a bachelor's degree. A recent report revealed that 77% of American postsecondary faculty are White, while 10% are Asian, 6% are Black (data included demographics from all-Black institutions), and 4% are Hispanic (National Center for Education Statistics, 2017a). Because more equality needs to be promoted in American society, the low number of minority faculty currently teaching at PWI merits special attention. In 15 years, 50% of prospective students will be racial minorities or biracial individuals in need of culturally informed education and mentoring delivered by competent faculty (Thomas, 2001).

As seen from the above-cited data, only 20% of faculty are minorities (National Center for Education Statistics, 2017a) and 50% of college students are likely to be minorities in the near future (Thomas, 2001), which creates a potential 30% gap in the proportion of minority students to minority faculty caused by the lack of minority professors. This potential disparity needs to be filled in order to meet the educational demands of the next generation (Sowell et al., 2015). The gap is likely to be promptly filled when minority PhD candidates in PWIs are able to complete their programs, therefore decreasing the astonishing rate of 60% attrition. In fact, more

than any other racial minority in higher education, African Americans are currently leaders both in enrollment and attrition, a fact that has been greatly overlooked by researchers (Cook & Cordova, 2006; Ehrenber, Jakubson, Groen, So & Price, 2007). Approximately, for every ten African American learners enrolled in a PhD program at a PWI, six will fail to graduate (King, 2008; Sowell et al., 2015).

A 20-year longitudinal government report that observed 41,368 PhD students from 406 universities from 1980 to 2000 reported an increase in degrees granted to minorities. The same report revealed that over the last 20 years, African Americans have experienced a 61% increase in awarded doctorate degrees, while Latinos have experienced a 177% rise. The same study revealed that, in addition to being the least likely to graduate, African Americans held an education debt rate of 30%, the highest among minority students (Hoffer et al., 2001). This study explores the issue of attrition and persistence among African Americans as an effort to join the community of researchers and offer information to facilitate solutions to the problem.

Background to the Problem

The high attrition rates among African Americans in higher education can only be fully understood within a historical perspective of the economic, political, social, educational, and cultural forces that forged African Americans' status in American society (Hartman, 1997; Watts, Williams, & Jagers, 2003).

African Americans carry the legacy of slavery. It is important to observe that slavery, much more than a labor system, was the foundation and means of economic survival and preservation of status for all of Southern society (Carlander & Brownlee, 2006; Edwards, 2009; Genovese, 2014; Grynaviski & Munger, 2014). As such, African Americans became not only servants but the focus of intentional oppression fueled by their owners' desire for economic

survival and status quo preservation (Marable, 2005; Watts et al., 2003). Consequently, from 1600 to 1864, the African Americans were slaves and treated as mere property. Enslaved Africans were stripped of their identities when, upon arrival in America, individuals of similar languages and cultures were separated due to the slave owners' desires to control insurgencies (Higginbotham & Franklin, 2010). To ensure slave trade profits, entire families were forcefully separated, rented, or sold, effectively stripping them of their close relationships (Baptist, 2014; Pargas, 2009). African Americans worked in the fields for their masters, and after long hours they still managed to work for themselves, but the earnings from work were often taken away by their masters. In some regions of the country, it was unlawful to conduct business with slaves; therefore, African Americans were often stripped of their sense of agency and personal entrepreneurship (Egerton, 2006; Williams, 1882).

Regarding social relationships and sense of belonging, African Americans were subject to propaganda of unworthiness that gave way to discriminatory social exclusion based on race (Fields, 1990). In 1790, when the Naturalization Act was enacted, White individuals from other nations officially became Americans, while freed African Americans were excluded. Considered as less than human, African Americans were denied citizenship (Higginbotham & Franklin, 2010; Williams, 1882; Wise, 2012). In 1846, the passage of the Thirteenth Amendment outlawed slavery. African Americans acquired freedom and were no longer considered property. However, the perception of Black individuals as property and as "outside the human family" (Williams, 1882, p. 1) remained, and Black individuals continued without the right to American citizenship for 23 more years (Higginbotham & Franklin, 2010).

Unfortunately, the preservation of slavery was a lengthy, well-established, and extremely well-designed process (Baptist, 2014), but when slavery came to an end, the strategic processes

to promote socioeconomic freedom were short-lived and lacked proper implementation. For instance, after the Civil War, the reconstruction process lasted only 15 years (from 1865 to 1880), while slavery lasted 246 years. Even during the short period of reconstruction, and especially in the South, African Americans had limited or blocked access to established programs and public policies to diminish poverty and support education (Franklin, 1970; Higginbotham & Franklin, 2010). In 1869, when citizenship was finally secured by African Americans, systematic psychological, social, and economic segregation, forced labor, Jim Crow laws, and racial terror often provoked by the lynching of successful African Americans under false accusations continued to strip African Americans of dignity, a sense of safety, and freedoms for another 100 years (Blackmon, 2009; Eyerman, 2001; Gordon, 2017; Higginbotham & Franklin, 2010; Jackson, 2005; Ohl & Potter, 2013).

Through the 1968 Civil Rights movement and the laws that followed, African Americans finally acquired complete equity to White Americans, but only in theory (Baptist, 2014; Higginbotham & Franklin, 2010; Wise, 2012). Lamentably, the endured years of segregation in the South and the development of cotton-picking machines, which decreased the demand for labor, created the need for African Americans to migrate north (Boyd, 2014; Lemann, 2011). Skilled in agriculture yet unable to own land, six million African Americans left the South. Many were forced to do any type of city work they could find, becoming "trapped at the bottom of the urban wage scale" (Franklin & Moss, 2000, p. 20). Fueled by residential segregation, inner-city ghettos were formed by African Americans who once again, experienced social, political, and economic exclusion (Schlichting, Tuckel, & Maisel, 2015).

Segregation was part of a long-term, well-established process of systematic psycho-social-political-economic exclusion that, like slavery, was developed to maintain the Southern

elite's ability to retain cheap labor to pick cotton (Lemann, 2011). The additional 80 years of systematic exclusion, promoted by segregation upon a group that although resilient, had already been systematically excluded for over 200 hundred years through slavery, had long-term ripple effects (Gordon, 2017; Higginbotham & Franklin, 2010; Jordan, 2013). Yet, a process of intentional ongoing inclusion and complete integration is still to emerge, especially in the field of education.

In their theory of education and race relations in America, Ladson-Billings and Tate (1995) stated that the promises of the landmark Civil Rights decision of school desegregation prompted by Brown v. Board of Education are still to be delivered. The authors pointed out that segregation affects African American students today more than ever before. In 1995, Ladson-Billings and Tate disclosed that of the 22 largest American urban school districts, African Americans were the majority in 21, even though African American individuals represented only 12% of the American population. Since Ladson-Billings and Tate's observations in 1995, the urban and suburban gap in education that follows racial lines have continued intact and been reported upon and explored extensively (Hirsch, 1999; Kozol, 1988, 2006; Meier, Cohen & Rogers, 2000; Payne, 2008; Wright, 2013).

Sadly, the African American circumstances of yesterday seem to still impact African American circumstances of today (Baptist, 2014; DeGruy, 2017; Higginbotham & Franklin, 2010; Tucker & Mitchell-Kernan, 1995). Table 1.1 offers a timetable of slavery and related events. Even biology serves as an unwelcome reminder of the epigenetic impact of the past (Thayer & Kuzawa, 2011). For instance, after controlling for lifestyle factors, African American babies consistently have a birth weight an average of 259 g lower than European American babies (Jasienska, 2009). Low birth weight is related to increased risk of adult onset diabetes,

insulin resistance, cardiovascular disease, and hypertension (Barker, 2002; Gillman, 1995; Gluckman, Cutfield, Hofman, & Hanson, 2005). Weight disparities disappear when non-American born Black babies are compared to Euro-American babies. Researchers relate this biological and epigenetic phenomenon to the consistent inadequate nutritional intake of African American slave mothers, the exposure to infectious diseases, and high-energy physical work. Biology experts assert that not enough generations have passed to extinguish the impact of the long period of slavery on the current health and biological condition of American-born Black individuals (Jasienska, 2009; Lumpkins & Saint Onge, 2017; Meloni, 2017; Thayer & Kuzawa, 2011).

The biological reminder of slavery is only intensified when the financial lives of African Americans as a group is observed. The U. S. Census Bureau (2017) reported that, when compared to any other race, including Hispanics, the real median household income of African Americans has consistently remained the lowest in the nation from 1967, when records for African Americans began to be kept. Unfortunately, the African Americans who achieve a middle-class status declare being often emotionally overwhelmed as they deal with constant stigma, discrimination, stereotyping, and inability to embrace their African American identity. Most declare that their economic success does not translate into acceptance and integration into the American culture (Feagin & Sikes, 1994; Landry & Marsh, 2011; Mouzon, Taylor, Woodward, & Chatters, 2017; Pittman, 2011).

Table 1.1

Highlights of the African American Journey and Slavery

Date	Event
1619	First African American slaves arrive in Jamestown, Virginia.
1831–1861	Through Underground Railroad, nearly 75,000 slaves escape to the North.
1857	Slaves are not considered citizens.
1861	Civil War begins.
1863	Emancipation Proclamation frees slaves from rebellious colonies.
1865	The Civil War ends. Slavery is officially prohibited. The era of Reconstruction begins.
1866	The Ku Klux Klan is formed. Legislators of former Confederate States pass "Black Codes" laws.
1866	Civil Rights Act is passed by Congress and grants full and equal citizenship rights to African Americans.
1870	African Americans acquire the right to vote.
1877	Reconstruction Era and African Americans' protected civil rights end.
1879	Thousands of African Americans migrate out of the South to escape oppression.
1881–1896	"Jim Crow" segregation laws are passed and enforced in Southern states.
1896	African Americans are blocked from equal access to public facilities by "separate but equal" laws.
1910–1970	A total of six and half million African Americans move north. 5 million after cotton picking is mechanized.
1954	Segregation is declared unconstitutional by Brown v. Board of Education.
1964	The Civil Rights Act prohibits discrimination of every kind.
1965	The Voting Rights Act guarantees the voting rights of African Americans in the South.

(Franklin & Moss, 2000; Gordon, 2017; Higginbotham & Franklin, 2010; Horton & Horton, 2005; Lemann, 2011; Smithers, 2012)

The above-reviewed data call for disbelief and might promote uneasy feelings. Many experts argue that perhaps uneasy feelings and a lack of awareness of the immensities of the

problem account for the fact that one of the most awkward and avoided topics in American society is race relations (Apfelbaum, Pauker, Ambady, Sommers, & Norton, 2008; Bonilla-Silva, 2017; Ladson-Billings & Tate, 1995). According to Wise (2008, 2012), the dialogue about education in America cannot be separated from race relations. Therefore, the lack of intentional dialogue that would shed light on this matter is caused by avoidance, uneasiness, and overwhelming feelings of guilt or fear. This perpetual lack of racial dialogue continues to contribute to the darkness of the cumbersome statistics explored in this study.

Race and Education

According to the Census Bureau, in 2015 the poverty rate was highest for Black children (36%) among all minorities. Among Black children living in poverty, 72% of parents did not hold a high school diploma. In addition, 57% of Black children lived in a mother-only household, which is correlated with a lower probability of finishing high school. In high school, 69% of Black students complete their first year, compared to 84% of their White counterparts (Heckman & LaFontaine, 2010; Sandefur, McLanahan, & Wojtkiewicz, 1992).

Among students who enroll in college, 53% of Black students attained a bachelor's degree, compared to 77% of White students (Ross et al., 2012). In addition, African American students experience less academic and social integration during their college years than their non-African American counterparts (Lyons, 2007). And, astonishingly, approximately one out of every ten college-age (18–24) African American males is in prison (Heckman & LaFontaine, 2010). In addition to the social-economic challenges, the sense of belonging seems to play a role in African American social adjustment and academic achievement (Cokley, 2000; Fleming, 1984).

Black Minorities and Attrition

To investigate the influence of the social-academic environment on African Americans, Fleming (1984) conducted a study comparing success among 3,000 African American students in five historically Black colleges and universities (HBCUs), and eight PWIs. The findings revealed that HBCUs positively impacted Black individuals. Cognitive and psychosocial benefits were related to the perception of a supportive cultural, social, and racial environment.

In another study, Cokley (2000) observed that environment positively affects self-concept and academic achievement among African American college students. Cokley (2000) recruited 388 participants from two public PWIs and one HBCU; he also included Black Greek letter organizations, professors, and staff. Cokley noticed that African Americans who attended HBCUs derived their self-concept from increased interaction with faculty, while PWI students reported increased self-concept based on their grades, indicating that the absence of relationships led PWI students to increase social acceptance efforts through higher grades.

Black Minorities and Attrition in Higher Education

The previously explored data highlight African Americans' specific challenges regarding basic education. Within higher education, far more than any other minority, African Americans have simultaneously retained the highest numbers in both enrollment and attrition (Cook & Cordova, 2006). Approximately six out of every 10 African American learners enrolled in a PhD program will not graduate (King, 2008; Sowell et al., 2015). This information indicates that the decision to withdraw might be influenced by negative incidents that take place during enrollment.

Hoffer et al. (2001), Nettles and Millett (2006), and Torres, Driscoll, and Burrow (2010), stated that African Americans enrolled in PWI doctoral programs often report experiencing

social and academic challenges. Socially, Black students report experiencing feelings of inadequacy and isolation, being treated as if they were second-class citizens, and being suspected of crime when walking on campus (Torres et al., 2010). Academically, African Americans report being subjected to underestimation of intellectual capacity and lack of support from academic departments and professors (Nettles & Millett, 2006).

Through an investigation of a sample of 107 Black PhD students at a PWIs, Torres et al. (2010) found that 45% of the participants experienced depression related to ongoing negative race interactions within academic settings. Of related importance, Tinto's (1975) theory of attrition, based on suicide literature, substantiates the idea that feelings of social isolation and poor academic integration precede student dropout. Accordingly, similar to suicide, where an individual chooses to die, students choose to "die" to the program by withdrawing.

Theory of Student Attrition

Remarkably, one of the most widely used theories of attrition—Tinto's (1975, 1982, 2012) theory based on suicide and anthropology—argues that before withdrawal, students feel poorly integrated and socially isolated. Thus, comparable to suicidal individuals, they decided to "die" to their program by dropping out (Tinto, 1975, 1982, 2007, 2012). Explained in detail in Chapter Two of this study, Tinto's systematic model accurately predicted academic success if five characteristics were present:

- initial characteristics: positive educational experiences, positive family characteristics;
- elements of initial goal commitment: commitment to educational goals;
- social integration: ability to feel that one belongs to the group;
- academic integration: ability to understand academic content, to connect and develop work in collaboration with faculty; and

- later goal commitment: ability to complete the process of integration by becoming and feeling like a scholar in connection to the learning institution.

Tinto asserted that students lacking such characteristics would be more likely to commit institutional "suicide"—that is, drop out. Interestingly, despite the previously described academic and institutional challenges faced by Black doctoral students, 40% are able to graduate yearly, resisting the fulfillment of Tinto's predictions (Sowell et al., 2015).

Black Minorities' Education and Faith

Historically, spirituality has been known to impact education among African Americans (Calhoun-Brown, 2000; Lambert, 1992; Lincoln & Mamiya, 1990; Mitchell, 2008). For instance, a qualitative and quantitative study revealed that religious involvement positively impacted educational outcomes among 306 low-income African American high school students (Barrett, 2010). In addition, observations in a quantitative study revealed that African American college students ($N = 144$) employed spiritual mechanisms to foster cognitive coping behaviors against academic environmental stressors (Constantine, Wilton, Gainor, & Lewis, 2002).

While investigating the impact of the college environment on spiritual development among 125 African Americans, Weddle-West, Hagan, and Norwood (2013) observed that Black individuals attending a PWI displayed higher levels of spirituality than Black individuals attending HBCUs. Weddle-West et al. (2013) posited that Black students may need to lean on a higher power more often and rely on prayer and scriptures as coping skills to maintain a sense of self and deal with environmental and cultural stressors when attending a PWI. Interestingly, in a study about attrition among HBCUs, Williams (1993) documented that the main reasons for attrition among college students were inadequate income, lack of financial aid, and the need to balance work, family, and academia instead of social integration.

Graduate Students

The challenges in education become even more pronounced for Black minorities when examining graduate studies. In a qualitative study that explored the experiences of motivation among a sample of first-generation African American graduate students, Adams (2011) found that faith was an underlying theme woven through Black students' reasons for motivation to complete their PhD degree when attending PWIs. Moreover, research suggests that African American graduate students employ spirituality as a source of support and compensation for their academic challenges (Riggins, McNeal, & Herndon, 2008; Shipp, 2017; Walker & Dixon, 2002). Curiously, Terenzini, Pascarella, Theophilides, and Lorang (1985) found some aspects of compensatory interactions when studying Tinto's attrition model.

According to Terenzini et al. (1985), individuals with deficits in social integration who successfully completed their programs counterweighed their deficiencies with high academic integration. Since literature strongly indicates that African Americans employ faith mechanisms to overcome academic obstacles, it is possible to suggest that similar to African American college students (Weddle-West et al., 2013), spirituality might serve as a compensatory element, which conceivably insulates Black doctoral students as they experience barriers to acquiring Tinto's five predictors for academic success. Despite substantial social and academic challenges, 40% of African American doctoral students persist, refuse to die (drop out), and graduate from their programs (King, 2008; Sowell et al., 2015). Factors associated with their persistence might inform the development of strategies to increase student retention and academic success.

Statement of Problem

The core problem addressed by this study is the high attrition rate (60%) among minority PhD students, especially African Americans. High attrition numbers among minority PhD

students is problematic for two reasons. First, it creates disparities in representation. Today, only 20% of faculty in higher education belong to a minority group, and among those, only 6% are African Americans (National Center for Education Statistics, 2017a), while African Americans represent 13.3% of the general population (United States Census Bureau, 2016).

Second, it creates deficits in faculty, due to aging faculty (Austin, 2002), and due to the growth of minority populations. In 15 years, 50% of all college-age Americans will be racial minorities (National Center for Education Statistics, 2017a). Given that only 20% of professors are racial minorities, in 15 years, there is a potential for a 30% gap in the ratio of minority students to minority faculty caused by the lack of racial minority professors needed to meet the impending educational demands of the next minority generations (National Center for Education Statistics, 2017a; Sowell et al., 2015; Thomas, 2001).

Among all racial minorities, African Americans experience the highest level of attrition (60%). Black individuals also experience the most social and academic challenges in higher education settings (Nettles & Millett, 2006; Torres et al., 2010; Williams, Brown Burnett, Carroll, & Harris, 2016). Tinto's attrition theory argues that in order to be academically successful, students must possess distinctive characteristics for academic success (Tinto, 1975, 1982, 2012). According to present research, however, Black minorities generally tend to experience barriers toward acquiring these characteristics (Eyerman, 2001; Heckman & LaFontaine, 2010; Higginbotham & Franklin, 2010; Jackson, 2005; Jasienska, 2009; Lyons, 2007; Ohl & Potter, 2013; Miller, 2005; Sandefur et al., 1992).

Based on Tinto's theory and the literature about African Americans explored here, and even after accounting for the relative financial prosperity enjoyed by a few African Americans who had never endured slavery, the 40% of Black PhD candidates reported to persist and receive

their degree poses an intriguing inconsistency with Tinto's model. Because, according to Tinto's theory, which will be further explained in Chapter Two, in order to succeed and graduate from a program, the cycle of academic and social integration needs to be completed. Tinto asserts that lack of social and academic integration leads to attrition. This implies that as a group experiencing significant academic and social exclusion, the 40% of African Americans who completed their PhD were not supposed to have succeeded (Tinto, 1975, 1982, 2012; Sowell et al., 2015).

However, literature suggests that spirituality positively impacts academic success among African Americans (Adams, 2011; Barrett, 2010; Calhoun-Brown, 2000; Constantine et al., 2002; Lambert, 1992; Lincoln & Mamiya, 1990; Mitchell, 2008; Riggins et al., 2008; Walker & Dixon, 2002; Weddle-West et al., 2013). Interestingly, Terenzini et al. (1985) found that in Tinto's model, it was possible for individuals to possess and effectively utilize academic and social compensatory strategies on the road to degree completion. Thus, spirituality might have been employed by African Americans as a compensatory strategy to overcome the obstacles related to the elements of academic success according to Tinto's model. Hence, this quantitative study explores the relationship between spirituality and degree completion and applies hierarchical regression to inquire whether spirituality serves as a moderator for challenges regarding Tinto's determinant characteristics of academic success and attrition prevention among African Americans.

To date, no quantitative study has been conducted on the relationship between faith and academic success among African American doctoral students employing Tinto's theory of student attrition. This study sought to investigate that gap within the literature.

Purpose of Study

The purpose of this quantitative study was to expand current understanding of attrition prevention among African Americans by obtaining data to devise effective strategies to reduce premature academic exit among Black PhD students. This study explored the possible relationship between spirituality and persistence among African American PhD candidates.

Research Question

This study hypothesized that faith may function as a moderator for the absence of any of Tinto's five characteristics necessary for academic success. In this case, faith impacts Tinto's five determining attrition factors affecting academic success for the sample of African American doctoral students. Consequently, moderation means that in different levels of strength, faith among African American doctoral students affects attrition and the ability to graduate.

Tinto's theory of attrition supports the idea that initial commitment, initial characteristics, social integration, academic integration, and goal commitment are fundamental for student degree achievement (Tinto, 1975, 1982, 2012). According to literature, African American students, due to social economic circumstances, seem to encounter barriers to attain such characteristics (Eyerman, 2001; Heckman & LaFontaine, 2010; Higginbotham & Franklin, 2010; Jackson, 2005; Jasienska, 2009; Lyons, 2007; Miller, 2005; Ohl & Potter, 2013; Sandefur et al., 1992). Interestingly, compensatory strategies were observed within Tinto's model (Terenzini et al., 1985), and other literature indicates that African Americans employ spirituality as a coping skill for challenges in education (Adams, 2011; Barrett, 2010; Calhoun-Brown, 2000; Constantine et al., 2002; Lambert, 1992; Lincoln & Mamiya, 1990; Mitchell, 2008; Riggins et al., 2008; Walker & Dixon, 2002; Weddle-West et al., 2013).

