PREDICTING BLACK MALE UNDERGRADUATE DEGREE COMPLETION AT A PWI EXAMINING SINGLE INDICATORS OF RELIGIOSITY, ANXIETY, AND DEPRESSION.

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PREDICTING BLACK MALE UNDERGRADUATE DEGREE COMPLETION AT A PWI EXAMINING SINGLE INDICATORS OF RELIGIOSITY, ANXIETY, AND DEPRESSION.

A dissertation submitted in partial fulfillment of the requirement for the degree of Doctor of Philosophy with a concentration in Counselor Education and Supervision

By

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Acknowledgments

“PERHAPS the sentiments contained in the following pages, are not yet sufficiently fashionable to procure them general favor; a long habit of not thinking a thing wrong, gives it a superficial appearance of being right, and raises at first a formidable outcry in defense of custom. But the tumult soon subsides. Time makes more converts than reason.
Thomas Paine”

First, I would like to give thanks to God for sustaining me through the terrains to make it to this point on my journey. For all things were made through him, and without him not anything was made. In him was life, and life was the light of mankind. Ten years ago, I was shown a version of myself today in a vision, and his light led to its manifestation. Next, I would like to acknowledge my wife, and lovely dove, Jennifer. You have not only supported me through this journey but encouraged me through this entire process. I want to acknowledge my children Nigel, Nickolas, and Julia, you three bring me so much joy and have motivated me on this journey to leave you a legacy. Daddy loves you! I would also like to acknowledge my family and friends. First, I thank my mother, Kim, for sacrificing as a single parent, to provide the tools to become the first doctor in our family. I am forever grateful. To my sister Nicole, thank you for your prayers of protection through this period. My uncle Kevin, I appreciate you encouraging and celebrating with me through this process. Education is no longer the exception in our family but now the rule. Next, I would like to thank my brother Wally for just listening to me process my experiences. Thank you to my mentors Dr. Joshua Aronson, Dr. Onorio Shapparo, Dean Andrew P. Daire and the late Dr. Dimitri Bradley (you are truly missed MOG). I would like to acknowledge my chair Dr. Kaprea Johnson, thank you for being in my corner since the day we met. I appreciate you encouraging me to strive for better and never accepting mediocrity. I would like to thank my dissertation committee, Dr. Wheeler, Dr. Beatty, Dr. Conley, you all collectively helped to make this vision come into reality. I appreciate your patience, firmness, and kindness on this journey. Next, I
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God Bless You.
# TABLE OF CONTENTS

Table of Contents ........................................................................................................... v
List of Tables ......................................................................................................................... x
Abstract ...................................................................................................................................... xi

**CHAPTER 1: Introduction** .............................................................................................. 1

  Statement of the Problem ...................................................................................................... 2
  Overview of Key Constructs .................................................................................................. 3
    Degree Completion .............................................................................................................. 3
    Historical Context of Predominantly White Institutions ............................................... 3
    Anxiety and Depression .................................................................................................. 6
  Theoretical Framework ....................................................................................................... 8
  Religiosity ............................................................................................................................ 9
  Methodology ....................................................................................................................... 10
    Research Questions and Hypothesis ............................................................................... 10
    Study Significance .......................................................................................................... 11
  Definition of Terms ........................................................................................................... 13

**CHAPTER 2: Literature Review** ................................................................................... 15

  Degree Completion ............................................................................................................ 16
    Black College Students and Degree Completion ......................................................... 17
    Black Male College Students and Degree Completion ................................................. 19
  Resilience Theory ............................................................................................................. 23
  Mental health: Anxiety and Depression ............................................................................. 25
    Anxiety and Depression Among Black College Students ............................................. 26
Contributors of Anxiety and Depression for Black Students

Outcome of Unaddressed Anxiety and Depression

Buffers against Poor Mental Health Outcomes

Barriers to Treatment

Black Male College Students and Anxiety and Depression

Religiosity

Importance of God

Religious Coping

College Students and Religiosity

Black College Students and Religiosity

Black Male College Students and Religiosity

Sense of Purpose

Resilience

Framework for decision-making

Social Support

Spiritual Groundedness

Conclusion

CHAPTER 3: Methods

Research Methodology

Data Source

Instruments

Religiosity Items

Anxiety and Depression Items
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Demographic Survey</td>
</tr>
<tr>
<td></td>
<td>Degree Completion</td>
</tr>
<tr>
<td>56</td>
<td>Procedures</td>
</tr>
<tr>
<td>56</td>
<td>Current Study</td>
</tr>
<tr>
<td>57</td>
<td>IRB Procedures</td>
</tr>
<tr>
<td>57</td>
<td>Data Procedure</td>
</tr>
<tr>
<td>57</td>
<td>Participants</td>
</tr>
<tr>
<td>58</td>
<td>Research Design</td>
</tr>
<tr>
<td>58</td>
<td>Research Questions</td>
</tr>
<tr>
<td>59</td>
<td>Statistical Analyses</td>
</tr>
<tr>
<td>60</td>
<td>Statistical Assumptions</td>
</tr>
<tr>
<td>61</td>
<td>Religiosity Moderator</td>
</tr>
<tr>
<td>61</td>
<td>Preliminary Analysis</td>
</tr>
<tr>
<td>62</td>
<td>Power Analysis</td>
</tr>
<tr>
<td>62</td>
<td>Data Analysis Plan</td>
</tr>
<tr>
<td>63</td>
<td>Limitations</td>
</tr>
<tr>
<td>64</td>
<td>Conclusion</td>
</tr>
<tr>
<td>66</td>
<td>CHAPTER 4: Analysis</td>
</tr>
<tr>
<td>67</td>
<td>Preliminary Analysis</td>
</tr>
<tr>
<td>67</td>
<td>Data Cleaning</td>
</tr>
<tr>
<td>67</td>
<td>Reliability Analysis</td>
</tr>
<tr>
<td>68</td>
<td>Checking for Assumptions</td>
</tr>
<tr>
<td>71</td>
<td>Participants</td>
</tr>
</tbody>
</table>
References..........................................................................................................................94

List of Figures.........................................................................................................................124
LIST OF TABLES

Table 1: Reliability of Scale Score........................................................................................................68
Table 2: Misspecification Error..............................................................................................................69
Table 3: Logistic Regression Classification..........................................................................................70
Table 4: Cook’s Distance for Multivariate Outliers Test........................................................................70
Table 5: Race and Ethnicity of Sample as Compared to Institution at Time of Data Collection........71
Table 6: Degree Completion ..................................................................................................................72
Table 7: Frequency..................................................................................................................................73
Table 8: Descriptive Statistics ................................................................................................................74
Table 9: Pearson Chi-Square ..................................................................................................................74
Table 10: ANOVA for Religious Coping...............................................................................................74
Table 11: Logistic Regression Analyses of single indicators of Religiosity Predicting Degree Completion............................................................................................................................75
Table 12: Logistic Regression Analyses of Anxiety and Depression Predicts Degree Completion.....................................................................................................................................................76
ABSTRACT

Religiosity is a well-known protective factor for mental health as a coping and resilience source, which positively affects Black male college students' academic success. However, less is known about whether religiosity predicts degree completion and buffers Black males' mental health from a quantitative research approach. Black males have one of the lowest degree completion rates at four-year institutions. Students who experience poor mental health outcomes have lower degree completion. This study utilized logistic regression to investigate whether religiosity: (1) predicted degree completion among Black male undergraduate students and (2) moderated anxiety and depression. The results suggest Black males identify high indicators of religiosity. However, only a small relationship might exist between religiosity and degree completion for Black and African American male students.
CHAPTER 1
INTRODUCTION

This study aimed to investigate whether single indicators of religiosity predicted degree completion for Black males (the researcher utilizes Black and African American interchangeably) who may have symptoms of depression and anxiety and attend a Predominantly White Institution (PWI). PWIs are universities with less than 50% of minorities (Brown & Dancy, 2010) and are the majority of the universities in the United States, with about 2.3–18.5% Black student enrollment on average (Columbia University, 2017; VCU, 2017). It is generally accepted amongst researchers that a PWI can be an inherently stressful environment for Black male college students because of the historical context that exists around discrimination and discriminatory policies which can influence the experience of some Black males and other non-White persons may have (Constantine, Gainor, Lewis, & Wilton, 2002; Davis, 1998; Harper, Patton, & Wooden, 2009; Sprung & Rogers, 2020; Williams, Kanter, & Ching, 2018). In investigating the stress of attending a PWI, researchers have also investigated the impact and relationship to mental health in stress, anxiety, and depression (Bierman, 2006). In the general population, Black people receive a diagnosis of anxiety and depression at a 24.6% rate (Census, 2016). Among Black college students, the rate is 40% (Lipson, Kern, Eisenberg, & Brelan-Noble, 2018). High anxiety and depression rates can lead to less degree completion among college students (Boyraz, Horne, Owens, & Armstrong, 2016). More research is needed on the relationship between anxiety and depression on Black male college students' degree completion at PWIs. While research is still emerging on the relationship between Black male college students who attend PWIs, degree completion, and mental health, there is a parallel conversation and investigation into Black male retention, academic achievement, and degree completion at
Within the literature, religion has emerged as an important protective factor and buffer for Black Male retention and degree completion (Dancy, 2010; Herndon, 2003; Herndon & Hirt, 2004; Jett, 2010; Riggins et al. 2008; Wood, & Hilton, 2012). A prior study engaged Black males in quantitative (Cole, Prassel, Keller, & Carlson, 2020) and qualitative investigations to understand how religion manifests as a protective factor for Black males who attend PWIs (Dancy, 2010; Herndon, 2003; Herndon & Hirt, 2004; Jett, 2010; Riggins, McNeal, & Herndon, 2008; Wood & Hilton, 2012). Stakeholders in higher education and the community want evidence-based practices and solutions to support Black male academic success and degree completion in all colleges (Eakins & Eakins, 2017; Reeves & Guyot, 2017; Shapiro et al. 2017), but specifically at PWIs because they make up most US-based colleges and universities (Parker, Puig, Johnson, & Anthony, 2016; Thompson-Sanders, 2002).