Given the facts stated above, this study hypothesized that among African Americans, spirituality is utilized in different levels as a compensatory strategy to persist to degree completion when faced with the challenges related to a portion or all of Tinto's five elements of attrition. In this case, moderation means that the higher the level of spirituality among the sample of African American PhD students, the lower the strength of the effect of lacking Tinto's elements of academic success leading to attrition. Accordingly, the higher the level of faith/spirituality among African Americans, the lower the degree of attrition will be. Therefore, this study asked three questions:

1. Is there a relationship between spirituality and persistence (degree completion) among African American PhD students? If there is,

2. Is spirituality related to persistence among African American PhD students after controlling for Tinto's five characteristics of academic success?

3. Does spirituality moderate the relationship between Tinto's five characteristics of academic success and persistence?

    a. Alternately, do the relationships between the five characteristics and persistence vary between African American PhD graduates with low, average, and high levels of spirituality?

Theoretical Base

A pilot qualitative study that employed Tinto's theory of attrition was the inception of this project. Strong themes were observed that pointed to spirituality as the main factor predicting persistence to degree completion among the small sample of African American doctoral students. Inspired by the idea, this quantitative study employed Tinto's theory of

attrition to observe dynamics of persistence among African Americans along with present research findings on education and spirituality.

First, Tinto's theory of student attrition was employed due to its ability to simultaneously observe individual social and academic factors and their interactions in predicting student success or attrition. Second, current statistics and literature regarding the status of education among African Americans and their social and academic experiences in higher education were employed to provide data upon which this study was conceptualized. Third, research regarding the culturally recognized relationship between spirituality and academic success among Black individuals was employed to inform hypothesis formation.

Tinto's (1975) model of attrition advocates that five characteristics predict academic success:

- initial characteristics: positive educational experiences and positive family characteristics;

- elements of initial goal commitment: commitment to educational goals;

- social integration: ability to feel that one belongs to the group;

- academic integration: ability to understand academic content, to connect and develop work in collaboration with faculty; and

- later goal commitment: ability to complete the process of integration by becoming a scholar who experiences connection to the learning institution.

Research for this study indicates that although Tinto's model is accurate in predicting attrition, when people experience challenges related to the five aspects of model, compensatory interactions are possible and have been identified (Terenzini et al., 1985). This study also highlights research findings supporting the ongoing barriers to social, academic, and

organizational integration experienced by African Americans in higher education (Hoffer et al., 2001; King, 2008; Nettles & Millett, 2006; Sowell et al., 2015; Torres et al., 2010).

This study was birthed because research strongly indicated that African Americans have historically employed spirituality mechanisms to succeed academically (Calhoun-Brown, 2000; Lambert, 1992; Lincoln & Mamiya, 1990; Mitchell, 2008). By using faith as a compensatory strategy in order to overcome academic and social challenges encountered in higher academia, PhD degree recipients became immune to Tinto's prediction of attrition. A moderation model was developed, and a quantitative methodological approach of hierarchical regression was employed to evaluate the presumed moderation model (Baron & Kenny, 1986).

Key Term Definitions

African American Spirituality: Faith in an omnipotent, transcendent force; experienced internally and/or externally as caring interconnectedness with others, God, or a higher power; manifested as empowering transformation of and liberating consolation for life's adversities, and thereby inspiring fortified belief in and reliance on the benevolent source of unlimited potential (Newlin, Knafl, & Melkus, 2002). Also defined as "a belief that all elements of reality contain a certain amount of life force" (Jagers & Smith, 1996, p. 430) and that nonmaterial and unobservable forces, such as one's ancestors, have powers to govern one's everyday life even after death (Jagers & Smith, 1996).

Minority: According to Louis Wirth (as cited in Linton, 1945), a group of people who, because of their physical or cultural characteristics, are singled out from others in the society in which they live for differential and unequal treatment and who therefore regard themselves as objects of collective discrimination. Minority status carries with it the exclusion from full participation in the life of the society. Minority groups are further defined as: (a) under-

represented ethnic groups, that is, individuals who are racially and culturally different from the majority; (b) Hispanics or Latinos, or persons from Central America or Mexico, South America, or another Spanish tradition or heritage independent of race; and (c) African Americans or Blacks, that is, persons with traces of Black African descent (Linton, 1945).

Persistence to degree completion: A student's ability to graduate from a program (Lufi, Parish-Plass, & Cohen, 2003).

Student attrition: A longitudinal process of interactions between the individual and the academic and social system of an institution, during which a person's experiences in those systems continually modify his goals and institutional commitments in ways which lead to varying forms of dropout (Tinto, 1975).

Whites: Persons with ancestries originating in Europe, North Africa, or the Middle East (Davis, 2005; U.S. Census Bureau, 2017).

Assumptions and Limitations

This study possesses several limitations. First, it employed surveys to explore and quantify very subjective experiences of spirituality and social academic education. It is possible that a hybrid approach including qualitative research would have yielded more accurate results. This study also employed self-assessment measures. The coding of observed social and academic behaviors would have rendered more accurate results.

The study sample was comprised of PhD students, yet participants were not asked about their fields of study; such information would have offered a broader perspective. Online surveys were employed in this study, therefore excluding individuals without digital access. This study examined persistence and spirituality as related to Tinto's model. An exploration of the impact of spirituality and persistence by employing different models is needed.

This investigation investigated persistence with relation to academic and social integration. Social integration involves relationships; an exploration of participants' style of relating and attachment style would have offered more information about attachment social dynamics among the sample. At the same time, an examination of participants' attachment to God would have increased the strength of the findings and offered more clarity about the dynamics of faith, persistence, and God attachment. This study also observed persistence; a measure of motivation would assist in distinguishing motivation as either a personal trait or faith-related trait. This study focuses on a specific population, African American PhD students; therefore, no inferences related to the general population can be made from this investigation.

This study assumed that Tinto's theory offers an objective framework from which to observe the relationship between faith, spirituality, and academic success among African Americans. This analysis also assumed that spirituality would be the main factor impacting the ability of 40% of Black students to receive a PhD despite social and academic deficits. Such information was displayed through a complete or partial moderation, where spirituality counted as the defining factor.

The Significance of the Study

This study fills a gap in literature by using quantitative methods to attempt to establish a direct relationship between Tinto's theory of attrition and African American doctoral students who complete their PhD programs through employing spiritually based strategies. In doing so, this work provides data to collaborate with retention efforts for ethnic minorities in higher education. Such an endeavor holds significance, given that African Americans belong to the minority group least likely to successfully complete a higher education degree (Hoffer et al., 2001; King, 2008; Nettles & Millett, 2006). This fact could impact the future of the United

States economy, since 67% of American citizens will be either biracial or part of a racial minority group by 2060 (Frey, 2014).

The results of this study might support the creation of spiritually based degree completion interventions among Black individuals. Consequently, it may offer a contribution to America's financial, educational, social, and emotional ability to thrive as a nation for the next several decades. America's future requires innovation, social adaptability (Kuznets, 1960), scholarship, a capability to replace aging faculty (Austin, 2002), and skills to train mental health professionals (Woo et al., 2016). This study aimed to contribute to a successful future by discovering how to best offer higher education to racial minorities (Sowell et al., 2015). As previously stated, guided by Tinto's attrition theory and literature regarding education status and the relationship between spirituality and education among African Americans (King, 2008; Riggins et al., 2008; Sowell et al., 2015; Walker & Dixon, 2002), this quantitative study hypothesized that faith moderates the relationship between the absence of any of Tinto's five characteristics necessary for academic success and degree completion among Black doctoral students.

Organization of the Dissertation

This work is divided into five sections. The first section offered an introduction to the study. The second section provides an overview of the literature regarding the educational efforts of African Americans, their status and experiences in higher education, Tinto's theory of student attrition, and the relationship between spirituality and education among Black individuals. The third section examines the research method and data analyses employed. The fourth section presents the results of hypothesis testing through descriptive statistics. The fifth and final section provides a discussion of this experiment findings, the study's strengths, limitations and implications, and recommendations for future research.

Chapter Summary

This chapter explored the growing number of minorities and the high indices of attrition among African American PhD students. The issue of attrition among African Americans was presented within a historical, social, cultural, and educational framework, which highlighted the legacy of slavery among African Americans. The influence of African American faith traditions on education was also explored. Tinto's model of academic success based on social and academic integration was presented to investigate the relationship between faith and academic persistence among African Americans. Observations revealed that the 40% of African Americans who annually proceed to degree completion posed a challenge to the well-researched and theoretically well-constructed model. The reason was, historically, African Americans have experienced significant barriers toward acquiring Tinto's necessary elements of social and academic integration. Therefore, according to Tinto's model, as a group experiencing academic and social exclusion, even the 40% African Americans who completed their PhD were not supposed to have succeeded. A hypothesis was presented that proposed that spirituality had perhaps been employed by African American PhD degree recipients as a compensatory strategy to overcome challenges related to all or some of the characteristics of academic success proposed by the presented model of attrition.

CHAPTER TWO: LITERATURE REVIEW

This study was the first quantitative investigation that attempted to establish a direct relationship between Tinto's theory of attrition and African American doctoral students' ability to bypass the theory by employing spirituality as a compensatory strategy to persist and attain a PhD. This work joins the effort to provide data to aid retention efforts for minorities in higher education. The importance of this endeavor is considerable, given that African Americans are the minority group least likely to succeed in completing a higher education degree (Hoffer et al., 2001; King, 2008; Nettles & Millett, 2006), a fact which may impact the future of the United States economy. By the year 2060, 67% of American citizens will be either biracial or part of a minority group (Frey, 2014) and therefore in need of competent and seasoned minority faculty.

This chapter begins by presenting a literature review regarding African Americans and education. The second section of this chapter explores in detail Tinto's theory of student attrition and its application to PhD students. The third section offers a historic overview of African Americans and education. This chapter concludes with a logical explanation of this study design and conceptual framework.

Scope of Literature Review

This study employed PsycNET and Google Scholar in the literature review. The researcher searched for the following terms: attrition theory, persistence theory, dropout theory, theory of student retention, minorities and PhD degree completion, minorities' attrition rate, Black or African American and doctoral degrees, Black or African American and education, Black or African American and PhD degree completion, Black or African American and dropout, Black or African American and PhD and attrition, Black or African American and PhD degree completion and faith or spirituality, Black or African American and education and faith or

spirituality, Black or African American faith or spirituality and academic success, Black or African American and church, and education success.

African Americans and Education

Dismaying Statistics

In the literature, there seems to be a consensus that the stigma and prejudice endured by African Americans during slavery is yet to be overcome. Scholars and researchers have hypothesized that racism embedded in American society and enacted by individuals, institutions, and systems can act as chronic or life event stressors for African Americans (Branscombe, Schmitt, & Harvey, 1999; Chae, Lincoln, & Jackson, 2011; Franklin-Jackson & Carter, 2007; Gordon, 2017; Schmitt, Branscombe, Postmes, & Garcia, 2014). Research also supports that the experience of racism may play a role in the high rate of stress-related mental and physical illnesses among African Americans (Franklin-Jackson & Carter, 2007; Geronimus & Thompson, 2004; Iheduru, 2013; Mouzon, Taylor, Woodward, & Chatters, 2017; Nelson, 2006; Phelan & Link, 2015). The presented literature review about African Americans and education might be better understood within the historical perspective of African Americans as a group of individuals who have experienced long-term stigma. According to Link and Phelan (2001), "stigma exists when elements of labeling, stereotyping, separation, status loss, and discrimination occur together in a power situation that allows them" (p. 377).

African Americans' Educational, Social, and Relational Challenges in Higher Education

Stigma. In a study of 59 Black and 21 White college students, Inzlicht, McKay, and Aronson (2006) reported that, surprisingly, that when coping with stigma, African American responders had impaired ability to respond properly. When confronted by the same problem-solving questions without stigma, African American participants performed well and

demonstrated the ability to solve problems without difficulties. Inzlicht et al. (2006) explained that stigma decreases a person's capacity to control behaviors and concentrate because dealing with stigma requires self-regulation, which is a limited resource.   When confronted with stigma, individuals experience an ego depletion and decreased concentration abilities. The authors proposed the idea that being the target of prejudice affects self-control because the energy to deal with stigma depletes the capacity for self-regulation.

Social Challenges

A quantitative investigation by Nettles and Millett (2006) involving 9,036 students revealed that compared to their peers, Black students were three times less likely to publish research articles and were the least expected to become research assistants among all minority groups. In higher education, Black students commonly report feelings of isolation and inadequacy. Black minority students also admit to being treated as unworthy citizens and as suspects of crime when walking on campus. In addition, African American students often disclosed that they experienced a lack of support from their academic departments and professors as well as an underestimation of their intellectual abilities (Hoffer et al., 2001; Nettles & Millett, 2006; Torres et al., 2010).

These experiences could account for Daniel's (2007) qualitative study findings that in a predominantly White social work program, Black students ($N = 22$) experienced a lack of professional development and social isolation, which led to program exit. Furthermore, a mixed-methods study found that from a sample of 107 African American PhD students, 45% experienced depression and attributed their condition to persistent negative interactions related to race (Torres et al., 2010). Gildersleeve, Croom, and Vasquez (2011), after documenting the daily experiences of three doctoral students of color, argued that institutional racism inhibited

these students' graduate experience and ability to thrive.   Moreover, in a seven-year longitudinal baseline study regarding minority retention in higher education involving more than 20,000 students among 24 national universities, King (2008) observed that race was a key factor impacting doctoral degree completion.

In the same analysis, King (2008) reported that when accounting for all academic fields, White individuals displayed a 55% degree completion rate, followed by 51% for Latinos and 50% for Asian Americans. The least successful at completing their programs were Black individuals, who had a 47% completion rate. Considerable attention must be paid to the fact that in fields with a higher incidence of Black scholars, such as life sciences and humanities, African American completion rates in PWIs increased. King (2008) related such an increase to the strong presence of Black scholars serving as mentors for incoming African American students in those particular fields.

The most recently updated longitudinal study, conducted by the Council of Graduate Schools, was conducted between 1992 and 2012. The report included 7,575 minority doctoral students, from 21 institutions. The evaluation reveals that African American completion rates dropped from 47% to 40% in the past 10 years, in contrast to Hispanics, which experienced a drop of 2% from previous 50% completion rates. The report disclosed that even among minorities, the gap in higher education for Black people is increasing (as cited in Sowell et al., 2015).

The data reviewed in this literature overview suggest that the least likely minority group to succeed in higher education is African Americans. Yet, as previously explored in Chapter One, despite the supposedly unsurmountable gaps formed by the financial, educational, psychological, relational, academic, and social hurdles likely promoted by slavery, segregation,

mass migration, and perpetuated by stigma (Cokley, 2000; Cook & Cordova, 2006; DeGruy, 2017; Egerton, 2006; Eyerman, 2001; Fields, 1990; Heckman & LaFontaine, 2010; Higginbotham & Franklin, 2010; Jackson, 2005; Jasienska, 2009; Kozol, 1988, 2006; Nettles & Millett, 2006; Miller, 2005; Ohl & Potter, 2013; Pargas, 2009; Ross et al., 2012; U. S. Census Bureau, 2017; Wise, 2012), 40% of African American doctoral students persist and receive their degrees (Sowell et al., 2015). Based on the presented literature review and Tinto's (1975, 1982, 2012) theory of attrition, the 40% of African American students who receive their PhD degree were not expected to endure to completion. The next section of this work explores in depth Tinto's theory of student attrition. At the end of this chapter, the author will return to the argument that the 40% of African American PhD candidates who graduate every year were not likely to have received their degrees according to Tinto's theory as well as the previously addressed literature review about African Americans.

Tinto's Theory of Student Attrition

A number of experts have proposed different theories of attrition. The two most employed models in student persistence literature are Tinto's and Bean's theories of student attrition. Each model comes from a distinct theoretical basis. Bean's (1980, 1983, 2000) model stems from employee turnover, while Tinto's (1975, 1982, 1987, 2012) theory is based on suicide and anthropology. It is beyond the scope of this study to explore both the above-mentioned attrition theories. Since Tinto's theory offers the theoretical foundation for this work, it is explored in detail in the following sections.

Basis for Tinto's Attrition Theory

Tinto's (1987) seminal work, in which he explains in detail his theory of attrition, has been cited by other researchers 14,460 times, making his theory one of the most employed

attrition theories regarding undergraduate students. Tinto (1975, 1982, 1987, 2012) argues that a student's decision to leave an academic institution occurs as a result of social and intellectual experiences during enrollment. Tinto detected that the interaction of social and academic matters shaped an institutional system, which in turn performed an important role in withdrawal dynamics. Tinto viewed attrition as a phenomenon which happened to students after they participated in negative social and academic dynamics. Informed by Spady's work (1970), Tinto proposed that these dynamics influenced the student's decision to give up life as a student and embrace a premature "death" to the learning institution by dropping out. Figure 2.1 offers a graphic description of this process. Tinto based his theory of attrition on Durkheim's (1951) suicide model and Van Gennep's (1960) studies of social-anthropological rites of passages for new tribal members.

Durkheim (1951), Spady (1970)	Tinto (1975)
Suicide is connected to lack of integration in **two realms of a society**	Student drop out is connected to lack of integration in **two realms of academia**
• **Collective affiliation** • **Values**	• Collective affiliation: **academic engagement** • Values of an organization: **social life**
Lack of integration leads to life's premature exit **death by suicide**	Lack of integration leads to the premature exit from the organization's life **death by attrition (dropout)**

Figure 2.1. Origin of Tinto's theory of student attrition applicable to minorities.

Suicide and tribal rites of passage. Durkheim (1951) concluded that suicide was likely to happen when individuals were insufficiently integrated into the two realms of a society: collective affiliation and values. Therefore, Tinto (1975) maintained that for individuals to avoid premature exit, they needed to be integrated simultaneously into the values of an organization, its social life, and its collective affiliation expressed as academic engagement. In his overview of social dynamics, Van Gennep (1960) maintained that ongoing social revitalization and social stability in times of transition were promoted by the focus on ceremonial rites of passages for different stages of tribal membership. Three phases in tribal membership transition were observed by Van Gennep: (a) separation—distancing from past relationships, (b) transition—pursuing interaction with new group members, and (c) incorporation—embracing the rewards and responsibilities of turning into a proficient group member.

Tinto (1975) claimed that although Van Gennep's stages of parting, transitioning, and incorporating were difficult to precisely identify for some students, they offered a conceptual framework helpful for recognizing the many stages of student integration with academic organizations and their members. Accordingly, Tinto proposed that students would not leave an institution if they were capable of disconnecting from prior connections, able to focus on new relationships and university circles, and willing to embrace the privileges and responsibilities of their new identity. Later, Tinto adapted his theory by explaining that Van Gennep's (1960) necessary transition of disconnecting from prior communities in order to connect to the new academic world did not apply to minorities, as minorities are accustomed to living in two different worlds, the general culture and their own minority culture, and are therefore able to negotiate the needs of both realities (Tinto, 1987).

Description of Tinto's Theory

Tinto's model of attrition is explanatory, longitudinal, and interactional. Tinto's focus was to explain how longitudinal processes, based on the interactions of prior and post-enrollment dynamics and guided by events of social and academic forces, contributed to students' voluntary institutional departure (Lyons, 2007). The more a student experienced the elements about to be explained, the lower the likelihood of premature institution departure. Figure 2.2 offers a graphic description of Tinto's model. As an explanatory model, Tinto proposed five central elements of attrition, adapted here for PhD students:

1. Initial characteristics: This element is represented by personal characteristics, such as a student's social skills, intellectual abilities, and achievements, paired with community and family background, parental education, and social status. Also factoring into this element are achievements such as grades and academic experiences prior to attendance at the institution (Tinto, 2012).

2. Initial goal commitment: This element is characterized by the student's intentions and specific goals regarding desired occupation as well as the student's initial endorsement of the institution's goals (Tinto, 2012).

3. Social integration: This element relates to one's feeling of belonging to the group. The perception of social integration is shaped by the student's continuous experiences when interacting with other students, staff, and professors (Tinto, 2012).

4. Academic integration: This element is manifested by the ability to work in collaboration with advisors and faculty, to believe in one's capability to understand academic content and develop work in collaboration with faculty, and to develop into a full member of academia by producing academic work relevant to the field of study (Tinto, 2012).

5. Later goal commitment: This final element relates to the ability to complete the process of integration by persisting, and feeling like and becoming a scholar. Goal commitment leads to complete integration that is in connection with the learning institution; the student achieves alignment with the institution's goals. Within Tinto's views, when students developed collective affiliation and incorporated the academic institution's values, the students became integrated and would not experience the need to "die" to the educational organization by committing suicide – premature withdrawal (Tinto, 2012).
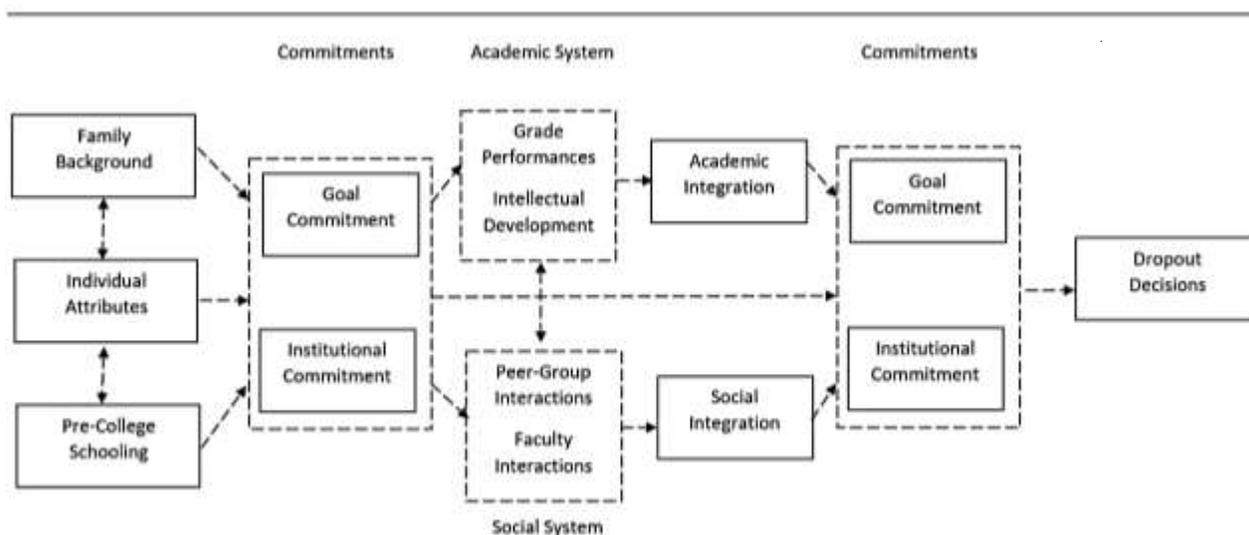
Figure 2.2. A conceptual schema for graduate dropouts.

A Theory of Attrition for PhD Students

The objective of Tinto's original theory was to predict persistence among general college student populations. PhD students have unique characteristics and challenges, yet it has been observed that the processes of persistence among doctoral students yield research findings similar to those for undergraduate-level students (Thomas, Clewell, & Pearson, 1991). Tinto (2012) suggested that persistence among doctoral students is also shaped by social and intellectual interactions that occur between students and professors within the many communities

that form an institution's social and academic system. However, a difference exists in that for undergraduate and graduate college students, community resides within the school itself, while among doctoral students, it resides within fields of study. Therefore, a doctoral student's experience and persistence is highly shaped by the individual's field of study and his or her community connection in the field.

Social integration. Another difference between undergraduate and doctoral students is that undergraduate social integration is reflected by communities of students and faculties across the institution. For doctoral students, however, persistence is reflected by small communities in specific fields or programs. Accordingly, the concept of social integration is more valuable for postgraduate students than for other college students because PhD students' ability to succeed is directly tied to social membership within their program. Hence, for doctoral students, social interaction and integration with faculty and peers is vital to developing the intellectual growth and skills necessary for academic integration and program completion (Tinto, 2012).

Academic integration. According to Tinto (2012), community in the form of program integration is one of the most important factors in a doctoral student's academic success. As a student progresses in a PhD program, he or she develops a community based upon specific academic relationships with faculty, academic advisors, and mentors. Consequently, while a college student's persistence depends on a general college community, program completion for doctoral students is reflective of the quality of specific student-faculty academic exchanges. In an analysis of Tinto's theory, Liu and Liu (2000) observed that the differences between social and academic integration vanished when the concepts of human solidarity were weighed against Tinto's model. Instead, they assumed a one-dimensional characteristic of absence of alienation. The same seems to be true for PhD students. The quality of interactions will determine the

doctoral student's ability to develop into a full member of the academic community who produces work relevant to his or her field of study.

Later goal commitment. Although they are associated with specific programs, doctoral communities are connected to multiple professional communities and fields of study beyond local departments and programs. When PhD students understand the dynamics of their program and find it easy to adhere to the local program, they are easily accepted into a wider national community. For PhD students, conflict in department integration results in challenges to integration into a specific field of study. These observations demonstrate that Tinto's model of social and academic integration is greatly relevant for persistence among PhD students due to the effects of both local and national social integration upon the individual. In addition to the challenges of social integration, connection and alignment with the institution's goals also carries great importance for PhD students.

Critics of Tinto's Theory

Guiffrida (2006), in agreement with Cabrera, Nora, and Castaneda (1993), Hurtado (1997), Kuh and Love (2000), Rendon, Jalomo, and Nora (2000), and Tierney (1999), stated that Tinto's theory unsuccessfully addressed the needs of ethnic minorities. Tinto implemented Van Gennep's (1960) claims on assimilation and enculturation, proposing that it was necessary to detach from prior associations in order to effectively assimilate into the intellectual and social life of academia. Tinto's critics, however, contended that the needs of ethnic minorities when joining academia were unlike the needs of individuals from a majority culture.

Tinto's critics argued that for those who were part of a racial minority, assimilation and enculturation were already present in their lives because minority students learn early in life how to live in a wider culture. As people of two cultures, their need was not to disconnect from

previous relationships in times of transition, as Tinto advocated, but to hold to their ties to family connections and supportive community in order to preserve their cultural identity and thrive in academia. Tinto's critics asserted that integration instead of assimilation was imperative for minorities. Due to this perspective, critics condemned Tinto's theory as harmful to minorities, calling him to improve his theory of attrition through acknowledging the need to describe and consider the interactions of familial connections and culture when focusing on minorities. Tinto (2012) responded to the criticism by officially embracing the views of his critics concerning minorities. Despite criticisms, Tinto's theory of attrition does offer a systematic manner to observe students' experiences in their academic and social systems.

Tinto's Attrition Theory Connection to This Study

Tinto (1975, 1982, 2012) argued that two major factors were essential for persistence to degree completion: (a) quality of one's initial characteristics and goals prior to enrollment and (b) quality of integration and goals after enrollment. The first factor, quality of background characteristics, is made up of two elements: the quality of education received and the student's personal goals. The quality of education received encompasses skills, experiences, and family examples of academic achievement, such as parents who have degrees. The student's personal goals include his or her initial beliefs and alignment with the goals of the institution, factors which positively influence a student's overall goals.

Quality of integration after enrollment was represented by a student's social and academic experiences on campus, which inform the condition of the student's social and academic involvement. For example, negative experiences within the academic setting deteriorate commitment to the institution, amplifying the likelihood of student departure. Simply put, the lower the degree of integration the individual experiences within the learning

environment, the lower the commitment to the institution's goals, equating a higher propensity

for departure (Burrus et al., 2013; Tinto, 1975, 1982, 2012).

Prior research has connected minority status to lower grades (Astin, 1975; Wright, 2013),

which is related to lower academic integration. Minority students have also been known to

experience alienation on their PWI campuses, which has been connected to lower social

integration (Smedley, 1993). This chapter has reported research findings supporting the presence

of barriers to social, academic, and organizational integration in higher education specific to

African Americans' experiences. (Hoffer et al., 2001; King, 2008; Nettles & Millett, 2006;

Sowell et al., 2015; Torres et al., 2010).

The literature review presented in this chapter regarding African Americans'

socioeconomic, educational, and psychological status and experiences within the American

society suggests that as a group, African Americans experience challenges connected to the

elements of academic success—initial characteristics, initial goal commitment, social integration,

academic integration, and final goal commitment—proposed by Tinto as promotors of degree

completion. Extreme caution must be taken before making such assertions, yet if these

observations hold true, then according to Tinto's theory of attrition (1975, 1982, 2012), the 40%

of African American students who receive a PhD annually directly bypass Tinto's model of

attrition when they complete their degrees (Sowell, et al., 2015).

Such bypassing might be explained by a striking discovery that took place when, in a

path analytic study with 763 residential university students, Pascarella and Terenzini (1983)

identified significant compensatory interactions between elements of Tinto's model, particularly

between institutional and goal commitment and between social and academic integration. For

example, the researchers found that individuals with deficits in social integration counterweighed

their challenges with high academic integration. Pascarella and Terenzini's (1983) findings are significant in two ways. First, they establish that within Tinto's model of attrition, compensatory interactions are possible. Second, they may explain how 40% of African American students graduate from their programs despite the apparent absence of some of Tinto's characteristics of academic success. The next section will explore a known African American compensation strategy in education: spirituality (Sanchez & Gilbert, 2016; Smith, 2012).

African Americans' Spirituality and Education

Research supports that African American minority groups are among the most spiritual people in America. Taylor, Chatters, Jayakody, and Levin (1996) investigated differences in spirituality between racial groups across the nation. The study employed seven data sets with a total sample of 57,114 respondents. After controlling for sociodemographic variables, the study discovered that regardless of sample or measures, Black Americans displayed higher levels of religious involvement than White Americans largely because spirituality permeates almost every aspect of African American life (Billingsley & Caldwell, 1991; Ferraro & Koch, 1994; Mattis & Jagers, 2001; Taylor, Chatters & Jackson, 2007).

Expression of Spirituality Among African Americans

Spirituality among African Americans seems to be absorbed in relationships with self, community, and God (Conner, 2003; Jagers & Smith, 1996; Jagers, Smith, Mock, & Dill, 1997; Mattis, Fontenot & Hatcher-Kay, 2003; Mattis & Jagers, 2001; Mattis et al., 2017). In their theoretical work, Mattis and Jagers (2001) argued that the relational nature of spirituality and religion among African Americans is transmitted in two ways across a lifetime: socialization acquired through family and church attendance and personal spiritual experiences. As relational expressions, spirituality and religion are evident by the impact it has on affect, cognition, and

behavior. A sign of high spirituality from this paradigm would be relationship quality followed by positive social behaviors, modulation of negative affect, and adoption of positive cognitive appraisals.

The Shaping of African American Spirituality

The shaping of African American spirituality is best understood within the context in which it emerged: slavery. Spirituality was shaped by the existential concerns regarding escaping oppression and seeking freedom, hope, justice, and love while simultaneously navigating the connection with the just Divine, the relationships within the African American community (Mattis & Jagers, 2001), and the relationships with the oppressors. Within the reality of subjugation, sacred stories depicting a God who liberated the captive by surprising and unexpected means deeply resonated with a group who experienced systematic cruelty (Long, 1997; Mattis & Jagers, 2001). African individuals, not only African Americans, seem to experience a more acute spiritual awareness, and it is possible that the natural spiritual orientation existent among African Americans dates back to African traditions of awareness of the power of ancestors and the mystic perception of the world. As a group, it appears that African Americans tend to believe that their world is constantly influenced by spiritual forces (Jagers & Smith, 1996; Mattis & Jagers, 2001).

African American Spiritual Dimensions

Spirituality among African Americans has many dimensions. Newlin et al. (2002) conducted a multidisciplinary analysis of studies regarding African American spirituality and found that spirituality for African Americans encompasses internal, consoling, external, and transformative dimensions. Mattis and Jagers (2001) had explored a theoretical conceptualization of spirituality among African Americans as involving aspects of individual,

familial, and communal relationship with the Divine, confirming Newlin and colleagues' (2002) findings. Previously, Jagers and Smith (1996) had explained that African American spirituality is influenced by intrinsic, extrinsic, and quest perspectives. These authors defined intrinsic perspectives as a certainty about the existence of a higher power, a deep personal connection with the higher power, and the ability to at the same time engage in spiritual quests that involve tolerance to ambiguity, expressed as religious well-being. The extrinsic aspect of spirituality seems to be expressed in three manners: (a) connection with others, expressed throughout community life and relationships; (b) existential well-being, defined as connection with material satisfaction and purpose and good material quality of life; and (c) spiritual well-being, referring to the ability to connect with the transcendence of life and believe in something more powerful than self, perhaps people, nature or objects.

In a study with a sample of 362 Black individuals, Smith (2012) found that African Americans employ the relationship with the Divine as a source of support, even when dealing with racial identity challenges that affect communal relationship. In their research on spiritual and religious attitudes among 3,570 African American college students, Sanchez and Gilbert (2016) found that 81.2% of respondents characterized themselves as being both religious and spiritual. This study adopted Jagers and Smith's (1996) and Newlin and associates' (2002) multidimensional aspects of spirituality for African Americans. These aspects of spirituality are expressed in a multitude of ways. Intrinsic spirituality may be evident through religious well-being and an intrinsic personal connection with God or a higher power and belief in his benevolence, omniscience, omnipresence, omnipotence, and transcendence. Extrinsic spirituality may be expressed through existential well-being, or connection with self and material satisfaction, personal purposes, and quality of life. Another component of extrinsic spirituality is

spiritual well-being, or an extrinsic connection with the spiritual world, that is, transcendence, the belief in something more powerful than self, perhaps people, nature or objects. Additionally, extrinsic spirituality is shown through social well-being, including relationships with others and a relationship with a community of faith perhaps through attendance at church or religious gatherings and/or community involvement and service.

In fact, the presence of spirituality and community involvement among African Americans gave rise to the need for education during slavery (Lambert, 1992). A brief historical perspective is warranted.

Slavery, Spirituality, and Education

As previously explored, African slaves lost their sense of identity, community, and connection after their forced departure from Africa. Interestingly, slaves from different ethnic groups found a common ground and found a sense of belonging in church communities in America, but they resisted Christianity, which they perceived as the slaveholders' "new religion" (Erskine, 2014). Traditionally, slave masters used church and religious Christianity to maintain servitude, control uprisings, and deny access to education for African American slaves (Fields, 1990; Levine, 1978). By law, slaves were prohibited from learning how to read and write (Mitchell, 2008; Shahid, 2014; Taves, 1987). However, in an unexpected manner, faith opened doors for the education of slaves.

According to Lambert (1992), the Great Awakening was an evangelical revival movement in the 1700s which promoted relying on the Bible instead of the logical ideas preached by Anglicans. Through this movement, a massive number of slaves became not only churchgoers but believers, and soon the reliance on the spoken word needed to be supported by the reading of the printed Bible. During revivals in 1739, slaves who experienced spiritual

transformation were thirsty for direct understanding of the Living Word, that is, the Bible. Faced with laws prohibiting literacy for slaves (Mitchell, 2008; Woodson, 1919), Black church pastors began learning how to read clandestinely in order to explain the Bible to their flocks.

Concomitantly, White evangelical revivalists fiercely promoted literacy for slaves, thereby going against the law to uphold their evangelical beliefs that the Living Word should be accessible to all. This conviction was so strong that in 1740, Seward, a fervent and prominent White evangelical, purchased land in Pennsylvania to build a school for "negroes"; because of his views, Seward was killed by criminals sent by slave masters. Still, according to Lambert (1992), the massive number of slave converts during the revivals, supported by revivalists who made teaching literacy to slaves as a mission, indirectly transformed the church and spiritual participation into a secure and open path to education, social justice, and liberation among Black slaves.

The ability to read, which was promoted by the church, simplified communication with other slaves and access to knowledge about slavery practices. The ability to read and write also facilitated the production of personal accounts about slavery, which eventually supported abolition efforts (Lambert, 1992; Mitchell, 2008; Taves, 1987). The role of spirituality in promoting access to education for African Americans was especially important during the years of racial segregation (Lincoln & Mamiya, 1990). The spiritually-led African American community, expressed through the church, was the driving force behind the Civil Rights movement, which advocated for racial desegregation and education equality and opportunity for African Americans (Calhoun-Brown, 2000; Mattis & Jagers, 2001; R. Roberts, 2010). Although church membership among African Americans has decreased in recent years, church attendance

and spirituality continue to be a place that offers African Americans safety, support, and comfort in times of need (Pride, 2011).

Spirituality and Black Academic Success

Today, African Americans continue to find resources in spirituality to cope with and overcome academic challenges (Constantine, Miville, Warren, Gainor, & Lewis-Coles, 2006). For instance, spirituality has positively impacted educational outcomes among high school students (Barrett, 2010), and considerable research associates spirituality to academic success among Black college students (Constantine et al., 2002; Edgell, 2007; Park & Millora, 2010; Patton & McClure, 2009). Currently, the relationship between spirituality and academic achievement among African American PhD candidates is mostly unexplored terrain (Jett, 2010). This review explores what is presently available.

In a qualitative study, Thompson (2005) explored success factors among Ivy League Black alumni. Participants who had held their doctoral degrees for fewer than five years were invited to provide a retrospective view of their experiences. When coding and analyzing the themes, the researchers noticed that all 11 participants had placed spirituality as a factor in their success. Ivy League–educated African Americans placed faith above their personal skills, confidence, and ability to develop research.

In another qualitative study, Jett (2010) interviewed four African American male graduate students. Two were doctoral students and two were master's students in the field of mathematics. Jett asked the men to only "reflect and (re)construct their academic (mathematics) experiences and their other experiences"—outside academia—"as African American men in their own words" (p. 328). The author never mentioned spirituality in his research questions, but after analyzing the 35-minute interview transcripts, Jett observed that all research participants

mentioned God and faith, as evidenced in statements such as, "I feel like the Lord put somebody in position to help me" (p. 330). The author also discovered that all four participants were spiritually grounded, and although they were from different religious denominations and affiliations, all mentioned a personal connection with a higher power who guided their academic and daily lives.

In a later case study, Jett (2011) investigated the experiences of a successful Black academic mathematician who had received his doctoral degree in mathematics. The African American participant attributed his accomplishments to amazing grace and declared that he would never have been able to finish and thrive if not for the grace of God. Looking from a different perspective, Brown McManus (2012) studied the influence of spirituality in the lives of four female executive leaders in research-producing institutions. Using surveys, interviews, and a focus group, the author found that the Black female leaders in academia employed spirituality to promote professional development, career decision making, political savviness, and professional maturity to provide proper mentoring and improve work performance and personal and professional presence. To conclude, in a national quantitative study investigating stressors, coping strategies, and lack of access to wellness activities among psychology graduate students ($N = 387$), El-Ghoroury, Galper, Sawaqdeh, and Bufka (2012) found that Black students, when faced with discrimination and program challenges, employed spiritual dynamics as a coping mechanism.

African Americans and Tinto's Model of Attrition and Spirituality

In summary, this study has reported research findings regarding the socioeconomic, educational, and psychological status of African Americans and data supporting the barriers encountered toward social, academic, and organizational integration in higher education

experienced by Black Americans. Such findings indicate that as a group, African Americans are less likely to possess the elements of initial characteristics, initial goal commitment, social integration, academic integration, and final goal commitment that promote persistence to degree completion as defended by Tinto (1975, 1982, 2012). This statement appears inconsistent when, according to data, every year 40% of African American PhD students successfully complete their degrees (Sowell et al., 2015). However, this apparent disparity might be eliminated if the compensation interactions found within Tinto's model of attrition are considered (Terenzini et al., 1985). In addition to compensatory interactions within Tinto's model, research indicates that African Americans seem to employ faith as a compensatory strategy, especially when faced with academic trials (Jett, 2010; Thompson, 2005). Based on these findings, this study proposes that even when challenged by Tinto's predictions of attrition, African Americans are able to refuse to "die"—drop out—by employing faith as a compensatory strategy.

Chapter Summary

This chapter presented a literature review regarding educational, social, and relational challenges of African Americans in higher education. Concurrently, it described Tinto's theory of attrition and its relevance to the study of persistence among PhD students. It reported that despite dismaying data, each year about 40% of African American PhD students receive their degrees. Three core aspects of Tinto's theory, goal commitment, academic integration, and social integration, were explained and applied to the PhD population. The history of African Americans' experiences with spirituality and education was also examined. The chapter concluded with a brief explanation of how compensatory strategies present in Tinto's model might have been employed by African American PhD students to compensate when faced with obstacles related to all or some of Tinto's characteristics which promote academic success.

CHAPTER THREE: METHODS

This quantitative study employed a variety of statistics strategies (descriptive analysis, correlations, factor analysis, and hierarchical regression) to explore how spirituality might offer an effective compensatory strategy for African Americans who experience barriers to acquiring Tinto's (1975) elements of academic success and desire to persist in higher academia to ultimately achieve their goal of completing their PhD program. This chapter delves into these investigation methods by closely examining this study's (a) research design and approach, (b) selection of participants, (c) instrumentation, (d) research procedures, and (e) data processing and analysis.

Research Design

The concept for this project originated with a pilot qualitative study that employed Tinto's theory and current literature as the conceptual framework to explore academic persistence among African Americans. Robust themes emerged from the pilot study, pointing to spirituality as the main predictive factor of persistence among the small sample of Black doctoral students. Inspired by the findings, the researcher for this study adopted a quantitative design to investigate the relationship between spirituality and persistence among African American PhD students based on Tinto's model of attrition.

A quantitative correlational design was chosen because of the apparent interaction between African American spirituality, Tinto's attrition model, and academic persistence. At this time, no study has attempted to empirically generate data by systematically measuring the extent of the relationship between African American spirituality and persistence related to the elements of Tinto's model of academic success (Privitera, 2017).

This study employed written survey methods to gather data. The decision to use these methods was based on literature that points to the efficacy of survey methods of data collection when investigating Tinto's model of attrition (Morris, 2002; Terenzini et al., 1985; Zhang, 2017). To guide the investigation, this study asked three basic questions.

Research Questions

1. Is there a relationship between spirituality and persistence among African American PhD students?

    Tinto's (1975) theory of attrition advocates that initial commitment, initial characteristics, social integration, academic integration, and goal commitment are fundamental for student degree achievement. According to literature, African American students encounter barriers to acquiring such characteristics.

2. Is spirituality related to persistence among African American PhD students after controlling for Tinto's five characteristics of academic success?

    Compensatory strategies were observed within Tinto's model (Terenzini et al., 1985), and literature indicates that African Americans employ spirituality as a coping skill regarding challenges in education (Brown McManus, 2012; Constantine et al., 2002; Edgell, 2007; El-Ghoroury et al., 2012; Jett, 2010, 2011; Park & Millora, 2010; Patton & McClure, 2009; Thompson, 2005).

3. Does spirituality moderate the relationship between Tinto's five characteristics of academic success and persistence?

    Alternately, do the relationships between the five characteristics and persistence vary between African American PhD graduates with low, average, and high levels of spirituality?

Given the facts stated above, this quantitative study hypothesized that among African Americans, spirituality is utilized as a compensatory strategy to persist to degree completion. In this case, the study hypothesized that spirituality moderates the relationship between the struggle to acquire Tinto's five characteristics necessary for academic success and degree completion among African American doctoral students. Accordingly, the higher the amount of faith/spirituality among African Americans, the lower the degree of attrition.

Sample

Population

According to the U.S. Census Bureau (2016), 13.3%, or about 46.3 million, of United States citizens are Black. The slight majority (24 million) of these are females, and the average age is 31.5 years. African American males are vaguely younger, 29.7 years old on average. Concerning economics, the annual median income of Black households in 2015 was $36,544, compared with the national average of $55,775, meaning that 25.4% percent of the Black population is below the poverty level. Among African American employed civilians 16 years old and above, 78.9% are salary workers, 17.7% are government workers, and 3.4% are self-employed workers. Educationally, among the 25.5 million African Americans 25 years old and above, 31% possess a high school degree or equivalent, 12.8% possess a bachelor's degree, and 7.5% possess a graduate or professional degree.

Sample Size

According to Kleinbaum, Kupper, and Mullers (1988), it is impossible to estimate regression coefficients prior to conducting research and collecting data. For this reason, Kleinbaum and colleagues' (1988) rule of thumb for data point observation is that the number of participants must be more than 5 to 10 times the number of variables. Applying Kleinbaum et

al.'s (1988) rule, since this study initially had seven variables, the minimum number of

participants originally needed for this study was 350, and the maximum number of participants

was 700. An ambitious goal of recruiting 350 to 700 participants was set to recruit the optimum

number of participants for a properly thorough regression analysis.