**Statement of the Problem**

According to recent statistics, only 34% of Black males complete a college degree as compared to Black females 44%, White males 61%, and White females at 67% (NCES, 2016). While the percentage of degree completers is rising for Black students, there are still gaping disparities among males, especially for those who attend PWIs (32%) (Wyllie, 2018). In the literature, adverse racial experiences at PWIs can sometimes lead to anxiety and depressive symptoms (Bierman, 2006) and other studies have connected mental health challenges to lower odds of degree completion (Boyratz et al. 2016). In seeking to understand protective factors to support Black male degree completion at PWIs, religion is a promising emerging buffer; however, more research is needed on the relationship between religiosity, Black male college students who attend PWIs, mental health, and degree completion. Some studies include mental health (i.e., anxiety and depression) have not assessed its relationship to religiosity among Black
male college students (Boyratz et al. 2016; Chang, 2018; Cokley et al. 2013; Lipson et al. 2018; Williams, Kanter, & Ching, 2018), which is a major gap in the literature. The study sought to fill some of these gaps because attunement to the issues that cause disparities in degree completion for Black male students from a strength-based approach is essential to understand modifiers to support their movement toward degree completion at PWIs. Previous research is deficit-based (Banks, 2010; Harper & Hurtado, 2007; Kim & Hargrove, 2013; Nadal, Wong, Griffin, Davidoff, & Sriken, 2014), which does not help with understanding factors which protect Black males through degree completion.

**Overview of Key Constructs**

**Degree Completion**

Degree completion occurs when candidates complete all necessary degree requirements to graduate from their programs (Hagedorn, 2006). Universities and colleges report problems retaining Black males through degree completion (Cuyjet, 2006; National Urban League, 2007). According to a national survey, Black men had the lowest degree completion (33.5%), had the highest attrition rate at two-year institutions (60.9%), were least likely to complete degrees (40%), and had the highest dropout rate (41.1%) at four-year institutions (Shapiro et al. 2017) as compared to women and students of other races (Eakins and Eakins, 2017; Reeves and Guyot, 2017; Von Robertson and Chaney, 2017). Colleges and universities have implemented initiatives to provide support for Black males seeking college degrees (Brooms, 2018; Palmer, Davis, & Maramba, 2010). Despite these statewide and nationwide efforts and initiatives, degree completion rates for Black males have not experienced significant changes in the past 30 years (28% to 36%) (Palmer et al. 2010; NCES, 2018).

**Historical Context of Predominantly White Institutions**
Predominantly White Institutions (PWIs) are defined as colleges or universities with a population greater than 50% of White students (Brown & Dancy, 2010). According to Crenshaw (1995), PWIs maintain ideologies of White supremacy through social practices, resulting in continued subjugation of minority students. Many universities have a history of inclusive and exclusive practices that affect the campus racial climate (Antonio, Milem, & Chang, 2012). The United States has a long-lasting legacy of segregation and discriminatory practices that hinder educational opportunities for non-White people (Rothstein, 2015). This legacy has also been perpetuated by policymakers post the emancipation of slavery. For example, the prevailing belief at the time was African Americans were intellectually inferior to Whites; therefore, they should pursue manual labor jobs instead of higher education (Davis, 1998; Harper et al. 2009). Former President Thomas Jefferson stated, “[B]lacks [were] inferior to the Indians...lacked literary ability, the finer senses of other races and although exhibiting a little aptitude in music were both physically and mentally inferior to the whites” (Jefferson, Ford, & Leicester, 1826, p. 267).

Universities and colleges formerly resistant to integration must be intentional about diversity-related initiatives to counter the effects of segregation. Diversity-related initiatives help increase awareness and expose students to marginalized cultures and races (Bourke, 2016). Student affairs and multicultural offices develop such initiatives. PWIs may attempt to promote diversity by promoting the number of students they serve from diverse backgrounds. However, their day-to-day practices are typically structured around the White dominance and normalcy of whiteness (Wille, 2003). Black males who attend PWIs are more likely to experience negative racial encounters (Williams, Kanter, & Ching, 2018).

Racism is the belief that one ethnic-racial group is intellectually and inherently superior to another ethnic-racial group (Schmid, 1996). It can operate on an individual, relational, or
institutional level. Unfortunately, Black male undergraduate students who attend PWIs report experiences of overt and covert forms of racism and discrimination (Parker et al. 2016; Thompson-Sanders, 2002) can affect mental health and academic productivity (Allen, 1992; Allen, Epps, & Haniff, 1991; Fleming, 1984; Nettles, 1998b; Sue et al. 2007). The stress this group faces may not be limited to academic performance but also a direct response from the lack of belongingness among a White majority, pressures to succeed academically, and psychological responses from negative racial encounters such as racial microaggressions (Thompson-Sanders, 2002; Watkins et al. 2007). For example, compared to White students, African American students are 70% more likely to experience racial microaggressions (Williams, Kanter, & Ching, 2018). Racial microaggressions are “brief and commonplace daily verbal, behavioral, or environmental indignities, whether intentional or unintentional, communicating hostile, derogatory, or negative racial slights and insults toward people of color” (Sue et al. 2007, p. 271). The intentional and unintentional nature of these behaviors creates an ambiguity that makes understanding offenses challenging.

The challenges Black students face to pursue higher education at a PWI may relate to historically discriminatory practices (Anderson, 1988). Although outright discriminatory practices and overt language are no longer politically correct or acceptable, educational policies continue to limit the success of many African Americans (Thomas and Stanley, 1969; Tinto, 2006). For example, educational barriers such as biased college entrance exams, weak affirmative action laws, and rigorous college acceptance requirements continue to limit African Americans who pursue higher education (Tinto, 2006). The high school curriculum in school systems predominantly minority-based has not been revamped to help students meet these requirements (Tinto, 2006). Dual enrollment and advanced placement (AP) courses are seldom
offered in many schools with high minority enrollments, which many Black males are more likely to have attended before college (Harper et al. 2009). Nationally, over 56% of African American students who pursue higher education are enrolled in remedial classes (Jimenez, Sargrad, Morales, & Thompson, 2016). Considering all these factors together, Black men still enroll in PWIs and graduate. To strengthen the pipeline from enrolling to graduation, identifying protective factors is crucially important. One emerging protective factor for Black males in college is religiosity (Dancy, 2010; Herndon, 2003; Herndon & Hirt, 2004; Jett, 2010; Riggins et al. 2008; Weddle-West, Hagan, & Norwood, 2013; Wood & Hilton, 2012).

**Anxiety and Depression**

College-age students, entering college for the first time, report increases in anxiety and depression because of transitioning to become more independent, living away from home, and experiencing academic stress (Andrews & Wilding, 2010; Beiter et al. 2015). And Black males experience another added layer of stress related to exposure to racial microaggressions, lack of belongingness, and academic pressures, which can exacerbate symptoms of anxiety and depression (Katerndahl, 1993; Smith, Allen, & Danley, 2007). Depression is defined as a persistent, sad, low mood that lasts for two or more weeks (DSM-5; American Psychiatric Association [APA], 2016); whereas anxiety is defined as intense fear, excessive worrying, and debilitating apprehension (DSM-5; American Psychiatric Association [APA], 2016). The symptoms of depression and anxiety may present differently in African Americans as compared to their White counterparts, similar in gender differences (Saleem & Lambert, 2016; Robinson, Paxton, & Jonen, 2011). Therefore, these conditions are often underdiagnosed (Chandra & Minkovitz, 2007; Murry, Heflinger, Suiter, & Brody, 2011; Power, Eiraldi, Clarke, Mazzuca, & Krain, 2005). For example, depressive symptoms for African Americans may present in forms of
anger or aggression as opposed to persistent low mood or sadness some Whites may demonstrate (Saleem & Lambert, 2016; Robinson et al. 2011). In contrast, anxiety symptoms can sometimes be defensiveness, avoidance, and panic (Carter, Mitchell, & Sbrocco, 2012; Chambliss & Williams, 1995).