Despite recruiting objectives, challenges were experienced during the recruitment of

eligible participants for this very specific project. The challenges were reasonably foreseeable

considering previously explored U.S. Census Bureau (2017) data; among the 25.5 million

African Americans 25 years old or older, only about 1.9 million had a graduate or professional

degree. Although this study's sample was far smaller than the ideal size, the number of 179

participants recruited for the study was sufficient to run the statistics analysis, including the

logistic regression. The main goal of the study was to observe interactions within a sample with

many shared characteristics (Bergtold, Yeager, & Featherstone, 2011).

Selection Criteria

The purpose of this study was to explore dynamics of persistence among African

American PhD students and to expand the current understanding of attrition prevention among

this specific minority group. Therefore, it was essential that the sample was composed of

African Americans.

African Americans of any health status, occupation, sexual orientation, or religion who

had attended a doctoral program (PhD, EdD, and JD) were eligible to participate. Anyone under

18 years old, any non-Black individuals, and any African Americans who had not attended a

PhD program were excluded from the study. There were no other exclusion criteria for

participation. This study was approved by the Institutional Review Board (IRB) and followed its

guidelines for the protection of participants and their rights concerning confidentiality and privacy.

Selection of Participants

Participants were identified and requested to participate in the study in three manners. First, posts were made on Black PhD Facebook groups and listservs, and emails were sent with survey links to African American professors. Second, Amazon Turk, a crowdsourcing Internet platform, was utilized. Third, the researcher used a participant locator service provided by Qualtrics, a survey platform. The multifaceted recruitment strategy occurred as a result of the challenges locating eligible participants.

Facebook groups, listservs, emails, and Mechanic Turk. Participants were recruited through social media groups and email disseminated through social media and state and national African American listservs. Snowball sampling was practiced. The researcher received permission from group moderators on Facebook to place posts with advertisements requesting voluntary participation in the study (see Appendix B). Some advertisements targeted African Americans who had completed their PhDs, and some targeted those who were PhD students but had left their programs without completing it. Individuals who accessed the survey through Black PhD Facebook groups, listservs, and emails ($n = 25$) did not receive any financial compensation. After over a month of data collection and only 25 completed surveys, this researcher requested and received IRB approval to employ Mechanic Turk (MTurk), an Internet crowdsourcing marketplace operated by Amazon, to find eligible participants. The researcher created a profile and posted a request for to fill out the survey to 175 degree completers and 175 non-completers. MTurk has a platform of 500,000 registered workers available to perform human intelligence tasks. Normally, participants within the demographic specifications respond

to the surveys quite quickly. The survey for this study received only two responses. After two weeks, the profile was erased, and the request was removed. The compensation offered through MTurk was $2.50.

Qualtrics. When faced with the challenge of the lack of survey responses, this researcher submitted a request for and received permission to utilize the participant search provided by Qualtrics, the survey platform that was already hosting the survey. Because of the costs associated with finding participants, this researcher, in consultation with advisors, decreased the sample number to 180 (90 completers, 90 non-completers). Qualtrics located 152 participants for the study through its sophisticated online sampling capacity. Qualtrics assembled possible participants from various sources, including social media and market research panels. This study was anonymous to avoid duplication and ensure validity and participants' confidentiality; Qualtrics checked every participant's IP address and encoded it with a digital fingerprint. Through this process, the privacy of this study's participants and the validity of the responses were protected, while respondents were simultaneously blocked from taking the same survey multiple times for compensation. To maintain quality, Qualtrics also adjusted the panel base to be proportional to the African American population and randomized the sample before sending the survey. Participants were chosen to receive the survey based on the information posted on their demographic profile. Qualtrics also employed routers that were similarly randomized to prevent source bias. Prospective participants received an email with the invitation to participate in a survey for research purposes with information about incentives and the time it would take to complete the survey. No further information was included to avoid self-selection bias. Members of the identified panels could unsubscribe at any time. Incentives were offered according to the average time necessary to complete the survey (15 minutes) and the difficulty of targeting the

population. Qualtrics compensation may have included sweepstakes entrance, vouchers, gift cards, airline miles, cash, or redeemable points. Qualtrics never disclosed to this researcher information regarding details of the compensation received by participants. A Qualtrics panel specialist excluded responses which displayed poor quality, such as too little time taken to complete or random responding. More information about the company's services can be found in Qualtrics (2014). Within the ($N = 152$) sample, Qualtrics provided ($n = 81$) non-completers and ($n = 71$) completers. After targeting race and education, the response rate for the survey was 25%; 1,329 people had access to the survey through Qualtrics. This researcher did not record response rates for the original 27 participants.

Participants

This study sought an equal number of African Americans who had received their PhD degree and had dropped out after attending a PhD program. Due to the nature of the study, a very specific convenience sample was acquired. The sample was composed of ($N = 179$) African Americans, ($n = 143$) females and ($n = 36$) males. Their ages ranged between 20 and 60 years, and the average age was between 40 and 49 years. The target sample during the selection process was 90 PhD completers and 90 non-completers. The final sample was 90 completers and 89 non-completers.

Variables

The dependent variable for this study was persistence, while the independent variables were Spirituality, and Tinto's (1975, 1982, 1987, 2012) elements of academic success: initial characteristics, initial goal commitment, academic integration, social integration, and later goal (institutional) commitment.

Persistence

Persistence was defined as a student's ability to graduate from a program (Lufi et al., 2003). In this study, persistence was the ability to receive a PhD and was measured by degree completion on the demographic survey. Persistence or degree completion was a nominal variable with two categories: did not complete PhD (0) and completed PhD (1).

Spirituality

Spirituality in this study was defined as faith in a transcendent and omnipotent force, interconnectedness with others, God, or a higher power, and a sense of self and life satisfaction (Jagers & Smith, 1996; Mattis & Jagers, 2001; Newlin et al., 2002). Spirituality was measured by participants' responses on the Spirituality Scale (SS) (Jagers & Smith, 1996). The SS is an instrument created specifically to measure spirituality among African Americans. The SS will be discussed more thoroughly in the instrument section of this chapter. The dimensionality of the SS scale was explored using exploratory factor analysis prior to answering the research questions. The exploratory factor analysis indicated that the SS comprises three factors scales: Belief in a Higher Power (eight items with factor loadings ranging from .89 to .43, Cronbach's alpha = .90), Materialistic Focus (seven items with factor loadings ranging from .82 to .44, Cronbach's alpha = .77), and Spiritual Attribution (five items with factor loadings ranging from -.76 to -.33, Cronbach's alpha = .67). Composite variables were calculated for the three factors and used to measure spirituality in each research question. The results of the factor analyses are described in greater detail in Chapter Four.

The Five Elements of Tinto's Model

The five variables representing Tinto's (1975, 1982, 1987, 2012) elements of academic success were initial characteristics, initial goal commitment, academic integration, social

integration, and later goal (institutional) commitment. To better define the variables, a brief review of the model is warranted. Tinto's model states that learners come to an institution with a variety of initial goal commitments shaped by initial characteristics. A goal commitment would be, for example, placing significant value on graduating from a specific program. Initial characteristics include race, sex, family social status, previous program performance, and academic ability.

According to Pascarella and Terenzini's (1980) description of Tinto's model, social and academic integration contain many basic elements. The degree of academic integration is regulated mainly by the student's level of intellectual development, which is demonstrated by initial characteristics, or her or his academic performance. Although the model assigns interactions with faculty to the social integration domain, Tinto (1975, 1982, 1987, 2012) specifically suggests that academic integration may also be enhanced by interactions with professors.

Social integration is chiefly a function of the condition of student interactions with faculty and the quality of peer-group interactions. These goal commitments and initial characteristics impact not only how the student will function during the program, but also how she or he will interconnect with, and successively become integrated into, an institution's academic and social systems. Tinto (1975, 1982, 1987, 2012) detected that the interaction of social and academic matters shaped an institutional system, which performed an important role in withdrawal dynamics. Consequently, the decision to leave an academic institution occurred as a result of the student's social and intellectual development during enrollment (Tinto, 1975, 1982, 1987, 2012).

Pascarella and Terenzini's (1980) levels of academic and social integration point to an additional component of the model called "commitments." This component is comprised of goals associated with graduation and commitments to career and the institution. As goal commitment and institutional level increases, there is an equivalent increase in the possibility of persisting at the institution. Tinto's elements were measured as high or low levels through scores on the Institutional Integration Scale (IIS). Figure 2.2 provides a diagram of Tinto's model. Figure 3.1 presents a diagram of the relationships between the independent, moderator and dependent variables.
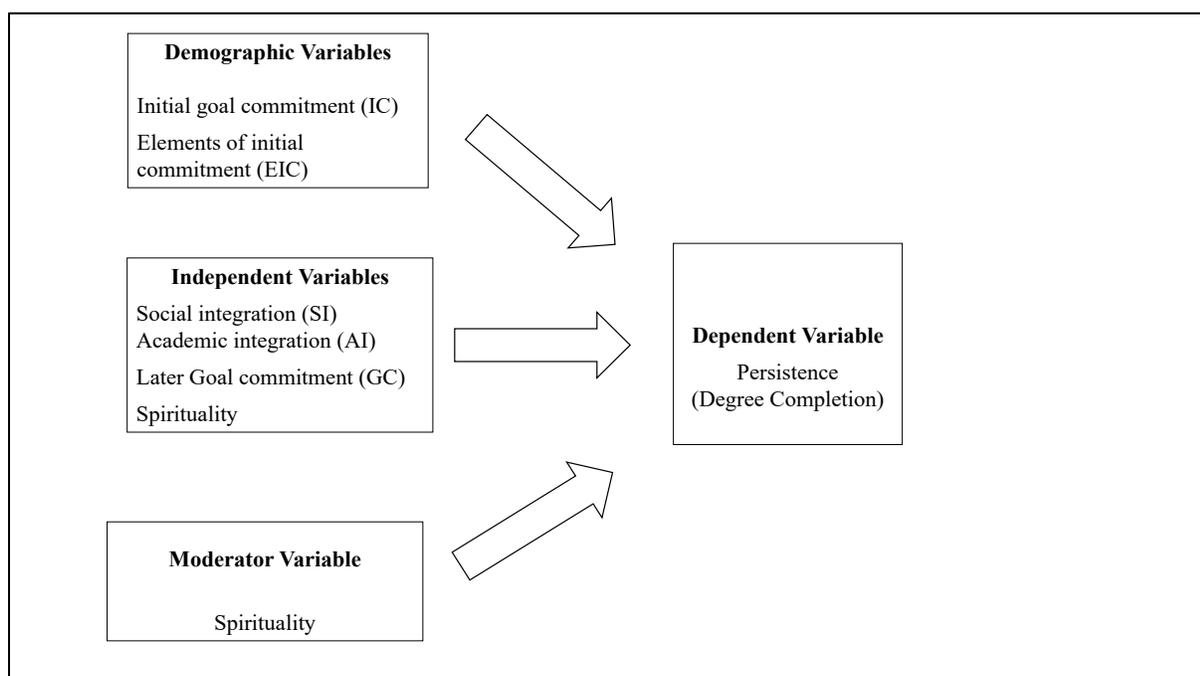
Figure 3.1. Model showing the relationships between the independent, moderator, and dependent variables.

The manner in which Tinto's (1975) five variables were measured in this study bears a close resemblance to the Pascarella and Terenzini (1980) strategy used to evaluate Tinto's model. Accordingly, initial characteristics and initial goal commitment were measured by a Demographic Survey (DS) with questions regarding age, gender, family income, and initial goal

commitments. Academic integration, social integration, and later goal commitment were measured by the IIS, designed by Pascarella and Terenzini (1980) to systematically measure three of Tinto's constructs of academic success: academic integration, social integration, and later goal commitment (institutional). Both the DS and the IIS will be explored in detail in the instrument section (see Appendixes C and D). Terenzini et al.'s (1985) directions for measuring Tinto's characteristics were followed (see Tables 3.1 and 3.3). Below, details are provided on how each variable was created.

Initial characteristics. The initial characteristics in this study were age, sex/gender, and family or parents' combined annual income. These three variables are suitable because they explore aspects of the initial academic and social characteristics proposed by Tinto as important for academic success. In this study, parents' level of education or participants' academic aptitude (e.g., GPA, GRE scores) were initially employed but were removed later because although considered predictors of success by Tinto, they did not impact the students in the sample, possibly because they were at doctoral level. Age comprised five categories coded as follows: 1 = 20–29 years, 2 = 30–39 years, 3 = 40–49 years, 4 = 50–59 years, 5 = 60 years or older. Family income was measured by a six-category variable which asked the parents' combined annual income in thousands and was coded as follows: 1 = 20,000–40,000, 2 = 40,000–60,000, 3 = 60,000–80,000, 4 = 80,000–100,000, 5 = over 100,000, and 6 = unknown. This study reverse-coded this data for use in the regression analysis so that unknown was coded 0 and became the first category.

Initial goal commitment. In this study, initial goal commitment was measured by a sum of the two items "Choice in attending the university for your doctoral program" (coded 1 = first choice, 2 = second choice, 3 = third choice, 4 = fourth choice) and "How confident are you that

choosing to attend your university was the right decision?" (coded 1 = not confident, 2 = maybe confident, 3 = confident, and 4 = very confident).

Academic integration. Academic Integration was measured by two subscales on the IIS, which is described in more detail later in this chapter in the Instrumentation section. The two subscales are "Faculty concern for student development and teaching" and "Academic and intellectual development." Faculty concern comprised five items (Cronbach's alpha = .82), including "Few of the faculty members I had contact with were generally outstanding or superior teachers" and "Most faculty members I had were interested in helping me grow in more than just academic areas." Academic and intellectual development comprised seven items (Cronbach's alpha = .74), for example, "I was satisfied with the extent of my intellectual development while I was enrolled in my university," and "I was satisfied with my academic experience and professional opportunities at my university." Each item was measured on a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. Both variables were formed by creating composites using the regression method in factor analysis. Each subscale was standardized with a mean of zero and standard deviation of one.

Social integration. Social integration was measured by two subscales on the IIS: peer-group interactions, which comprised five items (Cronbach's alpha = .84), and interactions with faculty, which also comprised five items (Cronbach's alpha = .83). Example of items comprising peer-group interactions are "The student friendships I had developed at my university were personally satisfying" and "Upon going to my university, I developed close personal relationships with other students." Examples of items comprising interactions with faculty include "My non-classroom interactions with faculty had a positive influence on my intellectual growth and interest in ideas" and "At my university, I collaborated with faculty and presented

our projects at professional conferences." Like academic integration, each item was measured on a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree, and both variables were formed by creating composites using the regression method in factor analysis. Each subscale was standardized with a mean of zero and standard deviation of one.

Later goal (institutional) commitment. In this study, final goal commitment (referred to as later goal [institutional] commitment) was measured by a scale of five items (Cronbach's alpha = .71). Example of items include "At the end of each semester it was likely that I would want to register for the next" and "It was important to me to graduate from my university." Each item was measured on a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The composite was created using regression method in factor analysis so that it was standardized with a mean of zero and standard deviation of one.

Instrumentation

This section describes the instruments that were used to measure the variables in the study: the IIS, the SS, and the DS.

The Institutional Integration Scale

The IIS is a multidimensional instrument devised to measure the main dimensions of Tinto's (1975) model of student attrition. The IIS possesses 30 Likert-type scale questions with response options ranging from 1 to 5, with 1 being strongly disagree and 5 being strongly agree; (Pascarella & Terenzini, 1980) this instrument can be found in Appendix D. The IIS is composed of three major scales with four subscales: the major scales being social integration, academic integration and institutional and goal commitment, and the four subscales being peer-group integrations, interactions with faculty, faculty concern for student development and teaching, and academic and intellectual development. Appendix D summarizes this information.

The seven scales of IIS. The IIS has internal reliability that ranges from .72 to .82 alpha

coefficients (Fox, 1984). The scale developers Pascarella and Terenzini (1980) also observed

alpha coefficients of .71 to .84 for all instrument scales. The IIS has been employed by many

other studies to explore dynamics of attrition and degree persistence among undergraduate

students (Beard, 1998; Burns, 1994; French & Oakes, 2004; Lyons, 2007). Since the original

scale targeted college students, some questions about academic and social integration were

modified to reflect the different realities of graduate students (Appendix D).

Table 3.1

IIS's Scales Operationalization Alpha Coefficients

Scale	Subscale	Operationalization	Items	Alpha Coefficient
Initial goal commitment		Sum of two items then standardized (mean of 0 and 1)	2	
Academic integration	Academic & intellectual development	Factor composite of items with mean of 0 and 1	7	.74
	Faculty concern	Factor composite of items with mean of 0 and 1	5	.82
Social integration	Faculty interactions	Factor composite of items with mean of 0 and 1	5	.83
	Peer group interactions	Factor composite of items with mean of 0 and 1	7	.84
Later goal (institutional) commitment		Factor composite of items with mean of 0 and 1	5	.71

Spiritual Scale

The SS (Jagers & Smith, 1996) is a 20-item measurement that assesses African American

spirituality. The SS contains concepts that are relevant to the influence of African culture on

African Americans' belief systems. Jagers and Smith (1996) applied constructs of spiritual well-

being, personal agency, and religious motivation among African Americans. The instrument

also includes five optional filler items not included in the SS for this study. Responses for the 20

items are provided through a six-point scale that ranges from 1 (completely false) to 6

(completely true). Some examples of these items include "The most important part of me is the

inner force which gives me life" and "All people have a common core which is sacred" (Jagers

& Smith, 1996).

Scores are obtained by summing the responses for each of the 20 items of the scale; the

higher the score, the higher the level of spirituality. The scale initially yielded valid coefficient

alphas of .84 and .87 for internal consistency. It also reported a reliable .88 coefficient for a

three-week test-retest in previous studies. The SS has demonstrated significant statistical

differences when measuring spirituality between African Americans and European Americans

(Smith, 2012), spirituality and creative coping among African Americans (Conner, 2003), and

spirituality and socialization among African Americans, which suggests that the SS accomplishes

the task of accurately measuring spirituality among African Americans. The full scale is

available in Appendix E.

SS subscales. When conducting a further examination of the SS, Jagers and Smith (1996)

clarified that the concepts employed to form the scale would be completely explained in Jagers et

al. (1997) a forthcoming publication. For unknown reasons, the work was never published, and

the detailed information about the SS subscales could not be retrieved. In a phone conversation,

this author consulted with Dr. Paula Smith, one of the creators of the scale. Dr. Smith confirmed

that the scale indeed had three subscales and affirmed that the publication in 1996 did not include

the subscales because the factor analyses that had been conducted with a sample of African

Americans was too small. Dr. Smith offered official oral permission to this author to confirm

that the original scale indeed included three dimensions of African American spirituality, even though she did not possess the non-published work nor the concepts and constructs for each scale. This author was unable to reach Dr. Jagers.

In this study, the dimensionality of the SS was examined to determine whether spirituality is a global factor or is multidimensional. Results of the factor analysis and the reliability of each of the three spirituality factors are reported in more detail in chapter four. The table below presents the information on the three factor subscales on the SS.

Table 3.2

Factor Subscales of SS

Scale	Subscales	Items	Alpha Coefficient
Spirituality	Belief in a higher power	8	.90
	Materialistic focus	7	.77
	Spiritual attribution	5	.67

Demographic Survey

The DS was designed by this researcher with the objective to gather general information about participants and to complete Tinto's models of attrition investigation among the sample. Some aspects of Tinto's model, such as initial characteristics and initial goal commitments, can be explored only through collecting specific data on the participants (Pascarella & Terenzini, 1980). An example of an item on the DS is "What was the highest level of formal education obtained by your mother?" In addition, participants were asked to select their GPA range and

their parents' combined annual income in thousands, as well as their age and sex. The DS is composed of 24 questions. The complete survey is available in Appendix C.

Table 3.3

Variables and Instruments Employed in the Study

Variable	Instrument	Scale	Example	Item number
Initial characteristics	DS	Age		5
	DS	Sex		6
	DS	Family income		10
Initial institutional and goal commitments	DS	Choice in attending university for doctoral program		17
	DS	Confidence choice to attend university was right		18
Academic Integration	IIS	Faculty concern for student development and teaching	"Few of the faculty members I had contact with were generally outstanding or superior teachers" and "Most faculty members I had were interested in helping me grow in more than just academic areas."[a]	19–23
	IIS	Academic and intellectual development	"I was satisfied with the extent of my intellectual development while I was enrolled in my university," and "I was satisfied with my academic experience and professional opportunities at my university."[a]	24–30
Social Integration	IIS	Peer-group Interactions	"The student friendships I had developed at my	7–13

			university were personally satisfying," and "Upon going to my university, I developed close personal relationships with other students."[a]	
	IIS	Interactions with faculty	"My non-classroom interactions with faculty had a positive influence on my intellectual growth and interest in ideas," and "At my university, I collaborated with faculty and presented our projects at professional conferences."[a]	14–18
Institutional and Goal Commitments	IIS	Later goal commitment (institutional)	"At the end of each semester it was likely that I would want to register for the next," and "It was important to me to graduate from my university."[a]	1–5
Spirituality	SS	Belief in a higher power	"I pray before I go on a trip," and "Without some form of spiritual help, there is little hope in life."[b]	3,5,9,10, 11,14,19, 20
	SS	Materialistic focus	"My happiness is found in the material goods I own," and "If I had more money, life would be happier."[b]	8,12,13, 15,16,17, 18
	SS	Spiritual attribution	"All people have a common core which is sacred," and "To me, every object has some amount of spiritual quality."[b]	1,2,4,6,7
Persistence	DS	Degree completion		1

[a] Measured on 5-point Likert scale from 1 = strongly disagree to 5 = strongly agree.
[b] Measured on 6-point Likert scale from 1 = completely false to 6 = Completely True.

Procedures

Participants could access their survey from any state in the United States by clicking a link that opened a new window and directed responders to the study's survey stored by Qualtrics, an online survey platform. The survey was delivered electronically only. After clicking the link, the participants could complete the survey at their discretion. Once the participant closed the browser, the survey was no longer available. Completed surveys were added to the study, and incomplete surveys were excluded.

Participants gained access to the survey through a survey link obtained through a Facebook post, a link sent by a friend, or an email. The survey was not visible or open to the general public through the Internet. Only participants with a link were able to access the survey. The survey did not record participants' Internet identification. In order to avoid response duplication, the survey had a feature that prevented participants from responding more than one time through the same computer. Upon opening the link, participants read the study's consent information, which was approved by the IRB. After consenting to participate in the study, full access to the survey was granted to participants. Participants were then directed to the study's screening questions according to the study's criteria and sample needs (see Table 3.4). Participants who did not meet the study's criteria were thanked for their participation and then redirected to the end of the survey through the survey skip logic system. Skip logic is a survey feature that allows researchers to display questions according to participants' responses, making surveys shorter and more efficient. Participants could exit the survey at any time.