African Americans report higher depression and more unfavorable states of anxiety compared to their White counterparts (Williams, Chapman, Wong, & Turkheimer, 2012). Unfortunately, an identified health consequence of attending a PWI for Black males is anxiety and depression (Banks, 2010; Chatters, & Taylor, 2005; Nadal et al. 2014; Thompson-Sanders, 2002; Watkins et al. 2007). Black male students who attend PWIs report higher rates of anxiety, depression, and low self-esteem, specifically following negative racial encounters (Banks, 2010; Nadal et al. 2014). For example, Black students report these symptoms: “(a) constant anxiety and worry; (b) increased swearing and complaining; (c) inability to sleep; (d) sleep broken by haunting, conflict-specific dreams; (e) intrusive thoughts and images; (f) loss of self-confidence; (g) difficulty in thinking coherently or being able to articulate (confirming stereotype); (h) hyper-vigilance; (i) frustration; and (j) denial” because of negative racial encounters (Smith, Allen, & Danley, 2007, p. 556). Black students who experience higher rates of anxiety and depression have higher dropout and lower rates of degree completion (Boyraz et al. 2016). In the literature, adverse racial experiences can sometimes lead to anxiety and depression symptoms decrease degree completion (Boyraz et al. 2016).

The study utilized resilience theory to explore whether single indicators of religiosity (i.e., Importance of God, Religious Coping) increased the likelihood of degree completion and moderated mental health (i.e., anxiety, depression) among African American male college students (Rutter, 1987; Rutter, 2007). Knowing Black males are attending PWIs, religiosity
could be important to this group, and degree completion is imperative to their economic mobility and is duly significant to higher education administrators and other stakeholders in education.

Theoretical Framework

Resilience theorists suggest individuals who experience intense adversity can recover, grow, and experience achievement (Rutter, 2007; Ungar, 2008). Adversity is defined as a misfortunate, stressful, and calamitous situation that affects an individual mentally, emotionally, and physically (Rutter, 1987). Resilience theorists conclude protective factors reduce the consequences related to adversity, and resilience is not limited to one’s personality traits; however, it consists of a dynamic internal and external resource (Rutter, 2007; Ungar, 2008). Resilience theorists have expanded to explore among Black males the resilience related to academic success despite adversity (Trotman, 2011). Although obstacles occur, resilience places a great emphasis on one’s capacity to recover and adjust to change (Rutter, 1987). Specifically, a need for resilience exists among Black males to overcome the adversity related to the legacy of slavery, Jim Crow laws, and discriminatory practices (Anderson, 1988; Du Bois, 1977 [1935]; Harper, & Patton, 2007). Such practices have historically influenced degree completion among African Americans. Many Black males who have completed their degrees describe religion as their source of resilience (Herndon, 2003; Riggins et al. 2008). These men report reliance on God as a source of resilience in the face of adversity, uncertainty, and negative racial encounters (Herndon, 2003; Jett, 2010; Wood, & Hilton, 2012). Because 80% of African Americans identify as religious, many Black parents teach their children to rely on their faith during times of adversity (Herndon, 2003; Lee, 2019; Wood, & Hilton, 2012). Specifically, African American children are taught to use religiosity to dismantle racial hierarchies and cultural elitism (Breland-Noble, Wong, Childers, Hankerson, & Sotomayor, 2015; Hunt & Hunt, 1977). Many African
Americans recognize that one’s racial identity cannot be intellectually superior to another’s because they believe “God does not show favoritism” or partiality to specific groups according to race (Krivanek, 2013). Most Black and African Americans subscribe to Christianity (Abdullah, 2008; Key, 2014; Miller, 2019; Mofokeng, 1988; Pew Research Center, 2020; Rashad, 1994), Nation of Islam (NOI) (Abdullah, 2008; Rashad, 1994), and Hebrew Israelites (Key, 2014; Miller, 2019). Black and African American millennials identify religion as either very important or at least somewhat important as compared to Whites (49%) and Hispanics (59%) (Pew Research Center, 2018). Religion is a culturally appropriate means of coping with adverse circumstances and a potential protective factor for African American male undergraduate college students who attend and graduate from PWIs.

**Religiosity**

Religiosity is the identification of belief in a God or spiritual deity, reliance on a religious institution, and resource for coping and protection against negative consequences (Lee, 2019; Reich, Oser, & Scarlett, 1999). Today, researchers have investigated religiosity as a potential protective factor to buffer the negativity of adversities that may affect degree completion among African American students (Weddle-West et al. 2013). Because African Americans report believing in a God and God being important at a higher rate compared to people of other races (Pew Research Center, 2009, 2018, 2020), many African Americans may have a unique acculturation experience at PWIs due to their race and religion. For example, although many colleges and universities throughout the United States have been founded by churches, a disengagement from church affiliation has transformed the campus culture over the past 40 years (Burtchaell, 1998). Many public institutions practice secularism, a societal commitment to
bifurcating public-government institutions and religious dignitaries (McGuire, 2019; Mooney, 2010), which impacts the culture of many PWIs.

**Methodology**

In this study, the researcher investigated whether single indicators of religiosity, anxiety and depression examined from Black male college freshman (e.g., cohort 1 and 2) at year one predicted degree completion by year six. On average, Black males who complete their bachelor’s degrees typically do so by year six, making this an important marker of degree completion (NCES, 2016). And Black males who drop out do so between the first and second years (Mortagy, Boghikian-Whitby, & Helou, 2018). The researcher used a non-experimental correlational research design. A binary logistic regression model was used to assess whether single indicators of religiosity predicts degree completion among Black male college students. In addition, the researcher examined whether religiosity moderated the relationship between mental health (i.e., anxiety and depression) and degree completion. The researcher used archival data (i.e., Spit4Science) from a larger study (Conley, Overstreet, Hawn, Kendler, Dick & Amstadter, 2017). Last, project staff collected degree completion using university registrar information, which assessed graduation status for each participant. Previous researchers have investigated religiosity (Mooney, 2010) and mental health (Breland-Noble et al. 2015) as they relate to academic success separately; however, less is known about how mental health influences Black males’ degree completion and whether religiosity is a protective factor.

**Research Questions and Hypothesis**

RQ1: Do single indicators of religiosity (i.e., Importance of God, Religious Coping) collected freshman year increase degree completion for Black male undergraduate students by year six?
H1: Higher religiosity (i.e., Importance of God, Religious Coping) collected during freshman year, would predict degree completion by year six for Black male undergraduate students.

RQ2: Does mental health (e.g., anxiety and depression) collected during freshman year predicted degree completion by year six for Black male undergraduate students enrolled at a PWI?

H2: Higher levels of anxiety and depression would predict the lower likelihood of degree completion by year six.

RQ3: Do single indicators of religiosity moderate the relationship between anxiety, depression, collected during freshman year, and degree completion at year six?

H3: Single indicators of religiosity would moderate the relationship between anxiety, depression, collected during freshman year, and degree completion at year six.

**Study Significance**

This results from this dissertation study infer implications for counselor educators, office of student affairs, practitioners, and future research. The hypothesized positive associations between indicators of religiosity and degree completion would infer Black male undergraduate students' potential protective nature of resilience. Given the low degree completion, high dropout rates (Cuyjet, 2006; National Urban League, 2007; Shapiro et al. 2017), and lack of empirical evidence for religiosity (Dancy, 2010; Herndon, 2003; Herndon & Hirt, 2004; Jett, 2010; Riggins et al. 2008; Wood, & Hilton, 2012) in counseling, university stakeholders, counselors, and counselor educators could benefit from emerging findings.

Despite university efforts to increase Black retention and academic success, Black male degree completion rates have not changed in nearly 30 years (Palmer, Davis, & Maramba, 2010; NCES, 2018; Wilson-Sadberry, Winfield, & Royster, 1991). Previous literature suggests that religiosity is important to people who identify racially and ethnically as Black or African
American (Diamant & Mohamed, 2018; Pew Research Center, 2009, 2018). Many counselors and counseling students may not understand how to use religious and spiritual competencies in practice (Bohecker, Schellenberg, & Silvey, 2017). Although the literature stresses the importance of including spirituality and religion to achieve holistic wellness, a disconnect between endorsement of competencies and student comprehension for religiosity as it relates to race-ethnicity, age, culture, and gender. Counselors describe barriers related to feeling unprepared to address religion and spirituality in therapy (Adams, 2012; Henriksen et al. 2015). Many counselors and students describe not truly grasping the importance of religiosity to their clients and the therapeutic process (Adams et al. 2015; Hage, Hopson, Siegel, Payton, & DeFanti, 2006).

The current dissertation might offer significant insight regarding importance because the researcher explored the 'Importance of God,' 'Religious coping,' and 'Belief in God', mental health (i.e., depression, anxiety), and degree completion among Black male undergraduate students.
Definition of Terms

**Anxiety**: Consistent fear, apprehension, physiological responses (e.g., heart palpitations), and avoidant behavior (5th ed.; DSM-5; American Psychiatric Association [APA], 2016).

**Black/African Americans**: The term Black and African American is used interchangeably because African Americans alone do not capture students identified as Afro-Latinas, Afro-Caribbean, and people of ancestral African descent (Latorre, 2012; Martin, 1991; Smith, 1992).

**College students**: Individuals enrolled in a college or university typically of the ages of 18–24, enrolled part time, or full time (Lebron, Slate, & Lunenburg, 2020).

**Degree completion**: Successfully satisfying all necessary academic requirements and credits to graduate from a specific degree program (Hagedorn, 2006).

**Depression**: Persistent sad affect, low mood, motivation, and loss of interest (5th ed.; DSM-5; American Psychiatric Association [APA], 2013).

**Importance of God**: The role and level of significance God plays in a person’s life, reflected in a God or religious deity, reflects a central part of their identity (Miller et al. 2000).

**Religiosity**: Connectedness with a religious doctrine centered on a supernatural deity or a God (Reich et al. 1999), which creates a greater sense of awareness, meaning, and transcendence (LeDoux, 2019). Many Blacks describe religiosity similar to spirituality (Dancy, 2010; Herndon, 2003; Herndon & Hirt, 2004; Jett, 2010; Riggins et al. 2008; Wood & Hilton, 2012). Specifically, Black Christians stress religiosity is their relationship with God (i.e., Jesus) over religious practices (Bennett-Carpenter, McCallion, & Maines, 2013).
Religious Coping: A “framed cognitive, emotional, or behavioral response to stress. It may serve many purposes, including achieving meaning in life, closeness to God, hope, peace, connection to others, self-development, and personal restraint” (Pargament, 1997, p. 310; 2011).
CHAPTER 2
LITERATURE REVIEW

In chapter two, the researcher summarized the literature to substantiate the need for research on the relationship between religiosity as a source of resilience and protection for anxiety, depression, and degree completion among African American male college students. Resilience theory suggests the importance of four processes occurs when overcoming adversity: (1) reduction of risk, (2) reduction in negative catalyst, (3) establishment and maintenance of self-esteem and -efficacy, and (4) opportunities for success. Thus, gaps in the literature exist on anxiety and depression, and whether religiosity promotes resilient processes for Black males that lead to academic achievement. The first section explores degree completion, which is the opportunity for success that resilience provides to Black male undergraduate students at PWIs. Next, to understand whether the risk for mental health problems contributed to a negative catalyst for degree completion, the researcher reviewed literature that addressed Black males and mental health consequences. Specifically, the researcher included a synthesis of studies focused on anxiety and depression among college students in a general population, African American college students, and African American males. Finally, in the last section, the researcher assessed whether religiosity promoted self-esteem and -efficacy and maintained success through a synthesis of studies to explore the relationship between religion and African American college students and African American males. Specifically, research to explore how religiosity supported academic success evidenced by grade point average (GPA), the decline in substance use, and ability to thrive among a general college population. Although religiosity supported GPA among African American college students, some studies reported perspectives on religion changed depending on the institution and gender. However, among Black male college students,
religiosity supported self-esteem and-efficacy by offering a sense of purpose, resilience, a framework, groundedness, and a source of accountability, which led to academic achievement and success (Dancy, 2010; Herndon, 2003; Herndon & Hirt, 2004; Jett, 2010; Riggins et al. 2008; Wood & Hilton, 2012).

**Degree Completion**

Degree completion refers to a student satisfying undergraduate credits and program requirements (Hagedorn, 2006). Although GPA may indicate academic achievement, it does not capture educational attainment, which makes degree completion increasingly important among university administrators and stakeholders. Through resilience theory, degree completion is the reward and opportunity Black males can achieve (Rutter, 1987; Rutter 2007) because African American men have the lowest degree completion rates when considering race and gender (Eakins & Eakins, 2017; Reeves & Guyot, 2017; Von Robertson & Chaney, 2017). However, previous literature indicated college students from a general population experienced premature dropout related to (1) access to two-year vs. four-year university, (2) university type, (3) ability to adapt and adjust to adversity, (4) maladaptive behavior, (5) planning behavior, and (6) physiological and psychological health (Gaydosh, Schorpp, Chen, Miller, & Mullan-Harris, 2018; Holliman, Martin, & Collie, 2018; Sutter and Paulson, 2016). A paucity of research examined African American college students and factors which adversely affected their degree completion. However, many studies highlight factors that contribute to their academic success such as social context, college environment, paradoxical persistence, pre-college exposure, and university type (Ciocca Eller & DiPrete, 2018; Flores, Park, & Baker, 2017; Gaydosh et al. 2018). Last, there is a dearth of research about Black male college students from entry into college through completion. The research made an association between academic success (GPA,
retention) and retention programs, workshops, peer engagement, mentorship, and post-college relationships (Brooks, Jones, & Burt, 2013; Gasman, Nguyen, Conrad, Lundberg, & Commodore, 2017). Given the low graduation (NCES, 2016), and high dropout rates (Shapiro et al. 2017) among Black male undergraduate students and limited research that examined degree completion of Black male undergraduate students, the need for the study is justified.

**Black College Students and Degree Completion**

According to the literature, a relationship exists between African American college students and degree completion, paradoxical persistence, pre-college exposure, and university type (i.e., PWI, Historical Black College or University (HBCU)) (Flores et al. 2017; Gaydosh et al. 2018; Harper et al. 2009). To illustrate, Ciocca Eller et al. (2018) utilized a logistic regression and counterfactual substitution of coefficient values to explain degree completion and the achievement gap between Black and White undergraduate students. Black students graduate at a lower rate compared to White students; however, resilience (i.e., paradoxical persistence) might level the playing field (Ciocca Eller et al. 2018). Paradoxical persistence suggests despite economic and academic barriers, Black students can enroll in college at high rates and persevere through adversity until degree completion (Ciocca Eller et al. 2018). And paradoxical persistence may moderate academic success because although Black students lacked access to extensive pre-college exposure, they demonstrated resilience, which increased degree completion rates. However, the dropout rate also increased from 48.4% to 50.4%, and the most considerable achievement gap existed among Black males compared to their White counterparts.

African American college students experience less exposure to pre-college, preparation, and dual enrollment before entering college (Harper et al. 2009). Thus, Flores et al. (2017) used a logistic regression analysis to explore whether academic pre-college preparation programs
predicted degree completion among Black undergraduate students. Consistent with previous studies (Ciocca Eller et al. 2018), pre-college exposure became an essential indicator of degree completion for African American students. And factors such as institution type affected whether Black students completed their degree. For example, Black students who attended PWIs were more likely to complete their degrees when compared to students who attended HBCUs (Ciocca Eller et al. 2018). However, the findings explained only 9.1% of the variance in the data. PWIs can offer their students more resources compared to HBCUs (Kim & Conrad, 2006; Melguizo, 2008), which supports degree completion.

Discrepancies between Black students who attend PWIs vs. HBCUs might occur at the individual and institutional levels. Previous literature supports that compared to African-American students who attend PWIs, students who attend HBCUs achieved lower standardized test scores, high school and college GPAs (Allen, 1992; Gurin & Epps, 1975; Kim, 2002; Nettles & Thoeny, 1988). Also, Black students who attend HBCUs usually come from low-income families (Allen, 1992; Kim, 2002). The findings suggest Black college students who attend HBCUs may also be at a disadvantage in degree completion. Although Black students who attended PWIs were more likely to complete, overall, they continue to have the lowest degree completion (43.6%) compared to White (65.5%) and Hispanic (51.4%) peers at PWIs (Flores et al. 2017). Future researchers could investigate the factors to support Black undergraduate students to degree completion at HBCUs and PWIs. The study adds to the literature on students who attend PWIs.

Despite barriers to success among African American college students, paradoxical persistence (i.e., resilience) may reduce the achievement gap. Gaydosh et al. (2018) explored the degree completion among African American college students ($N = 13,009$) while considering
psychological and physiological symptoms. Gaydosh et al. (2018) utilized a Poisson regression model to investigate whether degree completion and pursuing economic mobility increased psychological and physiological consequences (Gaydosh et al. 2018). African American college students’ degree completers from disadvantaged backgrounds report decreased depressive symptoms compared to students who terminated prematurely. However, Black students who completed their degrees had a higher risk of physiological problems (e.g., Gaydosh et al. 2018) when compared to Black students who dropped out. Degree completion may not offer the same protection as it may for other races, including White students (Gaydosh et al. 2018). The researcher could use the results of the study to address knowledge gaps by investigating if single indicators of religiosity support Black college undergraduate student mental health and degree completion.

Academic success among Black college students is evident by degree completion and relates to their capacity to experience resilience, pre-college preparation and paradoxical persistence (Flores et al. 2017). And African American college students pursue college degrees to experience economic mobility. Although degree completion may protect African American college graduates from psychological consequences, the Flores et al. (2017) study highlights a deeper issue related to physiological consequences, which degree acquisition may not offer protection. However, the sample was limited to college graduates after completion of their degree and the literature is scant regarding African American students enrolled in school. Future research, similar to the study, adds in the knowledge pertaining to exploring protective factors and Black male college students. Resilience theory suggests identifying a reduction in risk is essential in overcoming adversity, which contributes to the failure of degree completion.