Table 3.4

Criteria and Process for Group Assignment or Exclusion

Criteria	Screening Questions	Acceptable Answer	Action	Excluded
Age	*Please select your age:* Under 18 18–24	All	Proceed to next question	Under 18
Ethnicity	*Please select your Ethnicity:* White/Caucasian Black/African American Asian American Hispanic Other	African American	Proceed to next question	All other answers
PhD Completion	*Please select your highest level of education:* Some high school or less High school graduate/GED Some college Bachelor's degree Master's degree PhD	PhD	Assigned to completer group	All other responses
PhD non-completion	*Please select the option that best describes you:* I have considered getting a PhD I started a PhD program but didn't finish I have never considered getting a PhD	I started a PhD program but didn't finish	Assigned to non-completer group	All other responses

The study formed two groups with respondents the "PhD completers" and "non-completers" groups. The survey employed skip logic features to direct participants to questions relevant to their status. For instance, after inquiring about their education, participants who

endorsed having completed their master's degree were directed to the question: "Please select the option that best describes you: (a) I have considered getting a PhD (b) I started a PhD program but didn't finish (c) I have never considered getting a PhD. If a participant endorsed: "I started a PhD program but didn't finish", he/she was assigned to the non-completer group and through skip logic, answered the demographic questions. PhD completers were assigned to groups according to their answers on the survey. Although the DS questions were slightly different for each group, both PhD completers and non-completers had access to the same instruments (IIS, SS) employed by the study.

Upon consenting to participate in the study, full access to the survey was granted to participants who selected responses to screening questions that complied with the study's criteria. Once selected, contributors first completed the SS, and then were asked to recall their experiences as PhD student as they completed the IIS. The average time taken to fill out the survey was 15 minutes. Participants who did not meet the study's criteria were thanked for their participation and then redirected to the end of the survey. Participants could exit the survey at any time.

Participants

This study sought an equal number of African Americans who had received their PhD degree and had voluntarily dropped out after attending a PhD program. Given the nature of the study, a very specific convenience sample was obtained. The sample was composed of 179 African Americans, including 143 females and 36 males. They ranged from 20 to 60 years old, and average age was between 40 and 49 years. The selection process targeted 90 PhD completers and 90 non-completers. The final sample was 90 completers and 89 non-completers due to human error.

Data Analysis

Data analysis was conducted for a period of two weeks and took place in Maryland. Descriptive analyses were conducted to determine what differences existed for each variable between those who completed the PhD and those who did not. The data was analyzed to answer the three research questions: Is there a relationship between spirituality and persistence among African American PhD students? (correlation between spirituality and persistence); Is spirituality related to persistence among African American PhD students after controlling for Tinto's five characteristics of academic success? (hierarchical logistic regression); and Does spirituality moderate the relationship between Tinto's five characteristics of academic success and persistence? (moderation [interactions] effects). Alternately, do the relationships between the five characteristics and persistence vary between African American PhD graduates with low, average, and high levels of spirituality?

Moderation Analysis

This study employed analysis procedures to properly test and measure the modulation hypothesis based on the seminal work of Baron and Kenny (1986). According to the authors, moderation suggests that an unrelated variable changes the relation between other variables. Therefore, the statistical analysis tested and measured the "differential effect of the independent variable on the dependent variable as a function of the moderator" (Baron & Kenny, p. 1176). In other words, the statistical analysis measured the differential effect that spirituality has on Tinto's five elements and degree completion (Cohen & Cohen, 1983).

Baron and Kenny (1986) asserted that if the independent variable is denoted as X (Tinto's five elements), the moderator (spirituality) as Z, and the dependent variable as Y (degree completion), Y is regressed on X, Z, and XZ. Moderator properties will be specified by the

significant effect of XZ while X and Z are controlled. Therefore, descriptive and correlations analysis were conducted between all of the variables. First, a correlation analysis and a logistic regression took place with spirituality as the independent variable and persistence as the dependent variable to explore only interactions between spirituality and significant independent variables.

Second, a hierarchical logistic regression with three steps was conducted to establish if spirituality was related to persistence after controlling for Tinto's five elements of academic success. As the first step, Tinto's demographic independent variables of initial characteristics and elements of initial commitment were added. Second, social integration, academic integration, and goal commitment were added in the equation. Third, spirituality was added into the equation.

Once spirituality was defined as a moderator, the third step demonstrated the different levels (below average, and above average levels) in which spirituality as a moderator influences the dependent variable: persistence. In doing so, two hierarchical logistic regressions (one each for groups with low and high involvement) were conducted. Standardized spirituality scores were divided into two groups: low (below -1 SD), high (above 1 SD). Data were processed by employing SPSS.

Ethical Considerations

Prior to implementation, this research project was approved by the IRB under the category of the Protection of Human Subjects in Research. Every possible effort was made to adhere to ethical procedures to protect and ensure all participants' welfare. Prior to data collection, online participants received an electronic informed consent clearly explaining the nature of the study (see Appendix F). After completing each assessment, participants were given

the option to cancel or proceed with the electronic submission and transmission of their answers. The role of this researcher in data collection was to post advertisements on Facebook pages, send emails to potential participants and organizations, and monitor the progress of survey responses. This researcher was not present when participants responded to their surveys and did not influence participants' responses. This researcher had no participation in recruiting the Qualtrics sample. The only active participation this recruiter had during data collection was to consult with Qualtrics panel experts about survey response progress. This researcher had no past connections with Qualtrics, MTurk, or the Facebook pages through which participants for the study were recruited, nor did the researcher have any connection to or ability to identify participants.

Chapter Summary

This methods section explored the systematic strategies embraced by this study to conduct an analysis investigating the relationship between African Americans' persistence to degree attainment and spirituality when faced with the absence of any of Tinto's elements of academic success. This chapter explored this study's research design, participant selection, instrumentation, procedures, data processing, and data analysis. The next chapter provides the results obtained by this systematic engagement.

CHAPTER FOUR: RESULTS

This study employed quantitative statistical strategies to investigate the relationship between spirituality and degree completion among African American PhD students and graduates. From various American sites, a sample of convenience composed of degree completers ($n = 90$) and non-completers ($n = 89$) completed a confidential and anonymous survey; the obtained data were kept safe and analyzed. This chapter reviews the research questions and study's hypothesis, offers a descriptive analysis of the sample, explores factor analysis conducted for an instrument, reports results according to the research questions, explores research tolls, and presents interpretation of the findings according to the study's framework.

Research Questions and Hypotheses

This study asked three basic questions:

1. Is there a relationship between spirituality and persistence (degree completion) among African American PhD students?

Tinto's theory of attrition advocates that initial commitment, initial characteristics, social integration, academic integration, and goal commitment are fundamental for student degree achievement (Tinto, 1975). According to literature, African American students tend to encounter barriers to acquiring such characteristics.

2. Is spirituality related to persistence among African American PhD students after controlling for Tinto's five characteristics of academic success?

Compensatory strategies were observed within Tinto's model (Terenzini et al., 1985), and literature indicates that African Americans employ spirituality as a coping skill regarding challenges in education (Brown McManus, 2012; Constantine et al., 2002; Edgell, 2007; El-

Ghoroury et al., 2012; Jett, 2010, 2011; Park & Millora, 2010; Patton & McClure, 2009; Thompson, 2005).

3. Does spirituality moderate the relationship between Tinto's five characteristics of academic success and persistence?

Alternately, do the relationships between the five characteristics and persistence vary between African American PhD graduates with below and above average levels of spirituality?

Hypothesis

This study hypothesized that among African Americans, spirituality was utilized as a compensatory strategy to persist to degree completion. In this case, this quantitative study hypothesized that spirituality moderates the relationship between Tinto's five characteristics necessary for academic success and degree completion among Black doctoral students. Correspondingly, this study hypothesized that the higher the amount of faith/spirituality among African Americans, the lower the degree of attrition.

Descriptive Analysis

While 20.1% of the sample were male ($n = 36$) and 79.9% were female ($n = 143$), the proportion of males who persisted (completed the PhD) was equal to the proportion of females who persisted (see Table 4.1).

Table 4.1

Crosstabs of the Proportions of Degree Completion by Sex

		Persistence		Total
		PhD Not Completed	PhD Completed	
Male	Count	18	18	36
	% Degree Completion	20.2	20.0	20.1
Female	Count	71	72	143
	% Degree Completion	79.8	80.0	79.9
Total	Count	89	90	179
	% Degree Completion	100.0	100.0	100.0
	% within Sex	49.7	50.3	100.0

The mean age of the sample was 2.93 (SD = 1.32, median = 3.0), indicating that the mean age fell in the 40–49 years category. The mean annual combined parents' income was 3.69 (SD = 1.887, median = 4.0), indicating that parents' mean income fell in the $80,000—$100,000 range. In terms of age and parents' annual income, crosstab analyses revealed no significant differences between those who persisted to degree completion and those who did not (see Table 4.2 and Table 4.3). There were also no significant correlations (Pearson's) between age and parents' annual income and degree completion.

Table 4.2

Crosstabs of the Proportions of Degree Completion by Age

		Persistence		
		PhD Not Completed	PhD Completed	Total
Age				
20–29	Count	13	13	26
	% Degree Completion	14.6	14.4	14.5
30–39	Count	23	29	52
	% Degree Completion	25.8	32.2	29.1
40–49	Count	21	20	41
	% Degree Completion	23.6	22.2	22.9
50–59	Count	15	13	28
	% Degree Completion	16.9	14.4	15.6
60+	Count	17	15	32
	% Degree Completion	19.1	16.7	17.9
Total	Count	89	90	179
	% Degree Completion	100.0	100.0	100.0
	% within Age	49.7	50.3	100.0

Table 4.3

Crosstabs of the Proportions of Degree Completion by Parents' Annual Income

		Persistence		
		PhD Not Completed	PhD Completed	Total
Family Income				
20,000–40,000	Count	15	16	31
	% within Degree completion	16.9	17.8	17.3
40,000–60,000	Count	19	16	35
	% within Degree completion	21.3	17.8	19.6
60,000–80,000	Count	6	9	15
	% within Degree completion	6.7	10.0	8.4
80,000–100,000	Count	8	7	15
	% within Degree completion	9.0	7.8	8.4
100,000+	Count	20	23	43
	% within Degree completion	22.5	25.6	24.0
Unknown	Count	21	19	40
	% within Degree completion	23.6	21.1	22.3
Total	Count	89	90	179
	% within Degree completion	100.0	100.0	100.0

The means on each of Tinto's characteristics and the three spirituality variables are presented in Table 4.4. Those who did not persist to degree completion scored lower on initial goal commitment, later goal (institutional) commitment, academic integration, and social integration than those who persisted to degree completion. Those who did not persist to degree completion scored higher on belief in a higher power and materialistic focus, but lower on spiritual attribution compared to those who persisted.

Table 4.4

Mean Differences on Tinto's Characteristics and Spirituality Variables

	Did Not Complete PhD			Completed PhD		
Variables	Mean	*n*	*SD*	Mean	*n*	*SD*
Initial Goal Commitment**	-.21	89	1.06	.21	90	0.89
Later Goal (Institutional Commitment) ***	-.26	89	1.06	.26	90	0.86
Academic Integration	-.05	89	1.03	.05	90	0.97
Social integration	-.12	89	1.05	.12	90	0.94
Belief in Higher Power	.08	89	0.92	-.08	90	1.08
Materialistic Focus**	.22	89	1.02	-.22	90	0.94
Spiritual Attribution	-.13	89	0.988	.13	90	1.01

Note. All variables are standardized composite variables. $*p < .05$; $**p < .01$; $***p < .001$.

Similarly, Pearson correlations indicated that only initial goal commitment and later goal (institutional) commitment were significantly related to degree completion. Academic and social integration were not related to degree completion (see Table 4.5). The reliability and characteristics of the measures employed by this study are discussed in the next section.

Table 4.5

Correlations Between the Tinto's Characteristics and Degree Completion (N = 179)

		1	2	3	4	5
Degree Completion	Pearson Correlation	1.000				
	p value					
Initial Goal Commitment	Pearson Correlation	.207[**]	1.000			
	p value	.005				
Later Goal (Institutional) Commitment)	Pearson Correlation	.263[**]	.381[**]	1.000		
	p value	.000	.000			
Academic Integration	Pearson Correlation	.054	.313[**]	.265[**]	1.000	
	p value	.472	.000	.000		
Social integration	Pearson Correlation	.121	.344[**]	.310[**]	.480[**]	1.000
	p value	.106	.000	.000	.000	

Note. *$p < .05$; **$p <. 01$; ***$p < .001$.

Dimensionality of the Spirituality Scale

This study employed two measures, the SS and the IIS. Both instruments and their scales' reliability were explored thoroughly in Chapter Three. This section explores the factor analysis conducted for the SS.

Prior to examining the correlation between spirituality and persistence, an exploratory factor analysis was conducted to examine the dimensionality of the spirituality scale. Principal components analyses were used to examine the factors, and oblimin was used to rotate the items to acquire the best interpretable factor solution. The Kaiser-Meyer-Olkin measure of sampling adequacy was .86, and the Bartlett's test of sphericity was significant ($p < .05$), indicating that the items on the SS were suitable for factor analysis. Three criteria were used to make decisions on the number of factors to retain: Kaiser's criterion (i.e., eigenvalues greater than one), Catell's

scree test, and the conceptual meaning of the items. An eigenvalue is the proportion of variance in the items explained by each factor.

Based on these criteria, the three-factor solution seemed like the best fit. Items on the three factors all had factor loadings (i.e., pattern coefficients) above .30. Cronbach's alpha was calculated to determine the internal consistency or reliability of each factor scale. The three factors were (a) belief in a higher power, (b) materialistic focus, and (c) spiritual attribution. The three factors accounted for 52% of the variance in the items on the SS. The items and factor loadings for each factor are presented in Table 4.6.

Belief in a higher power comprised eight items with factor loadings ranging from .43 to .89 with a Cronbach's alpha of .90, indicating strong internal consistency. Material focus comprised seven items with factor loadings ranging from .44 to .82 with a Cronbach's alpha of .77, indicating good internal consistency. Spiritual attribution comprised five items with factor loadings ranging from .33 to .76 with a Cronbach's alpha of .67, indicating fair internal consistency.

Factor scores were calculated using the regression method for each of the three spirituality factors so that the factor scores were standardized with a mean of zero and a standard deviation of one. These three factor scores were used to measure spirituality in the following analyses.

Table 4.6

Factor Loadings for the Items on the Three Spirituality Factors

	Factor		
	1	2	3
I pray before I go on a trip.	**.893**	.134	.078
I pray before eating a meal.	**.856**	.119	.170
Though I may go to the doctor when I am ill, I also pray.	**.800**	-.056	-.039
I feel that life is made up of spiritual forces.	**.727**	-.101	-.226
Without some form of spiritual help, there is little hope in life.	**.689**	-.011	-.136
I act as though unseen forces are at work.	**.660**	-.081	-.260
I believe that the world is not under our control but is guided by a greater force.	**.569**	-.106	-.293
The most important part of me is the inner force which gives me life.	**.425**	-.231	-.393
My happiness is found in the material goods I own.	.118	**.819**	.201
To me, an object's material worth is that object's value.	.214	**.732**	.232
I don't know where to find the answers to life's questions.	-.089	**.662**	-.096
If I had more money, life would be happier.	.053	**.602**	-.089
I feel that all life is simply made up of different chemicals.	-.349	**.545**	-.140
To me the world can be described as a big machine.	-.337	**.491**	-.295
No preacher could ever understand the problems I have.	-.139	**.444**	-.152
All people have a common core which is sacred.	.107	-.103	**-.762**
To me, every object has some amount of spiritual quality.	.126	.100	**-.718**
We all need to have knowledge of the world's religions.	.060	-.049	**-.535**
To have faith in each other is to have faith in God.	.383	.218	**-.481**
Just because I have faith and beliefs does not mean I live that way all of the time.	-.037	.241	**-.331**

Note. Extraction method: Principal component analysis. Rotation method: Oblimin. Bolding in the table indicates factor loading.

Results

This section reports results by addressing each one of the three study's research questions.

1. Is there a relationship between spirituality and persistence among African American PhD students?

Correlations between the three spirituality factors and persistence were examined. Spearman rho and Kendal tau-b correlations revealed a significant relationship between spirituality and degree completion. Materialistic focus was negatively related to degree completion $r(179) = -.159, p < .05$, while spiritual attribution, $r(179) = .122, p < .05$, was significantly positively related to degree completion (persistence). Materialistic focus and spiritual attribution were also negatively related to belief in a higher power (see Table 4.7). There was no significant relationship between belief in a higher power and degree completion.

Table 4.7

Correlations between the Three Spirituality Factors and Degree Completion (N = 179)

			1	2	3	4
Kendall's tau_b	Degree completion	Correlation coefficient	1.000			
		p value				
	Belief in a higher power	Correlation coefficient	-.038	1.000		
		p value	.532			
	Materialistic focus	Correlation coefficient	**-.159****	**-.206****	1.000	
		p value	.010	.000	.	
	Spiritual attribution	Correlation coefficient	**.122***	**-.105***	-.058	1.000
		p value	.047	.036	.249	
Spearman's rho	Degree completion	Correlation coefficient	1.000			
		p value				
	Belief in higher power	Correlation coefficient	-.047	1.000		
		p value	.534	.		
	Materialistic focus	Correlation coefficient	**-.194****	**-.308****	1.000	
		p value	.009	.000	.	
	Spiritual attribution	Correlation coefficient	**.149***	**-.150***	-.088	1.000
		p value	.047	.045	.240	

Note. $*p < .05$; $**p <. 01$; $***p < .001$. Bolded values indicate correlation.

2. Is spirituality related to persistence among African American PhD students after controlling for Tinto's five characteristics of academic success?

A hierarchical logistic regression was conducted to examine the relationship between spirituality (i.e., belief in a higher power, materialistic focus, spiritual attribution) and persistence after controlling for initial characteristics (i.e., gender, age, parents' annual income, initial goal commitment), social integration, academic integration, and goal (institutional) commitment. The

variables were entered in three blocks or steps: (1) the demographic variables or initial characteristics in the first step of the logistic regression model, (2) Tinto's other characteristics (i.e., social integration, academic integration, and goal [institutional] commitment) in the second step, and (3) the three spirituality factors (i.e., belief in a higher power, materialistic focus, spiritual attribution) in the third step of the logistic regression. The logistic regression coefficients odds ratios, Wald chi-square statistics, and Nagelkerke R-squares, used to determine which variables predict the probability of degree completion, are presented in the tables for each step of the regression analysis.

In the first step (model 1), initial goal commitment was significantly positively related to the odds of degree completion (persistence), B = .46, Wald statistic = 7.47, Exp(B) = .1.59, $p <$ .01. Age, gender, and annual income were not significantly related to degree completion (see Table 4.8). The odds of completion increased by more than half (i.e., 59%) with every unit increase in initial goal commitment.

Table 4.8

Step One of the Logistic Regression Predicting Degree Completion (N = 179)

Variables	B	*SE*	Wald	*df*	Sig.	Exp(B)	95% CI for Exp(B) Lower	Upper
Step 1[a] Age	-.051	.118	0.190	1	.663	0.950	0.755	1.196
Sex (male)	-.278	.391	0.506	1	.477	0.757	0.352	1.629
Parents' combined annual income	.008	.083	0.011	1	.918	1.009	0.858	1.186
Initial goal commitment	.461*	.169	7.468	1	**.006**	1.586	1.139	2.207
Constant	.187	.519	0.129	1	.719	1.205		
Model Chi-Square	8.60							
Nagelkerke R^2	.063							
-2 Loglikelihood	239.55							
Hosmer & Lemeshow	6.66							

*$p < .001$.

After social integration, academic integration, and goal (institutional) commitment were entered into the second step (model 2), initial goal commitment was no longer significantly related to degree completion (see Table 4.9). Instead, later goal (institutional) commitment was significantly positively related to degree completion, B = .54, Wald statistic = 7.37, Exp(B) = 1.72, $p < .01$. The odds of completion increased by 72% for every unit increase in later goal (institutional) commitment.

Table 4.9

Step Two of the Logistic Regression Predicting Degree Completion (N = 179)

Variables[a]	B	*SE*	Wald	*df*	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
Age	-.144	.125	1.329	1	.249	0.866	0.678	1.106
Sex (male)	-.141	.405	0.122	1	.727	0.868	0.393	1.919
Parents' combined annual income (thousands)	-.003	.086	0.001	1	.973	0.997	0.843	1.180
Initial goal commitment	.256	.192	1.787	1	.181	1.292	0.887	1.882
Academic integration	-.140	.186	0.569	1	.451	0.869	0.604	1.252
Social integration	.090	.187	0.233	1	.629	1.095	0.758	1.581
Later goal (institutional) commitment)	.544**	.200	7.368	1	**.007**	1.722	1.163	2.551
Constant	.460	.544	0.716	1	.397	1.585		
Model chi-square	17.66*							
Nagelkerke R^2	.13							
-2 Loglikelihood	230.48							
Hosmer & Lemeshow	13.70							

Note. *p < .05; **p <. 01; ***p < .001
[a]Variable(s) entered on Step 2: academic integration (*z*-score), social integration (*z*-score), later goal (institutional) commitment).

Finally, the three spirituality factors, belief in a higher power, materialistic focus, and spiritual attribution, were entered into the third and final step of the logistic regression (see Table 4.10). Later goal (institutional) commitment continued to have a significantly positive relationship to degree completion, B = .54, Wald statistic = 6.34, Exp(B) = 1.71, *p* < .05. The odds of completion increased by 71% for every unit increase of later goal (institutional) commitment.

Two aspects of spirituality, belief in a higher power and materialistic focus, were significantly related to degree completion after controlling for Tinto's five characteristics of

academic success. Belief in a higher power had a significantly negative relationship to degree completion, $B = -.42$, Wald statistic $= 4.16$, $Exp(B) = .66$, $p < .05$. As belief in a higher power increased, the odds of degree completion decreased by a third (34%). Similarly, materialistic focus had a significantly negative relationship to degree completion, $B = -.58$, Wald statistic $= 8.92$, $Exp(B) = .56$, $p < .01$. As materialistic focus increased, the odds of degree completion decreased by 44%.