**Black Male College Students and Degree Completion**
Few studies focus on a strengths-based perspective of African American male undergraduate student degree completion. However, previous studies seem largely deficit-based and related to stereotype threat in education (Johnson-Ahorlu, 2013; Steele & Aronson, 1995), dropout (Schwartz & Washington, 2013), and inequalities among African American male degree completion. Therefore, more attention is warranted for strength-based approaches to exploring African American male undergraduate student degree completion. Although the subsequent studies do not directly relate to degree completion, the researcher reviews literature from a strength-based approach that leads to degree completion. For example, higher GPAs among African American males often predict degree completion (Flores et al. 2017). The following studies focus on successful retention programs and support programs that increase academic success and achievement evidenced by a higher GPA among African American males. However, indicators of success evidenced by GPA fail to make the connection between opportunities for success and the reward of degree completion.

Brooks et al. (2013) utilized a mixed-methods approach to explore whether retention programs increase academic success for African American males (N = 136) (Brooks et al. 2013). Retention programs, designed to provide an opportunity for African American male college students included access to focus groups, receiving tutoring services, career planning, and building peer and faculty relationships with other Black men. The results of the study concluded African American males who participated in retention programs experienced an increase in GPA as compared to African American male students who did not (Brooks et al. 2013). African American male undergraduate students who achieved higher GPAs experienced an increase in the likelihood of degree completion (Flores et al. 2017) and a decrease in developing symptoms of anxiety and depression (Boyraz et al. 2016). The top three identified barriers African
American undergraduate students faced related to acculturation, mentorship, and positive social interactions. According to previous research (Herndon, 2003; Jett, 2010; Wood and Hilton, 2012) Black male, undergraduate students reported religiosity offers them resources for self-acceptance, which translated among a White majority, mentorship, and social networks. Brooks et al. (2013) added to the literature regarding supporting the development of retention programs. The researchers did not capture academic success through degree completion - a key indicator for educational attainment. And if retention programs include religiosity as a component, the opportunities for addressing the spiritual needs of Black males are increased. Many Black males described religiosity offers them a social network that encourages their academic success (Dancy, 2010; Jett, 2010). Although the researchers highlighted successful retention programs practices for Black male students, the programs did not include mental health, wellness or religious coping.

Gasman et al. (2017) explored the impact of social support through workshops, mentorship, peer relationships, and student-faculty relationships among African American male undergraduate students. The researchers utilized a case study analysis that included Black male undergraduates enrolled in a STEM degree program at Morehouse College (Gasman et al. 2017). African American males achieved greater academic success evidenced by GPA through peer-learning workshops, peer engagement with other Black men, mentorship with Black faculty, and continued student engagement post-college. And the participants described the importance and value of receiving support from peers and faculty of the same race and gender. African American male college students who engage in accepting environments, where they are the majority (i.e., Black Church), may experience more significant support in their academic success among a White majority. For example, a participant described the importance of being around those “who
look like you” offered hope, support, and acceptance contributed to their success (Gasman et al. 2017, p. 189). However, similar to the previous study, a gap in the literature exists related to studies’ failure to capture African American male college student academic success as evidenced by degree completion. Therefore, the study adds to the gap in the literature that highlights other nuanced forms of academic success other than GPA.

Matthews-Whetstone, Richardson, and Scott (2015) used a qualitative approach to explore the factors which contributed to Black male degree completion. Specifically, the researchers were interested in whether factors affected Black male degree completion by year six. The results revealed, on average, Black men took ten years to complete their degrees. However, some Black men took as long as 27 years to complete their degrees. Although the researchers investigated the trajectory of Black males in pursuit of higher education degrees, the study does not report indicators of what may support Black males besides what may hinder their success. Using resilience theory, the researcher identified the risk and potential factors that may prevent the catalyst for negative consequences and promote resilience. A missing link exists between concerns increasing resilience for Black males by reducing risk factors and promoting academic achievement evidenced by degree completion. In addition, a quantitative gap exists in whether mental health contributes to failure to complete degrees for Black males. Also, the researcher explored whether single indicators of religiosity can be quantified as a source of resilience and coping through degree completion.

Degree completion varies among the general college student population, African American college students, and African American male college students. Among a general college student population, degree completion differs depending on university type (four-year, two-year), whether students display negative (self-handicapping) attitudes, and last, whether
students’ ability to plan predicted intention to graduate. However, among African American college students, degree completion related to their capacity to persist in the face of adversity (i.e., resilience) and increased depending on pre-college exposure. And African American student degree completers experienced decreases in anxiety and depression but increases in physiological consequences. African American male college students increased their chances of academic success mostly through degree retention programs that offer social support, resources, and a predominantly Black social network (Brooks et al. 2013; Gasman et al. 2017).

In this section, the researcher reviewed the literature that utilized resilience theory to investigate factors that influence African American male persistence in educational pursuits and academic achievement.

**Resilience Theory**

Resilience is an individual's capacity to recover, grow, and experience achievement following intense adversity (Rutter, 2007; Ungar, 2008). Resilience theory encompasses a four-step process to support an individual from adversity to experiencing an opportunity for achievement. The process includes identifying factors that contribute to (1) reduction of risk, (2) reduction in negative catalyst, (3) establishment and maintenance of self-esteem and -efficacy, and (4) opportunities for success. The researcher used resilience theory as a foundation for the study because it suggests despite adversity related to historical marginalization of Black people, experiences of racial stressors, and lack of pre-college exposure, Black men can achieve degree completion. The researcher investigated whether single indicators of religiosity was a source of resilience as evidenced by degree completion despite mental health symptoms. The steps in the process are reduction in risk, reduction in adverse chain reaction, increase in self-esteem and -efficacy, and opportunity for growth (Rutter, 1987). A multitude of theoretical frameworks may
have been satisfactory for the study. However, because much of the research on Black males appears to be deficit-based (Eakins & Eakins, 2017; Reeves & Guyot, 2017; Shapiro et al. 2017; Von Robertson, & Chaney, 2017) a need exists for literature that highlights strengths. Therefore, the researcher of the study was most interested in what appears to work to promote Black's academic success by identifying potential risks. In addition, the results of the study can increase knowledge about factors that promote efficacy and success, evidenced by degree completion for African American males such as religiosity. Religiosity and resilience seem to interrelate for Black students, especially in their description of what they choose as most significant to their academic success. Overcoming obstacles, facing issues surrounding racism, and debilitating consequences require an equally resilient response to create opportunities for paradoxical persistence (Ciocca Eller et al. 2018). Despite the circumstances one faces, overcoming adversity produces resilience. According to resilience theory, one can experience a reduction in risk and an adverse chain reaction, which creates an opportunity for growth and success in the face of adversity. A recurring theme throughout the literature suggests regardless of race or gender, when an individual experiences adversity, they have a risk of experiencing psychological consequences (Rutter, 2007; Trotman, 2011; Ungar, 2008). Therefore, the following section reviews literature that uses resilience theory to investigate persistent attitudes and academic achievement among African American males.

Ungar (2008) used the resilience theory to investigate whether African American youths ($N=1,500$) possessed resilient attitudes depending on context and culture. Specifically, the need for resilience increases when African Americans experience tension between themselves and the contextual environment (i.e., PWI) (Chavous, Harris, Rivas, Helaire, & Green, 2004). However, Rutter (2007) alludes exercising resilience may differ according to contextual and environmental
factors. For example, African Americans who attend PWIs may exercise a need for increases in resilience as compared to African Americans who attend HBCUs. Next, Morales and Trotman (2010) conducted a qualitative study to explore the impact of resilience theory among a mostly African American and Hispanic college student population ($N=50$). Morales and Trotman (2010) attribute students of color resilience in secondary education to being “statistically elite, those who avoid the dreadful educational outcomes associated with a historically underprivileged socioeconomic status” (p. 1). This theory suggests increases in self-esteem and efficacy impact student success. Another study attributed African American students’ ($N = 131$) ability to exercise resilience in the face of adversity to their positive racial identity. Students who identified forms of race pride fared better academically (Miller and MacIntosh, 1999). Wilson-Sadberry et al. (1991) utilized a longitudinal design to explore resilience and persistence of African American male students ($N = 131$) through degree completion. The researchers identified that resilience evidenced by degree completion relates to pre-college preparation, teacher and school counselor support, and family background (i.e., SES, paternal influence). Understanding educational attainment for Black male students through resilience theory relates to (1) cultural environment (i.e., PWI), (2) elite status (i.e., gaining successful acceptance to PWI university), and (3) positive self-perception of racial identity despite adversity. However, the Wilson-Sadberry et al. (1991) study was published nearly 30 years ago. Mental health is becoming increasingly important, as a potential consequence of such adversity (Hartmann & Schmidt, 2020; Shonkoff et al. 2012). The study aids in the next steps to expanding gaps in research knowledge related to academic success because mental health is important, and such scant literature exists related to Black males.

**Mental Health: Anxiety and Depression**
Mental health concerns related to transitions, stressors, adjustment, and educational demands impact college students (Sprung & Rogers, 2020). According to resilience theory, adverse chain reactions such as poor mental health outcomes contribute to the need to identify factors that promote resilience. The stressors college students experience can lead to two major mental health challenges, which are anxiety and depression (Kahn, Kasky-Hernández, Ambrose, & French, 2017; Mahmoud, Staten, Hall, & Lennie, 2012). College students between the ages of 18-24 are 75% times more likely to experience anxiety and depression (CDC, 2019), which makes mental health of great importance to university administration and stakeholders. From 2009 to 2015, the likelihood of students being diagnosed and treated with an anxiety disorder increased by an alarming 68% (Oswalt, Lederer, Chestnut-Steich, Day, Halbritter, & Ortiz, 2020). Both anxiety and depression are the most common diagnoses among college students. However, depression increased from 9% to 12%. Although anxiety has been the leading diagnosis among college students at 41.6%, depression comes second at 36.4% among college students (Mistler, Reetz, Krylowicz, Barr, 2013). Understanding the adverse impact of anxiety and depression on college students is important because college students experience vulnerability related to their age, life transitions, and academic pressures (Mahmoud, Staten, Hall, & Lennie, 2012; Sprung & Rogers, 2020). According to the DSM-5, the clinical definition of anxiety includes excessive fear, worry, and apprehension about future events (5th ed.; DSM-5). Whereas depression is defined as low mood, lack of motivation, and sadness for a period of persistence for at least two weeks (5th ed.; DSM-5; American Psychiatric Association [APA], 2016). There is a wealth of research on college students, anxiety and depression, but less is known about how they adversely affect African American college students.

**Anxiety and Depression Among Black College Students**
Today, more African American students are coming to college campuses with mental health challenges. It is essential to understand these risk factors which contribute to barriers for degree completion and increase the need for resilience (Boyraz et al. 2016; Helling and Chandler, 2019; Lipson et al. 2018). However, African American college students report lower rates of receiving a psychiatric diagnosis, although they have similar suicide attempts as compared to students with a diagnosis (Chen, Stevens, Wong, & Liu, 2019). The finding could mean African American college students are under-diagnosed or apprehensive about seeking mental health help. According to the U.S. Department of Health Services of Minority health, about 3.6% of African Americans over the age of 18 report serious psychological distress in the past 30 days, compared to 12.1% of Whites (CDC, 2019). In terms of depression, a small number of African Americans reported feelings of sadness (4.3%), even less reported hopelessness (2.1%), or worthless (1.8%), which are common symptoms of depression (CDC, 2017).

African Americans present mental health symptoms differently and experience unique contributors, which adds to their mental health pressure (Saleem & Lambert, 2016; Robinson, Paxton, & Jonen, 2011). In addition, added stressors related to discrimination, negative racial encounters, and microaggressions cause the symptoms of anxiety and depression to increase (Assari et al. 2017). Added stresses can create a catalyst for the adverse chain reaction described in resilience theory (Rutter, 1987; 2007) that can lead to an increased risk for dropout. African American students with more significant depression do poorly academically, as evidenced by lower GPAs and higher dropout rates (Boyraz et al. 2016). Because negative racial encounters impact Black students more, poor mental health may be a contributor to failing to achieve degree completion.

**Contributors to Anxiety and Depression for Black Students**
African American college students commonly report adversity related to negative racial encounters, which may negatively affect their mental health and academic success (Assari et al. 2017; Thompson Sanders, 2002). Throughout the literature, anxiety and depression among African American college students may increase following incidents of racial discrimination and microaggressions (Watkins, Green, Goodson, Guidry, & Stanley, 2007). According to resilience theory, risk factors can lead to an adverse chain reaction that may include poor mental health outcomes and failure to complete degrees. Williams, Kanter, and Ching (2018) utilized t-tests and hierarchical linear regressions to explore whether an association existed between self-reported anxiety, stress, and trauma among African American undergraduate college students. Their findings suggest African American students reported 70% more racial discrimination and racially related distress when controlling for race-ethnicity. African American students reported experiencing twice as many negative racial microaggression encounters compared to their White counterparts. Specifically, African American males reported experiencing racial microaggressions related to invisibility, which predicted perceived stress. Although African American students reported significant increases in microaggressions, they experienced fewer symptoms of anxiety and overall lower risks for psychopathology. The lower risks may follow a protective factor, such as religiosity. And Black female students reported higher anxiety compared to Black males, which contradicted previous studies (Chang, 2018; Cokley et al. 2013; Sprung & Rogers, 2020). According to previous studies, women were more anxious than men related to metacognition (Bahrami, F. & Yousefi, 2011). Because women had higher levels of thinking compared to men, this could cause greater anxiety.

Contrary to Assari et al. (2017), racial discrimination was not associated with increased depressive and anxious symptoms (Williams, Kanter, & Ching, 2018). African Americans who
encounter negative racial experiences may have a common protective factor that prevents them from poor mental health outcomes. The study fills gaps in knowledge related to whether factors such as religiosity protect Black male students from adverse mental health pathology.

Chang (2018) utilized a hierarchical regression to explore if an association existed between self-reported loneliness, anxiety, and depression among African American college students ($N=168$). Black college students who experience isolation and loneliness have a greater likelihood of developing symptoms of anxiety and depression (Chang, 2018). Unfortunately, many Black college students are unsupported due to the lack of culturally relevant campus resources (Herndon & Hirt, 2004). Jones and Williams (2006), and Watkins et al. (2007) indicated isolation may contribute to poor mental health because it leads to feelings of invisibility. Overall, the findings of the study followed previous studies (Chang, 2018) because loneliness predicted an increase in anxiety and depression for Black undergraduate college students (Chang, 2018). Therefore, the results of the study may add to the literature that investigates mental health among Black male undergraduate students. Chang (2018) indicates researchers did not consider contextual factors such as university type (i.e., PWI, HBCU) -- specifically, whether students who attend PWIs experience greater isolation, loneliness, and anxiety and depression. The PWI context may increase poorer mental health for African American students (Agyemang, Bhopal, & Bruijnzeels, 2005; Lee, 2019).

**Outcome of Unaddressed Anxiety and Depression**

African American college students with anxiety and depression have lower grade point averages and are least likely to complete their degrees compared to students with no diagnoses (Eisenberg, Golberstein, & Hunt, 2009). Boyraz et al. (2016) used a binary logistic regression to investigate whether a relationship exists between symptoms of depression and academic success

29
among African American college students \((N=569)\). The researchers reported first-semester depressive symptoms predicted premature dropout and lowered earned GPA. On average, above 32\% of the students from the sample dropped out before sophomore year. The researchers reported mental health influenced dropout rates, but they did not investigate how mental health impacts degree completion. Mental health may be a significant indicator to explain why Black males have a higher dropout rate and, on average lower degree completion. Also, the sample in the study only included 92 Black males (Boyraz et al. 2016). Future research such as the study fills gaps by examining whether poor mental health influences degree completion, specifically among Black males (Cokley et al. 2013).

**Buffers against Poor Mental Health Outcomes**

Religiosity (e.g., spirituality) serves as a protective factor against poor mental health outcomes among individuals who are terminally-ill (Nelson, Rosenfeld, Breitbart, & Galietta, 2002); are diagnosed with depression (Daaleman & Kaufman, 2006); worked in the medical field (Abe-Kim, Gong, & Takeuchi, 2004); have mental health and depressive symptoms (Jafari et al. 2010); had a significant association with psychological adjustment (Terreri & Glenwick); and experienced negative life experiences among a predominantly White sample of undergraduate students (Young, Cashwell, & Shcherbakova, 2000; Young et al. 2000). However, a lack of studies exists which exclusively focus on African American college students who identify as male (Gray & Molock, 1999; Harris & Molock, 2000). In their examination of religiosity (e.g., coping), Molock, Puri, Matlin, & Barksdale (2006), Rose, Finigan-Carr, & Joe (2017), reported African American adolescent high school students may experience an unknown buffer effect against negative mental health outcomes such as (1) suicidal ideation and depression (Molock et al. 2006; Rose et al. 2017), (2) depressive symptoms (Gray & Molock, 1999; Harris & Molock,
2000), and (3) a decrease in the likelihood of meeting diagnostic criteria for psychiatric disorders (Hope, Assari, Cole-Lewis, & Caldwell, 2017). According to Bierman (2006), religiosity may assist these students in buffering the negative psychological consequences of discrimination (Bierman, 2006). Although the previous researchers (Bierman, 2006; Gray & Molock, 1999; Harris & Molock, 2000; Hope et al. 2017; Molock et al. 2006; Rose et al. 2017) helped to understand how religiosity protects Black adolescence, less is known about the relationship between religiosity and Black male college students.