Table 4.10

Step Three of the Logistic Regression Predicting Degree Completion (N = 179)

Variable [a]	B	*SE*	Wald	*df*	Sig.	Exp(B)	95% CI for Exp(B) Lower	Upper
Age	-.245	.137	3.211	1	.073	0.783	0.599	1.023
Sex (male)	-.328	.449	0.535	1	.464	0.720	0.299	1.735
Parents' combined annual income	-.008	.090	0.007	1	.933	0.992	0.832	1.184
Initial goal commitment	.271	.205	1.739	1	.187	1.311	0.877	1.961
Academic integration	.117	.208	0.317	1	.573	1.124	0.748	1.689
Social integration	.125	.201	0.387	1	.534	1.133	0.764	1.680
Later goal (institutional) commitment	.537*	.214	6.335	1	**.012**	1.712	1.126	2.601
Belief in higher power	-.415*	.203	4.159	1	**.041**	0.661	0.444	0.984
Materialistic focus	-.576**	.193	8.921	1	**.003**	0.562	0.385	0.820
Spiritual attribution	.282	.184	2.336	1	.126	1.326	0.923	1.903
Constant	.822	.579	2.014	1	.156	2.275		
Model chi-square	34.90***							
Nagelkerke R^2	.24							
-2 Loglikelihood	213.24							
Hosmer & Lemeshow	8.30							

[a]Variable(s) entered on step 3: belief in higher power, materialistic focus, spiritual attribution.
*$p < .05$; **$p <. 01$; ***$p < .001$. †$p \le .06$.

To explore whether other spirituality variables may be related to degree completion, two variables from the DS were added to the regression: leader in community of faith and church attendance (see Table 4.11). Later goal (institutional) commitment continued to be significantly

positively related to degree completion, $B = .61$, Wald statistic $= 4.44$, Exp(B) $= 1.85$, $p < .05$.

Results also indicated that leader in faith community was significantly negatively related to

degree completion, $B = -1.38$, Wald statistic $= 7.69$, Exp(B) $= .25$, $p < .01$. Leadership in

community of faith reduced the odds of degree completion by 75%. A crosstabs analysis of

leadership in faith community x degree completion (see Table 4.12) revealed that greater

proportions of those who were not leaders in their faith community completed their PhD

compared to those who were leaders in their faith community (75% vs. 25%).

Table 4.11

Logistic Regression Predicting Degree Completion (Persistence) with Additional Measures of Spirituality (N = 131)

Variable	B	*SE*	Wald	*df*	Sig.	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
Age	-.161	.184	0.758	1	.384	0.852	0.593	1.223
Sex (male)	.134	.591	0.052	1	.820	1.144	0.359	3.645
Parents' annual income	.135	.121	1.238	1	.266	1.144	0.903	1.450
Initial goal commitment	.044	.268	0.027	1	.870	1.045	0.617	1.769
Academic integration	.523†	.280	3.476	1	**.062**	1.686	0.974	2.921
Social integration	.096	.239	0.163	1	.686	1.101	0.690	1.758
Later goal (institutional) commitment	.614*	.292	4.436	1	**.035**	1.848	1.044	3.273
Belief in higher power	-.556	.375	2.193	1	.139	0.574	0.275	1.197
Materialistic focus	-.722**	.250	8.309	1	**.004**	0.486	0.297	0.794
Spiritual attribution	.449†	.242	3.444	1	**.063**	1.567	0.975	2.519
Leader in faith community	-1.376**	.496	7.691	1	**.006**	0.253	0.096	0.668
Church attendance	.131	.204	0.413	1	.520	1.140	0.764	1.700
Constant	-.078	1.388	0.003	1	.955	0.925		
Model chi-square	37.29***							
Nagelkerke R^2	.33							
-2 Loglikelihood	144.24							
Hosmer & Lemeshow	4.77							

*p < .05; **p <. 01; ***p < .001. †p ≤ .06.

Table 4.12

Crosstabs of the Proportions of Degree Completion by Leadership in Faith Community

			Persistence		
			Did Not Complete PhD	Completed PhD	Total
Leader in faith community	No	Count	39	48	87
		% within degree completion	58.2	75.0	66.4
		Adjusted standardized residual	-2.0	2.0	
	Yes	Count	28	16	44
		% within degree completion	41.8	25.0	33.6
		Adjusted standardized residual	2.0	-2.0	
Total		Count	67	64	131
		% within degree completion	100.0	100.0	100.0
Pearson's Chi-Square					4.14*

*$p < .05$; **$p <. 01$; ***$p < .001$.

3. Does spirituality moderate the relationship between Tinto's five characteristics of academic success and persistence? Alternately, do the relationships between the five characteristics and persistence vary between African American PhD graduates with below average and above average levels of spirituality?

To examine whether spirituality is a moderating variable, that is, whether it alters the relationship between Tinto's characteristics and the dependent variable (persistence), four interactions were entered into the hierarchical regression: spirituality x initial goal commitment, spirituality x later goal (institutional) commitment, spirituality x academic integration, and spirituality x social integration). The three spirituality factor scales were summed and the standardized scores computed. Then, a dummy-coded variable was created for spirituality (i.e., spirituality below the mean = 0, spirituality above the mean = 1). Next, the interaction or product terms were created by multiplying each of the variables measuring Tinto characteristics by spirituality, that is, spirituality x initial goal commitment, spirituality x later goal

(institutional) commitment, spirituality x academic integration, and spirituality x social integration.

The only significant interaction was spirituality x initial (goal) commitment, $B = 1.11$, Wald statistic $= 5.91$, $Exp(B) = 3.02$, $p < .05$. For students with spirituality scores above the mean, also demonstrated higher initial goal commitment, thus increasing their odds of degree completion; that is, they had three times higher odds of degree completion. In other words, for students with spirituality scores above the mean, when initial goal commitment increased by one unit, the odds of degree completion were three times higher. However, the interactions of spirituality x academic integration and spirituality x later goal (institutional) commitment all approached significance.

Table 4.13

Logistic Regression Including Interactions with Tinto's Characteristics

| Variables | B | *SE* | Wald | *df* | Sig. | Exp(B) | 95% CI for Exp(B) | |
							Lower	Upper
Age	-.268†	.145	3.428	1	**.064**	.765	0.576	1.016
Sex (male)	.047	.474	0.010	1	.920	1.049	0.414	2.653
Parents' combined annual income	-.022	.095	0.051	1	.821	.979	0.812	1.179
Initial goal commitment	-.287	.303	0.900	1	.343	.750	0.414	1.359
Academic integration	-.314	.315	0.994	1	.319	.731	0.394	1.354
Social integration	.117	.314	0.139	1	.709	1.125	0.607	2.082
Later goal (institutional) commitment)	.822**	.289	8.086	1	**.004**	2.274	1.291	4.007
Belief in higher power	-.337	.211	2.535	1	.111	.714	0.472	1.081

	B	SE	Wald	df	Sig	Exp(B)	Lower	Upper
Materialistic focus	-.596**	.201	8.766	1	**.003**	.551	0.371	0.818
Spiritual attribution	.338	.197	2.934	1	.087	1.402	0.952	2.062
Spirituality x initial goal commitment	1.106*	.455	5.914	1	**.015**	3.023	1.239	7.372
Spirituality x later goal (institutional) commitment)	-.725	.450	2.595	1	.107	.484	0.200	1.170
Spirituality x academic integration	.692	.431	2.579	1	.108	1.999	0.858	4.654
Spirituality x social integration	.020	.436	0.002	1	.963	1.021	0.434	2.399
Constant	.899	.724	1.542	1	.214	2.456		
Model chi-square	47.13***							
Nagelkerke R^2	.31							
-2 Loglikelihood	201.01							
Hosmer & Lemeshow	11.58							

*p < .05; **p <. 01; ***p < .001. †p < .06.

3.1. Alternately, do the relationships between the five characteristics and persistence vary between African American PhD graduates with below average and above average levels of spirituality?

To better understand the interactions and to improve the instability of the regression model (due to small sample size and elevated standard errors), a separate logistic regression analysis was conducted for each spirituality group, one for students scoring below the mean and one for students scoring above the mean on spirituality. These regressions show how Tinto's characteristics behave for each spirituality group, that is, the differential effect that spirituality

has on the relationship between Tinto's five elements and degree completion (Cohen & Cohen, 1983).

Below the Mean Spirituality Group

Age and later goal (institutional) commitment were significantly related to degree completion for those who scored below the mean on spirituality (see Table 4.14). Age was significantly negatively related to degree completion, B = -.42, Wald statistic = 4.10, Exp(B) = .66, $p < .05$. As age increased by one unit, the odds of degree completion decreased by over a third (i.e., by 34%). Later goal (institutional) commitment was significantly positively related to the odds of degree completion (persistence), B = .84, Wald statistic = 7.74, Exp(B) = 2.32, $p < .01$. For students with lower spirituality levels, the odds of completion more than doubled (i.e., increased 2.32 times) for each unit increase in later goal (institutional) commitment. Table 4.14 and Figure 4.1 display the means of later goal (institutional) commitment for students from both spirituality groups and degree completion statuses.

Table 4.14

Logistic Regression Analysis Predicting Degree Completing for Students with Spirituality Levels

Below the Mean (With the Three Spirituality Factors Added)

Variables	B	*SE*	Wald	*df*	Sig.	Exp(B)	95% CI for Exp(B) Lower	Upper
Age	-.422*	.208	4.098	1	**.043**	0.656	0.436	0.987
Sex (female)	.435	.588	0.549	1	.459	1.546	0.489	4.889
Parents' combined annual income	.043	.130	0.108	1	.742	1.044	0.809	1.347
Initial goal commitment	-.246	.313	0.616	1	.433	0.782	0.423	1.445
Academic integration	-.424	.319	1.759	1	.185	0.655	0.350	1.224
Social integration	.107	.313	0.118	1	.732	1.113	0.602	2.058
Later goal (institutional) commitment	.841**	.302	7.741	1	**.005**	2.319	1.282	4.195
Belief in higher power	-.279	.279	0.997	1	.318	0.757	0.438	1.308
Materialistic focus	-.442	.303	2.129	1	.145	0.643	0.355	1.164
Spiritual attribution	.174	.273	0.407	1	.523	1.190	0.697	2.031
Constant	.879	.902	0.951	1	.329	2.409		
Model chi-square	19.79*							
Nagelkerke R^2	.27							
-2 Loglikelihood	103.31							
Hosmer & Lemeshow	6.11							

*$p < .05$; **$p < .01$; ***$p < .001$. Bolded values indicate significance.

Above the Mean Spirituality Group

Initial goal commitment and materialistic focus were significantly related to degree completion for those who scored above the mean on spirituality (see Table 4.15). Initial goal commitment was significantly positively related to the odds of degree completion (persistence), B = .94, Wald statistic = 6.30, Exp(B) = 2.55, $p < .05$. For students with higher spirituality levels, the odds of completion increased over two and a half times (2.55 times) for each unit increase of initial goal commitment. Materialistic focus was significantly negatively related to the odds of degree completion, B = -.72, Wald statistic = 4.93, Exp(B) = .49, $p < .05$. For students with spirituality levels above the mean, as materialistic focus increased by one unit, the

odds of degree completion decreased by almost half (49%). In other words, those who scored lower on materialistic focus were more likely to complete their degree.

Table 4.16 contains the means of initial goal commitment for students from both spirituality groups and degree completion statuses. Students with spirituality scores above the mean who did not complete their PhD programs scored lower on initial goal commitment than those who completed their PhD; students who scored below the mean on spirituality had similar mean scores on initial goal commitment whether they completed their PhD programs or not. The means are demonstrated in Figure 4.1, which shows the means plot for each group on initial goal commitment.

Table 4.15

Logistic Regression Analysis Predicting Degree Completing for Students with Spirituality Levels Above the Mean (With the Three Spirituality Factors Added)

	B	SE	Wald	df	Sig.	Exp(B)	95% CI for Exp(B) Lower	Upper
Age	-0.149	.216	0.475	1	.491	0.861	0.564	1.317
Sex (female)	-0.599	.937	0.409	1	.523	0.549	0.088	3.446
Parents' combined annual income	-0.096	.149	0.417	1	.519	0.909	0.679	1.216
Initial goal commitment	0.935*	.373	6.301	1	**.012**	2.548	1.228	5.289
Academic integration	0.524	.340	2.372	1	.123	1.689	0.867	3.289
Social integration	0.211	.325	0.421	1	.517	1.235	0.653	2.337
Later goal (institutional) commitment	0.044	.384	0.013	1	.909	1.045	0.493	2.216
Belief in higher power	-1.423	.929	2.347	1	.126	0.241	0.039	1.488
Materialistic focus	-0.716**	.322	4.929	1	**.026**	0.489	0.260	0.920
Spiritual attribution	0.608	.409	2.205	1	.138	1.836	0.823	4.095
Constant	2.143	1.630	1.728	1	.189	8.522		
Model chi-square	32.26***							
Nagelkerke R^2	.40							
-2 Loglikelihood	92.33							
Hosmer & Lemeshow	3.82							

*$p < .05$; **$p <. 01$; ***$p < .001$.

Table 4.16

Means of Initial Goal Commitment in Relation to Spirituality Levels and Degree Completion

Spirituality	Degree Completion	Mean	Std. Error	95% CI Lower	95% CI Upper
Below Average	Did not complete PhD	.133	.147	-.158	.424
	Completed PhD	.072	.139	-.203	.347
Above Average	Did not complete PhD	-.513	.139	-.788	-.238
	Completed PhD	.352	.146	.065	.639

Note. Dependent variable is initial goal commitment.
*$p < .05$; **$p <. 01$; ***$p < .001$.
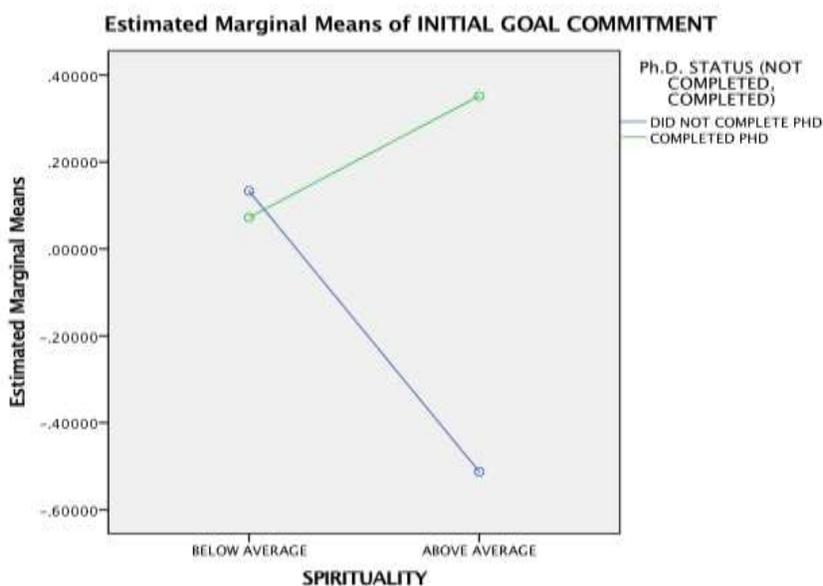
Figure 4.1. Graph showing the interaction effect of spirituality and initial goal commitment.

Hypothesis

This study hypothesized that among African Americans, spirituality was utilized as a compensatory strategy to persist to degree completion. In this case, this quantitative study hypothesized that spirituality moderates the relationship between Tinto's five characteristics necessary for academic success and degree completion among Black doctoral students. Correspondingly, this study hypothesized that the higher the amount of faith/spirituality among African Americans, the lower the degree of attrition would be. This aspect of the hypothesis was

supported. Different levels of spirituality seem to moderate the most important predictors of degree completion on Tinto's model, initial and later goal commitment.

For students with higher spirituality levels, initial goal commitment was significantly positively related to the odds of degree completion (persistence), B = .94, Wald statistic = 6.30, Exp(B) = 2.55, $p < .05$. For students with higher spirituality levels, the odds of completion increased two and a half (2.55) times for each unit increase of initial goal commitment. Students who scored below the mean on spirituality had similar mean scores on initial goal commitment regardless of whether they completed their PhD programs. For students with lower spirituality levels, later goal (institutional) commitment was significantly positively related to the odds of degree completion (persistence), B = .84, Wald statistic = 7.74, Exp(B) = 2.32, $p < .01$. For students with lower spirituality levels, the odds of completion more than doubled (increased 2.32 times) for each unit increase in later goal (institutional) commitment. The hypothesis was supported.

Chapter Summary

This results section reported the findings that spirituality had three dimensions: belief in a higher power, materialistic focus, and spiritual attribution. Correlations revealed that materialistic focus was negatively related to persistence, and spiritual attribution was positively related to persistence. However, the logistic regression analysis revealed that both belief in a higher power and materialistic focus were negatively related to degree completion after controlling for Tinto's five characteristics of academic success. Later goal (institutional) commitment was also significantly positively related to degree completion, thus increasing the odds of earning a PhD. Interestingly, leadership in one's faith community was negatively related to degree completion.

Overall, spirituality appears to be a moderator between Tinto's characteristics and degree completion; that is, Tinto's characteristics behave differently based on one's level of spirituality. The two logistic regression models revealed different outcomes for people with different spirituality levels. For those with lower spirituality levels (below the mean), higher later goal commitment and lower age were significant predictors of degree completion. On the other hand, for those with higher spirituality levels (above the mean), higher initial goal commitment and lower materialistic focus were the significant predictor of degree completion. The next chapter discusses the results reported here.

CHAPTER FIVE: SUMMARY, CONCLUSIONS, RECOMMENDATIONS

As a conclusion to this study, this chapter (a) offers a brief overview of this investigation, (b) interprets and explores findings, (c) discusses implications for social change, (d) recommends necessary actions, and (e) recommends steps for further study.

A Brief Overview of this Study

The high PhD attrition rate (55%–60%) among minorities may create a significant future economic drawback to the United States. Half of the American population is made up of minorities, and this nation's economic prosperity relies on research, innovation, and development promoted by well-educated professionals. Among racial minorities, African Americans experience the highest levels of attrition (60%) in the nation as well as the most social and academic challenges in higher education settings. Based on suicide literature, Tinto's (1975) theory of attrition defends that in higher education, certain characteristics of academic success, e.g., social and academic integration, are necessary to persist to degree completion; otherwise, students decide to "die" to the institution of higher learning by dropping out.

Research suggests that, due to the legacy of slavery and segregation in American society, African Americans experience barriers to acquiring Tinto's social academic characteristics of degree completion in higher education. Yet, despite Tinto's prediction of attrition due to social economic and educational discrepancies, 40% of African American PhD candidates persist to degree completion, refusing to die (drop out) (Cokley, 2000; Cook & Cordova, 2006; DeGruy, 2017; Egerton, 2006; Eyerman, 2001; Fields, 1990; Heckman & LaFontaine, 2010; Higginbotham & Franklin, 2010; Jackson, 2005; Jasienska, 2009; Kozol, 1988, 2006; Miller, 2005; Nettles & Millett, 2006; Ohl & Potter, 2013; Pargas, 2009; Ross et al., 2012; U.S. Census Bureau, 2017; Wise, 2012).

Hypothesis

Informed by a small qualitative pilot study and a body of literature suggesting that spirituality positively impacts academic success among African Americans, this study hypothesized that spirituality moderates the relationship between degree completion and the apparent incongruences encountered by African Americans regarding Tinto's elements of academic success.

Procedures

A sample of convenience of African American ($n = 90$) PhD completers and ($n = 89$) PhD non-completers was recruited. Participants responded to an anonymous electronic survey which included three instruments: (a) Demographic Survey, a 24-item survey to collect basic information, e.g., age, gender, elements of initial characteristics, and commitments; (b) the Spirituality Scale, a 20-item spirituality scale devised specifically for African Americans (Jagers & Smith, 1996); and (c) the Institutional Integration Scale, 30 items crafted to measure Tinto's model (Pascarella & Terenzini, 1983). This investigation adopted a quantitative correlational design as well as descriptive statistics and hierarchical regression to explore the apparent interaction between African American spirituality, Tinto's attrition model, and academic persistence.

Research Questions and Findings

The study asked three questions:

1. Is there a relationship between spirituality and persistence among African American PhD students?

2. Is spirituality related to persistence among African American PhD students after controlling for Tinto's five characteristics of academic success?

3. Does spirituality moderate the relationship between Tinto's five characteristics of academic success and persistence; alternately, do the relationships between the five characteristics and persistence vary among African American PhD graduates with low, average, and high levels of spirituality?

Findings indicated that certain dimensions of spirituality, belief in a higher power and materialistic focus, were negatively related to degree completion. Leadership in one's faith community was also negatively related to degree completion. Spiritual attribution was positively related to persistence. Later goal (institutional) commitment was also significantly positively related to degree completion. Different levels of spirituality appear to be a moderator between Tinto's characteristics and degree completion. Higher later goal commitment and lower age were significant predictors of degree completion for those with lower spirituality levels. As for those with higher spirituality levels, higher initial goal commitment and lower materialistic focus were the significant predictors of degree completion.

Spirituality

In regard to the first research question, the study's findings supported the assumption that there is a relationship between spirituality and degree completion among the sample of African Americans. Interestingly, the only aspect of spirituality positively correlated with degree completion was spiritual attribution, which was also negatively related to materialistic focus. It seems that participants who were likely to endorse a more generic non-religious perspective of spirituality, e.g., sacred core attribution to all, including objects, and held lower focus on money were more likely to complete their PhD. On the other hand, it appears that African Americans who were more likely to adopt a materialistic type of spirituality, e.g. basing their happiness on material goods they own, were less likely to complete their doctoral degree.

Leaders in Communities of Faith

In regard to the second research question, spirituality does seem to be related to degree completion among African Americans after controlling for some of Tinto's characteristics of degree completion. A hierarchical regression was employed to explore how the variables might interact with each other within the model. Contrary to the researcher's expectations, the direction of the relationship between degree completion and the two dimensions of spirituality, belief in a higher power and materialistic focus, was negative. The direction of the relationship indicates that the more African Americans believed that there is a force that gives them strength, the less likely they were to complete their degree—in fact, 64% less likely to complete their degrees. Also, people who adopted a more materialistic-focused spirituality, e.g., the belief that money would add happiness to life, were 66% less likely to persist to degree completion.