African American students report statistically more minority stress and greater difficulty adjusting to a PWI setting (Cokley, McClain, Enciso, & Martinez, 2013). However, African American students' stressors do not appear predictive of poor mental health outcomes. Also, a potential buffer such as religiosity may be an indicator of protection. Cokley et al. (2013) utilized a moderated multiple regression to investigate whether gender moderated an association between religiosity, anxiety, and depression among racial minorities (e.g., Asian, Latino, and multi-racial) college students ($N = 218$). The researcher reported that African American students ($n = 50$) with higher religiosity achieved higher GPAs and decreased mental health symptoms (Cokley et al. 2013). Consistent with previous research (Weddle-West, Hagan, & Norwood, 2013), the researchers hypothesized a significant difference in religiosity according to gender (Cokley et al. 2013). Although religiosity showed no effect on depression and anxiety for men, religiosity decreased anxiety and depression in women. Cokley et al. (2013) reported a limitation of the study was an underrepresentation of men (27.9%), which the study addressed.

Anxiety and depression impact African American college student academic success; however, religiosity may be a significant buffer for negative outcomes. African American students who reported greater depressive symptoms during their freshman year of the college
received lower GPAs and had premature drop out compared to students with low mental health symptoms (Boyraz, Horne, Owens, & Armstrong, 2016). Specifically, African American males who struggle in religiosity can experience increases in depression. Further, African American students who reported greater loneliness and isolation experienced higher levels of anxiety (Chang, 2018). Religiosity may buffer isolation and the negative effects of racial discrimination and microaggressions. African American students who experience extreme adversity may not develop increases in symptoms of psychopathology as evidenced by anxiety and depression due to religious coping (Williams, Kanter, & Ching, 2018). However, although these findings highlight a buffer that may exist, less is known about how religiosity protects Black men from negative consequences (i.e., poor mental health, drop out). According to resilience theory, identifying factors can reduce the risk for individuals experiencing adversity (Rutter, 1987, 2007). The Boyraz et al. (2016) study may not represent a general population because the sample only included a small number of Black males (16.1%).

Future researchers such as the study could benefit from exploring the effects of single indicators of religiosity as a buffer against negative mental health outcomes among Black male college students. Last, African American students may experience barriers as a protective factor may contribute to risk and delay necessary mental health intervention.

**Barriers to Treatment**

Boyd-Franklin (2010) posits African American students who are religious can experience barriers to mental health treatment. Black students report they do not feel their counselors, faculty, and administration understand them culturally and prefer to avoid topics such as religion (Herndon & Hirt, 2004). A lack of cultural relevance prevents building rapport with counselors, faculty, and administration culturally different (Benn, 2018). For example, Black undergraduate
students are less likely to access university counseling services compared to other students due to (1) a perceived stigma about mental health, (2) a lack of access to financial resources, (3) a lack of empathy from care professionals, and (4) a preference for faith-based versus secular counseling services (Avent-Harris & Wong, 2018). A stigma exists within Black culture related to accessing counseling services for mental health problems (Corrigan, 2004). Many attribute a reluctance to seek help to pastors and church leaders who minimize the mental health symptoms and the efficacy of counseling (Avent-Harris & Wong, 2018). Avent-Harris and Wong (2018) reported students instructed by pastors and clergy to pray about depression and anxiety because the root of mental health problems is related to supernatural forces (e.g., Satan). Counseling services were sought as a last resort when students experienced a complete loss of control. Although for some students, religiosity acts as a protective factor, and for others, religiosity creates barriers that contribute to risk and delay in treatment. And a need exists for increasing the knowledge about religiosity and African Americans from a quantitative perspective. Last, practitioners can benefit from studies that validate the cultural relevance and necessity for integrating religiosity in therapy for Black students who identify as religious.

**Black Male College Students and Anxiety and Depression**

Barry, Jackson, Watkins, Goodwill, & Hunte (2017) utilized a t-test and regression analysis to examine mental health and substance use among Black male college students \(N=416\) attending a PWI. The results indicated that Black male students who attended a PWI show increases in symptoms of depression, anxiety and substance use as compared to Black men who attended HBCUs. Black male college students who attended PWIs may be more at risk for these symptoms due to daily pressures related to race and discrimination besides school pressures (Williams, Kanter, & Ching, 2018). Although the study was not directly investigating
negative racial encounters, the researcher is interested in whether Black males who attend PWIs are at risk for psychopathology as evidenced by depression and anxiety (Williams, Kanter, & Ching, 2018). Utsey and Payne (2000) used an independent sample t-test to investigate whether exposure to racism predicts increases in symptoms of anxiety and depression among African American men ($N=126$) while controlling for clinical mental health diagnosis (Utsey & Payne, 2000). And the sample included Black male college students from multiple universities and members from the community (Utsey & Payne, 2000). Although a significant difference existed in anxiety and depressive symptoms when controlling clinical status, both groups reported increases in distress following exposure to racism, which influenced mental health as a contributor. Black men from the community and Black male undergraduate students with clinical diagnoses demonstrated increases in symptoms following the exposure to racism (Utsey & Payne, 2000). Exposure to racism influences Black men differently depending on external and internal factors related to pathology and religious protection (Williams, Kanter, & Ching, 2018).

A review of the literature revealed exposure to racism is a strong contributor to anxiety and depression in Black students and Black male students specifically. While the research study does not directly assess racism, the researcher examined known outcomes of Black students experiencing negative racial encounters anxiety and depression. Anxiety and depression in a Black male college student population is an under-researched area that potentially hinders academic success (Eisenberg, Golberstein, & Hunt, 2009). It is essential to understand whether buffers exist between mental health and degree completion among Black male college students because the literature appears limited; specifically, understanding buffering factors serve as sources of resilience to create opportunities for growth through adversity and academic achievement.
Religiosity

Religiosity may serve as a source of resilience believed to reduce the risk for stress and anxiety (Rutter 1987, 2007), and may offer hope and protection for Black men who attend PWIs (Agyemang, Bhopal, & Bruijnzeels, 2005). Religiosity may counteract poor academic and mental health outcomes (Lee, 2019). Baxter, Medlock, & Griffith (2019) posit that many in the African American community believe religion offers similar buffering effects as their spirituality provides relief and support to cope with adverse circumstances. Most African Americans subscribe to religious groups such as Christianity, Islam, and Judaism (Abdullah, 2008; Baer & Singer, 2002; Key, 2014; Miller, 2019; Mofokeng, 1988; Pew Research Center, 2020; Simpson, 1980). Religion in the Black community is less about an attempt to codify spirituality into rituals and rules through practice and more about an existential relationship with a God (e.g., Higher Power) derived through scripture (i.e., the Bible, Koran, or Torah) (Lee, 2019; McCray, Grant, & Beachum, 2010; McGuire, 2019; Shannon, Oakes, Scheers, Richardson, & Stills, 2013). Many Blacks describe their religiosity synonymously with spirituality because they are connecting with the divine (Dancy, 2010; Herndon, 2003; Herndon & Hirt, 2004; Jett, 2010; Riggins et al. 2012). For Christians, this is reflective in stressing the importance of establishing a relationship with God (i.e., Jesus) over the religious practices (Bennett-Carpenter, McCallion, & Maines, 2013). The relationship for African Americans with their Higher Power translates into an optimistic attitude to overcome adversity creates sustenance and hope. Black males who identify as more religious report experiencing positive academic success outcomes (e.g., GPA, degree completion) (Weddle-West et al. 2013), greater satisfaction with their PWI university experience (Mooney, 2010), and an increased sense of purpose guides their decision-making when experiencing adversity (Herndon, 2003; Wood & Hilton, 2012). The researcher explored if
differences exist between how college students among a general population view religiosity compared to Black students and specifically Black males. Religiosity is often captured in two ways: (1) Importance of God and (2) Religious Coping (Kendler et al. 1997; Kessler et al. 1994; Miller et al. 2000; Reiland & Lauterbach, 2008).

**Importance of God**

According to a National survey Pew Research Center (2009; 2014; 2020), the 'Importance of God' is understood as the role and level of significance God plays in a person’s life. Individuals who report the ‘Importance of God’ attribute their belief in a God or religious deity, central to their identity (Miller et al., 2000). Also, they report participating in religious practices frequently. For example, people who report a God or religion to be important in their lives participate in prayer, liturgical practices, attend religious services and celebrate religious holidays (Kendler et al. 1997; Kessler et al. 1994). Although 'Importance of God' changes when factoring race, ethnicity, and age (Pew Research Center, 2009; 2014; 2020). Colbert, Jefferson, Gallo & Davis (2009) highlight religiosity increases with age also. In addition, spiritual development theory suggests during early adulthood, students experience religious struggle (Conn, 1993; Fowler & Dell, 2006; Wink & Dillon, 2002). Among Black and African Americans, ' Importance of God' and religion appear consistent across age groups. Blacks and African Americans report God or religion is very important or at least somewhat important compared to Hispanics (59%) and Whites (49%) (Pew Research Center, 2018). Among adults, 75% of African Americans identify God as very important compared to 59% of Whites and 49% Hispanic. Also, 65% of African Americans and Black college-age millennials identified God as highly important as compared to Whites (49%) and Hispanics (59%) (Pew Research Center, 2018).
Religious Coping

Religious coping includes religiosity as a “framed cognitive, emotional, or behavioral response to stress. It may serve many purposes, including achieving meaning in life, closeness to God, hope, peace, connection to others, self-development, and personal restraint” (Pargament, 1997, p. 310). Whereas, a protective factor includes a resource that potentially mitigates the adverse effects of stressful events (Rutter, 2007; Ungar, 2008). The majority of college students identify religiosity is very important (40%) or somewhat important (25%) to them (Pew Research Center, 2014). Of this group, about 14% identify religiosity as not important.