The results demonstrating a negative relationship between belief in a higher power and persistence puzzled this researcher. Previous qualitative and quantitative studies consistently indicate that African Americans rely on a higher power to attain academic achievement (Barrett, 2010; Calhoun-Brown, 2000; Constantine et al., 2002; Lambert, 1992; Lincoln & Mamiya, 1990; Mitchell, 2008; Weddle-West et al., 2013). Two variables from the DS were added to the regression to investigate whether other spirituality variables may be related to degree completion. The variables were leader in community of faith and church attendance.

When the variables leadership in community of faith and church attendance entered the equation, it became apparent that African Americans who were leaders in their faith community were 75% less likely to graduate. In fact, Cohall and Cooper (2010) randomly selected 255 leaders of communities of faith in the nation and observed that compared to their White community of faith leader counterparts, who focused primarily on the spiritual needs of their

congregations, African American pastors provided much more than spiritual direction. African American leaders also functioned as social activists, political strategists, and counselors to their communities. Thus, this writer can speculate that leaders in faith communities tend to believe in a higher power, yet their service might be linked to the negative relationship between faith in a higher power and degree completion after Tinto's elements were controlled.

High and Low Levels of Spirituality and Persistence

In regard to the third research question, according to the analyzed data, spirituality moderates the relationship between Tinto's model and persistence. It was found that different levels of spirituality were related to two central elements to degree completion according to Tinto's model: initial goal commitment and later goal commitment (Terenzini et al., 1985; Tinto, 1975). Higher levels of spirituality were closely related to higher levels of initial goal commitment—the certainty that the institution of higher learning or program had been a good choice. In simple words, African Americans with high levels of spirituality were three times more likely to hold on to the confidence that it had been a good choice to attend a certain program. The higher their spirituality level, the stronger their confidence and the stronger their likelihood to graduate. This confirms previous research that the academic journey is often seen as a spiritual path among African Americans (Constantine et al., 2002; Edgell, 2007; Jett, 2010; Park & Millora, 2010; Patton & McClure, 2009). If the academic journey is seen as guided by a higher power, the confidence about previous choices produced by faith is understandable.

Lower spirituality levels displayed a strong relationship with later goal commitment—the desire to graduate from the institution of higher learning. It appears that African Americans with lower levels of spirituality were more likely to hold on to the importance of graduating from a certain institution. The strength of that belief was related to their persistence to degree

completion. Interestingly, this aspect of degree completion seems to be consistent with data that indicates that education among African American communities of faith is important (Calhoun-Brown, 2000; Lambert, 1992; Lincoln & Mamiya, 1990; Mitchell, 2008). No causation can be established here, but it is worth speculating upon based on the above-cited data and the work of Mattis and Jagers (2001), who explained that among African Americans, spiritual formation is an ongoing process that includes family and community exposure. It is possible that individuals who have had cultural contact with communities and families of faith are more likely to retain the learned values they were exposed to even when they do not actively profess or embrace them in their personal lives.

Social and Academic Integration

In this study, the relationship between spirituality, degree completion, and academic and social integration was not statistically significant. Tinto's theory (1975, 1982, 1987, 2012) explains that the decision to leave an academic institution occurs as a result of a student's social and intellectual experiences during enrollment. Tinto detected that the interaction of social and academic matters shaped an institutional system, which in turn performed an important role in withdrawal dynamics. The model viewed attrition as a phenomenon which happened to students after they participated in negative social and academic dynamics. Informed by Spady's work (1970), Tinto proposed that these dynamics influenced the student's decision to give up life as a student and embrace a premature "death" to the learning institution by dropping out. Social and academic integration is the heart of Tinto's model (Braxton, Milem, & Sullivan, 2000; Terenzini et al., 1985; Tinto, 1975).

Perhaps the most remarkable findings to emerge from data around the higher and lower levels of spirituality and their interactions with the elements of degree completion in Tinto's

model is the apparent lack of interaction. It seems that for those who attained degree completion, spirituality as a variable established a strong relationship to either initial goal commitment or later academic goal commitment, the variables that, according to Tinto's model, are the initial or final predictors persistence. The most important predictors of degree completion, social and academic integration dynamics, were absent from the interaction estimating persistence. In this study, the relationships to persistence within Tinto's model were established by jumping from the beginning of the model (initial goal commitment) to the end (later goal commitment), thereby completely skipping Tinto's central characteristics for academic success: quality of social and academic integration (relationships).

This finding seems consistent with Mattis and Jager's (2001) theoretical work regarding spirituality among African Americans. The authors argued that real spirituality among African Americans was expressed through the combination of three practical behaviors: relationship quality, modulation of negative affect, and adoption of positive cognitive appraisals. It seems that through different levels of spirituality, African Americans in this study, when faced with social integration challenges, were able to adopt positive relational and social behaviors and positive cognitive appraisals to resist potential dynamics of social exclusion. When experiencing stigma in academic situations, instead of experiencing cognitive depletion as observed by Inzlich et al. (2006), it seems that when guided by spirituality, participants in this study might have employed modulation of affect, a powerful self-regulatory tool (Laurin, Kay & Fitzsimons, 2012; McCullough & Willoughby, 2009), to maintain their academic capacities, becoming also immune to potential dynamics of academic exclusion.   However, the absence of social and academic interaction in the model among this sample of African Americans can have other

possible explanations: (a) small sample size, (b) the sample's socio-cultural characteristics, and (c) culturally unsuitable measures.

Small sample size and sample's socio-cultural characteristics. Perhaps the small sample size of African Americans in this study significantly decreased the ability for a logistic hierarchical regression to capture all relationship dynamics within the model, including social and academic integration. In a replication study of Tinto's model, Terenzini et al. (1985) could identify academic but not social interactions within the model. Terenzini et al. (1985) attributed the absence of social integration interactions to the reduced sample size.

Another possible explanation for the lack of social and academic interactions in the model is Braxton et al.'s (2000) assertion that social and academic integration tends to reveal a student's sense of affiliation and congruence with communities and academic systems. Thus, it can be suggested that the absence of interaction between social and academic integration and spirituality within Tinto's model might be related to the samples' learned capacities to deal with challenging social dynamics, as previously stated by Braxton et al. (2000).

As the descendants of people who endured slavery and were considered outcasts in American society for many years (Gordon, 2017; Higginbotham & Franklin, 2010; Wise, 2012), African American individuals are likely to have learned how to cope with social exclusion. If this is the case, they might have developed and mastered internal and external strategies to deal with the constant dynamics of experienced exclusion. Importantly, roughly 80% of the individuals in the sample for this study were African American females. Although this study explored African American doctoral students' dynamics of persistence as a group without concentrating on gender, the unintended strong presence of females among the participants requires special attention. One cannot rule out the possibility that the apparent lack of social

academic dynamics in the model can be explained by social-cultural dynamics related to African American females in the present literature.

African American female professionals and social integration. African American females seem to possess practical and helpful social integration skills. Jang and Johnson (2005) found that, although distressed, African American females were more likely to manage behaviors as a response to high stress levels because they were more likely to employ spirituality as a distress-buffering strategy than the general population. When racial and socio-cultural dynamics are considered, African American females hold the least power of any demographic in American society (Bell, 1990; King, 2016). Consequently, as professionals, African American females adopt complex life structures to overcome adverse contexts of racial and gender discrepancies in the workplace (Bell, 1990; King, 2016). Likewise, African American female professionals have learned to compartmentalize the various elements of their lives in order to adapt and respond to dynamics of power and their own lack of it, managing to live in bicultural dimensions (Bell, 1990).

Purdie-Vaughns, Steele, Davies, Ditlmann, & Crosby (2008) asserted that minorities learn to examine their professional environment for safety and the presence of racial bias. It is reasonable to consider the likelihood that the sample, mainly composed of Black professional females, could have learned to precisely assess their academic environments for cues of restrictions and judgements in order to accurately manage risks related to identity during social and academic interactions. Since they are socially attuned and supported by their ability to manage distress through spirituality (Jang & Johnson, 2005), it is possible that the heavy representation of African American female professionals in the sample might have contributed to the phenomenon of the "integration" aspects of Tinto's model being completely skipped.

Culturally unsuitable measures. The apparent absence of social and academic integration interactions in the model can also be attributed to the IIS's (Pascarella & Terenzini, 1983) inability to capture the multidimensional social and academic experiences of minorities in the model. Tinto's critics have long explored, analyzed, and called for proper adaptations to the model's limitations (Braxton et al., 2000; Guiffrida, 2006; Hurtado, 1997; Kuh & Love, 2000; Rendon et al., 2000; Tierney, 1999). With guidance from Tinto, some adaptations have been made to the model, yet this study sheds light on a different issue. Most of Tinto's model testing has been derived from college students. The designers of the scale were careful to have minorities represented among the sample. However, the focus of the scale was to explore social and academic dynamics present among the general population.

Problematically, this study's sample was primarily composed of highly experienced African American professionals between 40 and 49 years old who experience exclusion and stigma. Even with the adaptions made by this study, the socio-cultural characteristics present in the sample were quite different from those of the sample used to develop the IIS. Thus, there is moderate probability that the measure was not able to capture the experience of a sample with very particular socio-cultural characteristics.

<center>**Recommendations for Action, Social Change and Further Research**</center>

Church Leadership

African American leaders are important role models for their communities. The information that African American leaders in communities of faith are 75% more likely to stop attending their PhD program has serious social and educational implications. Positive role models encourage and increase college attendance among African Americans (Brown, Rosnick

& Segrist, 2017; Perna, 2000). A negative role model can indirectly impact levels of education in many African American communities.

Action is needed from administrators and faculty in higher education. PhD administrators and faculty can begin to use this information by designing programs for extremely busy people and specifically targeting African Americans. Program leaders interested in increasing their degree completion rates among African Americans should also devise persistence-promoting strategies geared specifically for African American leaders in communities of faith. Such strategies may include offering more flexible assignments; reducing course load; increasing the length of programs; focusing on breaking down more time-intensive tasks, program requirements, and demands; or providing multiple or flexible options of due dates for assignment completion.

It may sound simplistic, but intentionally setting assignment deadlines for midweek instead of Sunday nights may make a difference, given that weekends tend to be the busiest days for leaders in communities of faith. Research also indicates that African American leaders in their communities of faith feel unprepared for the multiple demands of their ministry (Cohall & Cooper, 2010). It is necessary to design effective, well-tailored, and intentional programs to respond to the most immediate needs of African American leaders in their communities, making them valuable enough to compete with their other compelling life demands. Further research is needed to more closely explore the real practical needs of African American leaders in their communities of faith and the relationship between the variables apparently leading to their high likelihood of attrition. It is also important to explore how faith and the desire to serve others may be related to "holding back" African American leaders in their academic pursuits.

Levels of Spirituality

One of the goals of this research project was to contribute to a successful future by discovering how to offer higher education to racial minorities. The finding that spirituality seems to moderate the relationship between Tinto's characteristics of academic success and persistence among African Americans has many important implications for social change. First, higher education institutions can join communities of faith by expanding and increasing their focus on producing minority faculty to shape the workforce of tomorrow through partnerships. Institutions of higher learning can open satellite campuses in church buildings and offer significant incentives such as grants to support and encourage attendance. Considering that the data explored in this study show that communities of faith are generally interested in education, educational partnerships with communities of faith have a great potential for success. Therefore, with the aforementioned motivation, such an endeavor geared toward education would represent a secure return on investment.

Another positive feature of higher education partnerships with African American communities of faith is the communities' tradition of social service, social justice, and inclusion. The educational resources invested and shared have the potential to impact entire communities. If PhD students connected to communities of faith are required to develop research projects within their districts as part of payment for their education, governments and development organizations could then foster partnerships with local PhD students to undertake needed research. Such intentional research collaborations could be used to provide well-informed and tailored support to the recognized needs of each specific community.

Second, the possible mediation between spirituality and degree completion offers institutions of higher learning and faculty practical resources to promote degree completion. The

knowledge that some African Americans value and feel inspired by spirituality when pursuing their degree can be employed by institutions and faculty to promote space and permission for spiritual expression. Some African Americans tend to feel isolated in higher education settings, particularly in PWIs, because they perceive that their spirituality is seen as inconsistent with the rigor of academia (Jett, 2010, 2011). Intentional normalizing of spiritual perspectives and practices among African Americans could offer a simple yet apparently effective strategy to promote retention efforts toward degree completion.

Social and Academic Integration

This author still considers Tinto's model to be a comprehensive manner in which investigate dynamics of attrition. However, as explored in this section, to be employed properly, the model needs measures to detect and assess the dynamics of social and academic exclusion experienced by African Americans and other minorities. It is imperative to devise measures based on qualitative research that are respectful of the social and academic exclusion experienced by African Americans and other minorities in doctoral programs. Common sense reveals that a scale geared for more mature, experienced, and educated minorities is long overdue. In addition, more research is necessary to continue to investigate the dynamics of attrition and persistence among African Americans. Qualitative and quantitative research is vital to properly address the underlying problems which lead to the present underrepresentation of African American faculty and other minorities in many fields of higher education. The dynamics and interactions of spirituality identified in the study require further exploration and study.

Spirituality as a Moderator of Degree Completion

The knowledge that spirituality is likely to moderate degree completion calls for complex further research. First, there is a need to closely investigate the relationship between spirituality

and academic success through qualitative research in order to better capture nuances of the apparent relationship established through this study. Second, additional investigation is necessary to explore the applicability of employing spiritual resources not only in academic settings but also in other social settings where African Americans experience challenges. Third, the apparent relationship between spirituality and persistence points to the power of spirituality to offer powerful coping mechanisms and skills.

It is known that stigma depletes self-regulative functions, thereby weakening cognitive abilities. The fact that spirituality facilitated the process of degree completion authenticates spirituality as a strong self-regulative strategy as already observed in previous studies (Laurin et al., 2012; McCullough & Willoughby, 2009). Further research is necessary to investigate the relationship between spirituality and self-regulation among African Americans. It is also necessary to devise integrative clinical interventions that employ spiritual coping strategies to promote self-regulation and other resources to surmount the constant stigma experienced by African Americans in academic settings. Similarly, the application of such interventions to other settings where African Americans experience stigma requires further research.

Limitations

This study possesses several limitations. First, it employed surveys to explore and quantify very subjective experiences of spirituality and social academic education. It is possible that a hybrid study including qualitative research would yield more accurate results. This study also employed self-assessment measures. The coding of observed social and academic behaviors would render more accurate results.

The study sample was comprised of PhD students, yet participants were not asked about their fields of study; such information would offer a broader perspective. Online surveys were

employed in this study, therefore excluding individuals without digital access. This study explored persistence and spirituality as related to Tinto's model; an exploration of the impact of spirituality and persistence by employing different models is needed.

This investigation explored persistence with relation to academic and social integration. Social integration involves relationships; an exploration of participants' settings and styles of relating would be beneficial. Regarding settings, the investigation of social and academic integration among the sample was measured by a scale designed for a general population, not specifically for African Americans. For that reason, it is possible that social and academic dynamics present in the model could not be identified. The exploration of attachment styles adopted by participants would have offered important information about social styles of relating. At the same time, an exploration of participants' attachment to God would have increased the strength of the findings and offered more clarity about the dynamics of faith, persistence, and God attachment. This study also observed persistence; a measure of motivation would assist in distinguishing motivation as a personal trait or faith-related trait. This study focused on the specific population of African American PhD students; therefore, no inferences related to the general population can be made from this investigation. The conclusions reviewed here should be read with caution. The present study has only investigated associations and the strength of relationships between the variables. Thus, as a correlational study, no causation can be established.

Conclusion

The purpose of this study was to address the high attrition rates among African Americans and expand the current understanding of attrition in order to devise effective strategies to reduce premature academic exit among Black PhD students. This investigation

established a strong likelihood of a moderating relationship between spirituality and persistence among African American PhD students. Some important findings from this study can be added to the present effort to address the current high levels of attrition among African American PhD students. Among these important findings is the negative relationship between the belief in a higher power and persistence, linked to the possibility that holding a position of leadership in a community of faith diminishes one's probability of graduating by 75%. Another finding is the existence of limitations in properly measuring social and academic dynamics of African American PhD students and other minorities when employing Tinto's model. Based on its findings, this study also offered practical suggestions to address the potential minority faculty shortage by encouraging institutions of higher learning to foster educational partnerships with communities of faith. Much is yet to be explored.

In African American faith traditions, the words of the prophet Isaiah are highly respected and employed. This researcher uses his words and spiritual analogy to conclude this study. When daring social cultural challenges came upon Isaiah's people, inspired by the Divine, Isaiah stated: "Behold, I will do something new, now it will spring forth; will you not be aware of it? I will even make a roadway in the wilderness, rivers in the desert" (Is. 43:19, New American Standard Bible). The prophet is most likely alluding to the wilderness and deserts of Judea, known by its granite peaks, sandstone mountains, chalk cliffs, little rain, and high temperatures. The wilderness and deserts were places of intense hardship and certain death (Hoffmeier, 2005). Given the history of Black Americans, briefly explored by this study, the promise of rivers in the wilderness is understandably resonant with African Americans. As a people, African Americans have endured a history of family separation and related emotional distress, cruel means of transportation, slavery, social isolation, language barriers, loss of identity, intense labor,

violence, barriers to education, barriers to social mobility, poverty, injustice, systematically disempowering laws, segregation, terror, mass migration, social stigma, incarceration, and discrimination (see Chapter Two: Literature Review). It seems that through spirituality, African Americans find their "rivers" of resilience and strength in the "wilderness" and "deserts" of high academia. Some refuse to die in places of certain death. This study pointed to the likelihood that when attrition models predict certain death, through faith, African Americans hold on to life and complete their degree. Much is to be learned from their compensatory strategies.

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APPENDIX A: IRB Approval Letter

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

January 25, 2018

Kerley Perminio Most
IRB Exemption 3100.012518: I Refuse to Die: Exploring the Relationship between Spirituality and Persistence among African American Ph.D. Students and Graduates

Dear Kerley Perminio Most,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under exemption category 46.101(b)(2), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:101(b):

> (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
> (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Please note that this exemption only applies to your current research application, and any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.

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

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
The Graduate School

APPENDIX B: Advertisements and Email to Recruit Participants
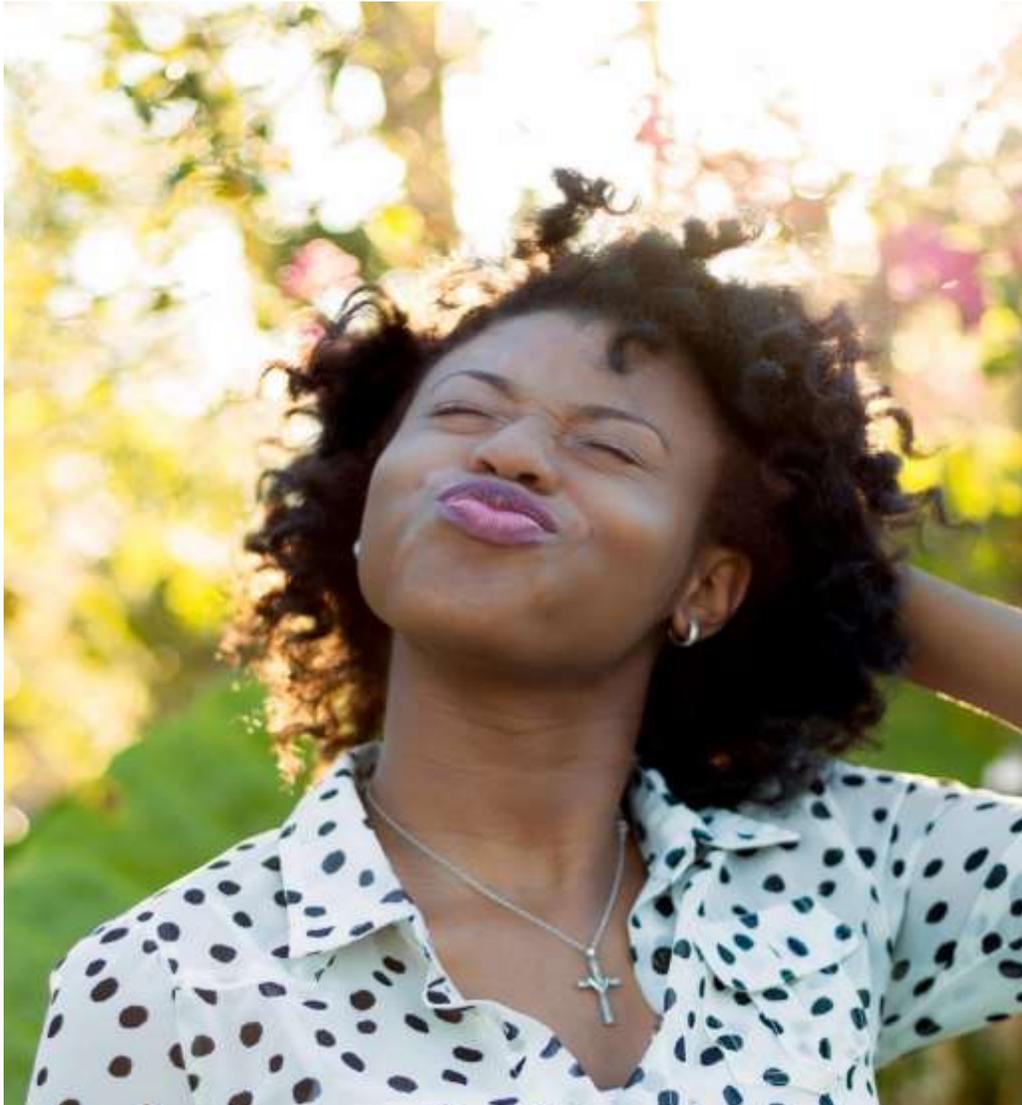
You Did Not Want to Stop Your PhD, yet Many Things Happened in Your Life…

- Are you African American?
- Have you stopped attending your PhD program for more than one year?
- Have you taken all your classes and stopped trying to finish your dissertation?

If you answered yes to the first question and yes to the second or third question, you may be eligible to participate in my candidacy defense research study that investigates the relationship between spirituality and degree completion among African Americans. For more information please click the link

You Were a PhD Student, yet
Many Other Things Needed Your Attention…

- Are you African American?
- Have you stopped attending your PhD program for more than one year?
- Have you taken all your classes and stopped trying to finish your dissertation?

If you answered yes to the first question and yes to the second or third question, you may be eligible to participate in my candidacy defense research study that investigates the relationship between spirituality and degree completion among African Americans. For more information please click the link

Congratulations!

You have transcended yourself!

You have earned your PhD!

Dear colleague,

- Are you African American?

- Have you recently successfully defended your dissertation?

- Have you had a PhD for a long time?

If you answered yes to the first question and yes to the second or third question, you may be eligible to participate in my candidacy defense research study that investigates the relationship between spirituality and degree completion among African Americans. For more information please click the link
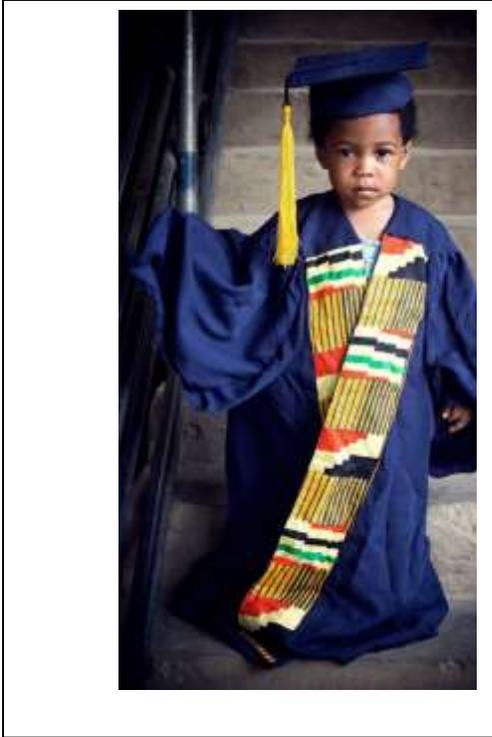
Congratulations!

You have accomplished your dream!

You have earned your PhD!

Dear colleague,

- Are you African American?

- Have you recently successfully defended your dissertation?

- Have you had a PhD for a long time?

If you answered yes to either of these questions, you may be eligible to participate in my candidacy defense research study that investigates the relationship between Spirituality and Degree Completion among African Americans. For more information please click the link.

Email to possible participants

Dear Former Doctoral Student,

My name is Kerley Perminio Most, and I am a doctoral candidate in Counselor Education and Supervision at Liberty University. I would like to invite you to participate in my dissertation research study examining the **relationship between spirituality and degree completion among African American doctoral students and graduates.** I am conducting this study to fulfill degree requirements for the Ph.D. in Counselor Education and Supervision at Liberty University. This study has been approved by the Liberty University Institutional Review Board (Approval # 3100.012518).

About the Study:

This study explores the relationship between spirituality and degree completion among African American doctoral students and graduates. **The survey is anonymous and takes only about 17-20 minutes to complete.** Participation in this survey is completely voluntary, and you have the right to withdraw at any time during the survey by exiting the survey and closing the browser window.

Eligibility:

You may participate in this study if you meet the following criteria:

1. You are 18 years of age or older

2. You are African American

3. You have earned a PhD, or

4. You were enrolled in a PhD program in the past but left and did not graduate.

Contacting the Researcher:

If you have any questions regarding this study you may contact me on my cell (xxx-xxx-xxxx) or email at ▮▮▮▮▮▮▮▮▮. My dissertation chair is Dr. John Thomas and he may be reached at ▮▮▮▮▮▮▮▮.

How to participate:

To participate in this study, please click this ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮. This link will take you to a consent form and to the survey. **Please forward this e-mail to eligible colleagues, friends, and relevant listservs**.

Thanks in advance for your help with this project!

Sincerely,

Kerley Perminio Most, MA, LPC, PhD Candidate

APPENDIX C: Demographic Scale

Demographic Survey

1. Please select your highest level of education:

   a) Some high school or less   b) High school graduate/GED   c) Some college

   d) Bachelor's degree   e) Master's degree   f) PhD

2. Please select the option that best describes you:

   a) I have considered getting a PhD   b) I started a PhD program but didn't finish

   c) I have never considered getting a PhD

3. How long were you in the PhD program before graduating?

   a) 2–4 years b) 4–6 years   c) 6–8 years d) 8–10 years c) More than 10 years

4. How long were you in the program before leaving it? (for individuals that did not finish their PhDs.)

   a) ____less than a year   b) ___1–3 years   c) ___ 3–6 years d) ___6–8 years or more

   b) ___ all but dissertation

5. Age:

   a. ___ 20–29   b. ___ 30–39   c. ___ 40–49   d. ___ 50–59 f. __ 60 or older

6. Sex:

   a. ___Male   b. ___ Female   c. ___Transgender

7. Racial background: Please select all that apply.

   a. ____ African American

   b. ____ African

   c. ____ Black South American

   d. ____ Black from the Islands.

   e. ____ Biracial

8. What was the highest level of formal education obtained by your mother?

   a) ____ Middle school or less

   b) ____ Some high school

   c) ____ High school graduate

   d) ____ Some college

   e) ____ College graduate (Associate's or bachelor's degree)

f) ____ Some graduate study

g) ____ Received a master's degree

h) ____ Received a Doctorate degree

9. What was the highest level of formal education obtained by your Father?

a) ____ Middle school or less

b) ____ Some high school

c) ____ High school graduate

d) ____ Some college

e) ____ College graduate (Associate's or bachelor's degree)

f) ____ Some graduate study

g) ____ Received a master's degree

h) ____ Received a doctorate degree

10. Parents' combined annual income in thousands:

a. ___ 20–40 b. ___ 40–60 c. ___ 60–80 d.___80–100 e. ___100 or more

f.___ unknown

11. How many siblings do you have?

a. __ 1 b. __ 2 c. __ 3 d. __ 4 c.__ 5 or more.

12. GRE score:

a. __ 200 to 290 b. __ 304 to 317 c. ___ 328 or above

13. Master's GPA:

a. ___2.7 to 3.0 b. ___ 3.3 to 3.7 c. ___ 3.8 to 4.0

14. Doctoral GPA:

a. ___2.7 to 3.0 b. ___ 3.3 to 3.7 c. ___ 3.8 to 4.0

15. What University did you graduate from?

_____

16. When did you graduate?

_____

17. Choice in attending the university for your doctoral program:

a. __1st choice b. __ 2nd choice c. __ 3rd choice d. __ 4th choice

18. How confident are you that choosing to attend your university was the right decision?

a. ___Not confident c.___ Maybe confident d. __Confident e. ___Very confident

19. Are you part of a community of faith?

     a. ___ yes   b. ___ no

20. Are you a leader in your community of faith?

     a. ___yes   b. ___no

21. How often do you attend services at a community of faith?

     a. ___ Weekly   b. ___ Bi-weekly   c. __Once a month   d. ___ Twice a Year

     e. ___ Do not attend

22. What type of faith expression/beliefs define your community of faith?

     a. ___ Catholic   b. ___ Evangelical   c. ___ Pentecostal   d. ___ Protestant

     c. ___ Muslim   d. __ Jewish   e. ___Other _____

23. Do you offer pro-bono professional services to your community of faith?

     a. ___ yes   b. __ no   c. ___n/a

APPENDIX D: Institutional Integration Scale

(Pascarella & Terenzini, 1980)***modified items in italic and underlined***

PEER GROUP INTERACTIONS

1. Since coming to this university I have developed close personal relationships with other students
2. The student friendships I have developed at this university have been personally satisfying
3. My interpersonal relationships with other students have had a positive influence on my growth, attitudes, and values
4. My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas
5. It has been difficult for me to meet and make friends with other students
6. Few of the students I know would be willing to listen to me and help me if I had a personal problem.
7. Most students at this university have values and attitudes different from my own.

INTERACTONS WITH FACULTY

1. My non-classroom interactions with faculty have had a positive influence on my personal growth, values and attitudes.
2. My non-classroom interactions with faculty have had a positive influence on my intellectual growth and interests in ideas.
3. My non-classroom interactions with faculty have had a positive influence on my career goals and aspirations. **Modified:** *At my university, I collaborated with faculty and presented our projects at professional conferences.*
4. Since coming to this university I have developed a close, personal relationship with at least one faculty member.
5. I am satisfied with the opportunities to meet and interact informally with faculty members. **Modified**: *I was satisfied with the opportunities to interact and to collaborate with faculty members.*

FACULTY CONCERN FOR STUDENT DEVELOPMENT AND TEACHING

1. Few of the faculty members I have had contact with are generally interested in students. **Modified:** *Few of the faculty members I had contact with were generally interested in me.*
2. Few of the faculty members I have contact with are generally outstanding or superior teachers.
3. Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students. **Modified**: *Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to me.*
4. Most of the faculty members I have had contact with are interested in helping students grow in more than just academic areas.
5. Most faculty members I have had contact with are genuinely interested in teaching.

ACADEMIC AND INTELLECTUAL DEVELOPMENT

1. I am satisfied with the extent of my intellectual development since enrolling in this university
2. My academic experience has had positive influence on my intellectual growth and interest in ideas.
3. I am satisfied with my academic experience at this university. **Modified**: *I was satisfied with my academic experience and professional opportunities at my university*.
4. Few of my courses this year have been intellectually stimulating.
5. My interest in ideas and intellectual matters has increased since coming to this university
6. I am more likely to attend a cultural event (i.e., concert, lecture art show) now then I was before coming to this university. **Modified:** *I was able to publish while I was a student*.
7. I have performed academically as well as anticipated I would

INSTITUTIONAL AND GOAL COMMITMENTS

1. I am confident that I made the right decision in choosing to attend this university.
2. It is likely that I will register at this university next fall. **Modified:** *At the end of each semester it was likely that I would want to register for the next.*
3. It is important to me to graduate from this university.
4. I have no idea at all what I want to major in. **Modified**: *I had no idea at all about what type of research projects I would want to get involved with.*
5. Getting good grades is not important to me. **Modified**: *Acquiring excellence and scholarship was not important to me.*
6. It is not important to me to graduate from this university

For each of the following statements, circle the choice that best describes your personal experience when you were a PhD student:

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
1. I was confident that I had made the right decision in choosing to attend my university.	1	2	3	4	5
2. At the end of each semester it was likely that I would want to register for the next.	1	2	3	4	5
3. It was important to me to graduate from my university.	1	2	3	4	5
4. I had no idea at all about what type of research projects I would want to get involved with.	1	2	3	4	5
5. Acquiring excellence and scholarship was not important to me.	1	2	3	4	5
6. It was not important to me to graduate from my university.	1	2	3	4	5
7. Upon going to my university, I developed close personal relationships with other students.	1	2	3	4	5
8. The student friendships I had developed at my university were personally satisfying.	1	2	3	4	5
9. My interpersonal relationships with other students had a positive influence on my personal growth, attitudes, and values	1	2	3	4	5
10. I was difficult for me to meet and make friends with other students.	1	2	3	4	5
11. My interpersonal relationships with other students had a positive influence on my intellectual growth and interest in ideas.	1	2	3	4	5
12. Few of the students I knew would be willing to listen to me and help me if I had a personal problem	1	2	3	4	5
13. Most students at my university had values and attitudes different from my own.	1	2	3	4	5
14. My non-classroom interactions with faculty had a positive influence on my personal growth, values and attitudes.	1	2	3	4	5
15. My non-classroom interactions with faculty had a positive influence on my intellectual growth and interest in ideas.	1	2	3	4	5
16. At my university, I collaborated with faculty and presented our projects at professional conferences.	1	2	3	4	5

17. I developed a close, personal relationship with at least one faculty member while studying at my university. **1 2 3 4 5**

18. I was satisfied with the opportunities to interact and to collaborate with faculty members. **1 2 3 4 5**

19. Few of the faculty members I had contact with were generally interested in me. **1 2 3 4 5**

20. Few of the faculty members I had contact with were generally outstanding or superior teachers **1 2 3 4 5**

For each of the following statements, circle the choice that best describes your personal experience:

	1 Strongly disagree	**2 Disagree**	**3 Not sure**	**4 Agree**	**5 Strongly agree**
21. Few of the faculty members I had contact with were willing to spend time outside of class to discuss issues of interest and importance to me.	1	2	3	4	5
22. Most faculty members I had were interested in helping me grow in more than just academic areas	1	2	3	4	5
23. Most faculty members I had contact with were genuinely interested in teaching.	1	2	3	4	5
24. I was satisfied with the extent of my intellectual development while I was enrolled in my university.	1	2	3	4	5
25. My academic experience had a positive influence on my intellectual growth and interest in ideas.	1	2	3	4	5
26. Few of my courses were intellectually stimulating.	1	2	3	4	5
27. I was satisfied with my academic experience and professional opportunities at my university	1	2	3	4	5
28. I was able to publish while I was a student.	1	2	3	4	5
29. My interest in research and intellectual matters was increased by going to my university.	1	2	3	4	5
30. While at my university. I had performed academically as well as I had anticipated I would.	1	2	3	4	5

APPENDIX E: Spirituality Scale

(Jagers & Smith, 1996)

For each of the following statements, circle the choice that best describes your personal experience:

	COMPLETELY FALSE	MOSTLY FALSE	SOMEWHAT FALSE	SOMEWHAT TRUE	MOSTLY TRUE	COMPLETELY TRUE
1. To me, every object has some amount of spiritual quality.	1	2	3	4	5	6

2. To have faith in each other is to have faith in God.

3. I believe that the world is not under our control but is guided by a greater force.

4. All people have a common core which is sacred.

5. I act as though unseen forces are at work.

6. We all need to have knowledge of the world's religions.

7. Just because I have faith and beliefs does not mean I live that way all of the time.

8. No preacher could ever understand the problems I have.

9. Without some form of spiritual help, there is little hope in life.

10. I pray before eating a meal.

11. The most important part of me is the inner force which gives me life.

12. My happiness is found in the material goods I own.

13. I feel that all life is simply made up of different chemicals.

14. I pray before I go on a trip.

15. To me the world can be described as a big machine.

16. If I had more money, life would be happier.

17. I don't know where to find the answers to life's questions.

18. To me, an object's material worth is that object's value.

19. Though I may go to the doctor when I am ill, I also pray.

20. I feel that life is made up of spiritual forces.

APPENDIX F: Consent Forms and Permissions

CONSENT FORM (MTurk Participants)

"I Refuse to Die": Exploring the Relationship between Spirituality and Persistence among

African American Ph.D. Students and Graduates

*Kerley Perminio Most Liberty University Counselor Education and Supervision Program-
School of Behavioral Sciences*

You are invited to be in a research study about African Americans and degree completion. You were selected as a possible participant because you are an African American who has attended a PhD program. Please read this form and ask any questions you may have before agreeing to be in the study.

My name is Kerley Perminio Most, I am a doctoral candidate in the Counselor Education and Supervision Program- School of Behavioral Sciences at Liberty University, and I am conducting this study.

Background Information: The purpose of this study is to investigate the relationship between spirituality and degree completion among African American doctoral students.

Procedures: If you agree to be in this study, I would ask you to do the following things:

1. *Complete the demographic survey*. This will take you an average of 4 minutes to complete.
2. *Complete the Spirituality Scale*. This will take you an average of 5 minutes to complete.
3. *Recall your experiences as PhD students by completing the Institutional Integration Scale*. This will take you an average of 7 minutes to complete.
4. *Optional: Forward the email with the research link* to African American friends or acquaintances who have attended a PhD program.

Risks: The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

Benefits: Benefits to society include providing data that might be used by administrators and professors at institutions of higher education to improve completion rates among Black PhD

students. By supporting the intellectual advancement of a minority group, this study indirectly promotes acts of social justice.

Compensation: Participants who take the survey through Mechanical Turk (MTurk), an internet crowdsourcing marketplace operated by Amazon, will receive a compensation of $2.50 for completing the survey.

Confidentiality: The records of this study will be kept private. In any sort of report, I might publish, I will not include any information that will make it possible to identify a subject.

Research records will be stored securely, and only my chair and I will have access to the records.

Your responses to this survey will be anonymous. To ensure anonymity of your responses to this research study, your IP addresses will not be collected.

Voluntary Nature of the Study: Your decision to participate or decline participation in this study is completely voluntary. Once you begin, you have the right to withdraw from participation at any time prior to submitting the survey. Additionally, withdrawal will not affect your current or future relationship with this researcher or with Liberty University in any way.

How to Withdraw from the Study: If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Contacts and Questions: Again, my name is Kerley Perminio Most. If you have questions at any time about this study, or you experience adverse effects as the result of participating in this study, please contact me, as the principal investigator. My phone number is (xxx) xxx-xxxx and my email is (xxxxxxx@liberty.edu). You may also contact my dissertation chair, Dr. John Thomas (xxxxxxx@liberty.edu).

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 1887, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the above information. By clicking on the link below, I consent to participate in the study.

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS IRB APPROVAL INFORMATION WITH CURRENT DATES HAS BEEN ADDED TO THIS DOCUMENT.)

CONSENT FORM (Facebook, Listserv, and Email Participants)

*"I Refuse to Die": Exploring the Relationship between Spirituality and Persistence among
African American Ph.D. Students and Graduates*

*Kerley Perminio Most Liberty University Counselor Education and Supervision Program-
School of Behavioral Sciences*

You are invited to be in a research study about African Americans and degree completion. You
were selected as a possible participant because you are an African American who has attended a
PhD program. Please read this form and ask any questions you may have before agreeing to be in
the study.

My name is Kerley Perminio Most, I am a doctoral candidate in the Counselor Education and
Supervision Program- School of Behavioral Sciences at Liberty University, and I am conducting
this study.

Background Information: The purpose of this study is to investigate the relationship between
spirituality and degree completion among African American doctoral students.

Procedures: If you agree to be in this study, I would ask you to do the following things:

1. *Complete the demographic survey*. This will take you an average of 4 minutes to
   complete.
2. *Complete the Spirituality Scale.* This will take you an average of 5 minutes to complete.
3. *Recall your experiences as PhD students by completing the Institutional Integration
   Scale*. This will take you an average of 7 minutes to complete.
4. *Optional: Forward the email with the research link* to African American friends or
   acquaintances who have attended a PhD program.

Risks: The risks involved in this study are minimal, which means they are equal to the risks you
would encounter in everyday life.

Benefits: Benefits to society include providing data that might be used by administrators and
professors at institutions of higher education to improve completion rates among Black PhD
students. By supporting the intellectual advancement of a minority group, this study indirectly
promotes acts of social justice.

Compensation: Participants who take the survey through Qualtrics, an internet crowdsourcing survey platform, will receive a compensation of $3.00 to complete the survey.

Confidentiality: The records of this study will be kept private. In any sort of report, I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only my chair and I will have access to the records. Your responses to this survey will be anonymous. To ensure anonymity of your responses to this research study, your IP addresses will not be collected

Voluntary Nature of the Study: Your decision to participate or decline participation in this study is completely voluntary. Once you begin, you have the right to withdraw from participation at any time prior to submitting the survey. Additionally, withdrawal will not affect your current or future relationship with this researcher or with Liberty University in any way.

How to Withdraw from the Study: If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Contacts and Questions: Again, my name is Kerley Perminio Most. If you have questions at any time about this study, or you experience adverse effects as the result of participating in this study, please contact me, as the principal investigator. My phone number is (xxx) xxx-xxxx and my email is (xxxxxx@liberty.edu). You may also contact my dissertation chair, Dr. John Thomas (xxxxxx@liberty.edu).

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 1887, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the above information. By clicking on the link below, I consent to participate in the study.

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS IRB APPROVAL INFORMATION WITH CURRENT DATES HAS BEEN ADDED TO THIS DOCUMENT.)

CONSENT FORM (Qualtrics Participants)

"I Refuse to Die": Exploring the Relationship between Spirituality and Persistence among

African American Ph.D. Students and Graduates

Kerley Perminio Most Liberty University Counselor Education and Supervision Program-
School of Behavioral Sciences

You are invited to be in a research study about African Americans and degree completion. You were selected as a possible participant because you are an African American who has attended a PhD program. Please read this form and ask any questions you may have before agreeing to be in the study.

My name is Kerley Perminio Most, I am a doctoral candidate in the Counselor Education and Supervision Program- School of Behavioral Sciences at Liberty University, and I am conducting this study.

Background Information: The purpose of this study is to investigate the relationship between spirituality and degree completion among African American doctoral students.

Procedures: If you agree to be in this study, I would ask you to do the following things:

1. *Complete the demographic survey*. This will take you an average of 4 minutes to complete.

2. *Complete the Spirituality Scale*. This will take you an average of 5 minutes to complete.

3. *Recall your experiences as PhD students by completing the Institutional Integration Scale*. This will take you an average of 7 minutes to complete.

4. *Optional: Forward the email with the research link* to African American friends or acquaintances who have attended a PhD program.

Risks: The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

Benefits: Benefits to society include providing data that might be used by administrators and professors at institutions of higher education to improve completion rates among Black PhD students. By supporting the intellectual advancement of a minority group, this study indirectly promotes acts of social justice.

Compensation: Participants will not be compensated for participating in this study.

Confidentiality: The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only my chair and I will have access to the records. Your responses to this survey will be anonymous. To ensure anonymity of your responses to this research study, your IP addresses will not be collected

Voluntary Nature of the Study: Your decision to participate or decline participation in this study is completely voluntary. Once you begin, you have the right to withdraw from participation at any time prior to submitting the survey. Additionally, withdrawal will not affect your current or future relationship with this researcher or with Liberty University in any way.

How to Withdraw from the Study: If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Contacts and Questions: Again, my name is Kerley Perminio Most. If you have questions at any time about this study, or you experience adverse effects as the result of participating in this study, please contact me, as the principal investigator. My phone number is (xxx) xxx-xxxx and my email is (xxxxx@liberty.edu). You may also contact my dissertation chair, Dr. John Thomas (xxxxx@liberty.edu).

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 1887, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the above information. By clicking on the link below, I consent to participate in the study.

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS IRB APPROVAL INFORMATION WITH CURRENT DATES HAS BEEN ADDED TO THIS DOCUMENT.)

PERMISSION (to employ the Spirituality Scale)

From: Robert Jagers <░░░░░░░░░░░░
Sent: Wednesday, October 4, 2017 7:27 AM
To: Perminio Most, Kerley
Subject: Re: Permission to employ your SS scale

Good morning Kerley,

You are correct. it has been difficult to find a copy of the measure. Of course, you have permission to use it. I will let you know if I come across any relevant materials.

Best,

Rob

On Tue, Oct 3, 2017 at 12:04 PM, Perminio Most, Kerley <░░░░░░░░░░░░░> wrote:

Good morning Dr. Jagers,

I imagine it has been hard to find the scale. No problem at all I will dig and find it.

May I have official permission to employ it when I find?

Thank you!

Kerley Most

*I will send you a copy of my work when I am finally done! It is taking ages!