Approximately 57% of college students report believing in a God, 19% fairly, 6% not too much, less than 1% don’t know, and 14% do not believe in a God. Several researchers investigated a protective factor against maladaptive coping (Cole et al. 2020), a source of resilience (Wood & Hilton, 2012), and they also found it increased thriving (Morgan-Consoli et al. 2015). Resilience theorists (Rutter, 1987, 2007) suggest a resource such as religiosity can buffer aversive effects such as substance use or addiction. Maladaptive coping can occur in college students because of an inability to manage the increased stress related to transitioning from high school to college. Many students reported increased substance use because of the stress and demand of academic pressures to succeed besides social pressures (Cole et al. 2020; Sprung & Rogers, 2020).

However, despite increased substance use among college students in a general population, those who identified as more religious had lower substance use and a lower likelihood of developing addiction (Cole et al. 2020). Cole et al. (2020) further demonstrated that religiosity serves as a buffer for maladaptive coping (e.g., substance use) among a general college student population. College students who adaptively coped with stressors are more likely to complete their degrees successfully. Piedmont and Nelson (2001) investigated whether religiosity predicted substance
use behavior among ($N = 288$) a general population of undergraduate college students by using a condensed version (i.e., 12-item) of the Faith Maturity Scale to measure religiosity. The researchers utilized a two-step hierarchical regression to analyze whether religiosity moderated substance use. The results of the study indicated undergraduate students with a higher religiosity predicted lower levels of substance use as compared to students who reported lower levels of religiosity. Although the researchers discovered significant differences among a general college student sample, the sample consisted of mostly females. It is significant to note that women report higher levels of religiosity than males (Pew Research Center, 2009). Although the study may not directly examine maladaptive coping, expanding the knowledge about whether Black males use ‘religious coping’ from a quantitative approach is important.

Black males reported using religiosity as a source of resilience as compared to other White college students (Herndon, 2003; Herndon & Hirt, 2004; Morgan-Consoli et al. 2015). Historically, marginalized groups such as women and minorities exercise specific characteristics such as resilience and thriving to overcome barriers to academic success in higher education (Morgan-Consoli et al. 2015). Religiosity is believed to influence resilience and the capacity to thrive among college students (Morgan-Consoli et al. 2015). Specifically, thriving is the capacity to grow and progress despite adverse circumstances (Morgan-Consoli et al. 2015). Morgan-Consoli et al. (2015) investigated whether religiosity among ($N = 121$) undergraduate students predicted thriving and resilience (Morgan-Consoli et al. 2015). The researchers used a one-way ANOVA to detect whether a significant difference existed among self-reported religiosity, thriving, and resilience while controlling for gender. The results suggested religiosity, although significant, was small for thriving (explained 11% of the total variance). Students who use religiosity to thrive may experience interconnectedness with a God or a deity, which promotes
growth in the face of adversity (Herndon, 2003). Although religiosity promotes resilient characteristics such as thriving, the researchers did not account for degree completion. Students who face and overcome adversity through degree completion demonstrate a propensity to thrive. The study increased knowledge about academic success evidenced by degree completion. Among a general college student population, religiosity decreased substance use and supported the character trait of thriving among minority students.

**College Students and Religiosity**

Lebron et al. (2020) define college students as students enrolled in a college or university, part time or full time, and typically between the ages of 18–24. Over the last decade, several studies have been conducted on college students and religiosity (Cole et al. 2020; Mooney, 2010; Morgan-Consoli et al. 2015). Morgan-Consoli et al. (2015); examined the relationships among religiosity, higher GPA, and student propensity to thrive (university satisfaction, and decreased substance use). However, these studies did not include a large African American male student population, and only used GPA as an indicator of academic success, which does not demonstrate evidence of degree completion. Although GPA may be a significant predictor for academic success leads to degree completion, it does not indicate academic achievement. It is clear from the available literature that religiosity is an important buffer to help quell adverse experiences among college students.

Mooney (2010) examined whether religiosity predicted GPA and university satisfaction among \( N = 3,924 \) college students attending 28 PWIs. The researchers investigated religiosity using two scales to assess weekly religious services attendance and observance of religious traditions and customs (e.g., the scale of 1–10) (Mooney, 2010). When controlling for gender, class, and race, the students who attended weekly religious services during their senior year of
high school achieved higher GPAs in college, in contrast to students who did not attend services regularly (Mooney, 2010). Although GPA is an important indicator of success, degree completion is an even more important variable stakeholders, university administrators, find dually important (Kim & Hargrove, 2013; Mortagy et al., 2018; NCES, 2016; Shapiro et al. 2017).

**Black College Students and Religiosity**

Although the study did not account for subgroups, such as Afro-Caribbeans, Afro-Latinas, and Migrant Africans, identifying religiosity, it is essential to understand nuances that exist within subgroups of Black people. To account for the cultural relevance of religiosity among Blacks (e.g., Afro-Caribbean, Afro-Latina) vs. African Americans, the researcher reviewed a study that included subgroups perceptions of religiosity (Taylor, Chatters, & Jackson, 2009). Taylor et al. (2009) used a regression analysis to investigate self-reported religiosity among African Americans ($N = 3,570$) and the Afro-Caribbeans ($N = 1,621$). African Americans and Afro-Caribbeans both reported high levels of religiosity. In addition, the researchers detected no significant difference between African Americans and Afro-Caribbean. The findings support the conclusion that religiosity may transcend the country of origin because African Americans and Afro-Caribbean identify religion similarly. Although the study did not examine subgroups, the results remain consistent regarding the importance of religiosity.

African Americans in the general population report higher-religiosity (79%) when compared to Whites (59%) and Hispanics (49%) (Pew Research Center, 2009). Religiosity is considered so common among African Americans, about less than 1% identify as atheist or agnostic (Pew Research Center, 2009). African Americans have a history of being more religious (Baxter et al. 2019). Specifically, many African Americans identify God as their source of
strength, which offers them a sense of hope, meaning, and a growth mindset. A growth mindset is an individual's capacity for positively adapting and adjusting to adversity (Hochanadel & Finamore, 2015). During times of great suffering, Black people seek solace through prayer, corporate worship, and scripture reading (Hunt & Hunt, 1977). Not surprisingly, African Americans report reading the Bible more (54%) compared to other races (i.e., 32% for Whites and 38% for Hispanics) (Diamant, Pew Research Center, 2018).

Researchers have validated the impact religiosity has on Black people as it relates to health (e.g., morbidity and mortality), psychological well-being (e.g., depression) (Levin, Chatters, & Taylor, 2005) and resilience (Baxter et al. 2019). Higher levels of religiosity also promote resilience outcomes for overcoming difficult circumstances (Lee, 2017). Therefore, when Black male students experience adverse events, they report ‘religious coping’ as their preferred means (Riggins et al. 2008; Wood and Hilton, 2012). A rising dichotomy is Black millennials are less religious as compared to previous generations (Avent, Cashwell, & Brown-Jeffy, 2015, Avent-Harris & Wong, 2018). However, Black millennials (e.g., born between 1980 and 1996) report higher religiosity (75%) compared to non-Black millennials (48%) (Diamant & Mohamed, Pew Research Center, 2018). Black millennials represent the typical college student age who participated in the study (18-24); this study adds to the literature regarding Black male college student religiosity.

African Americans often use religiosity as a means of motivation for academic achievement, higher GPAs, and completing their education (Owens, 2014; Walker & Dixon, 2002; Weddle-West, Hagan, & Norwood, 2013). A paucity of research examines religiosity and degree completion for African American college students (Owens, 2014). However, GPA is a significant predictor of degree completion (Weddle-West et al. 2013). Researchers who
examined religiosity and academic success among African Americans, reported religiosity impacts students’ GPAs, specifically, students who are juniors or seniors are more religious (Weddle-West et al. 2013). According to resilience theory, students who use resources such as religiosity have more opportunities for academic achievement (Rutter, 1987, 2007). The findings of the Weddle-West et al. (2013) study follow previous studies that discovered African American students who identified as religious achieved higher GPAs. Religiosity mediated GPA for African American college students (Owens, 2014). Walker and Dixon (2002) explored whether a relationship exists between religiosity and academic performance as evidenced by GPA for African American college students (N=83). According to the results of the study, religiosity correlates with higher GPAs. Weddle-West et al. (2013) explored whether academic rank influenced religiosity among African American college students (N=125). Black freshman and sophomores reported lower levels of religiosity compared to juniors and seniors. Black students with higher religiosity, experience academic success as evidenced by the GPA. Although African American students identified religion to be essential and an indicator of their success, many go unsupported. For example, Black college students express that because of taboos toward religion among faculty and administration, they do not feel their spiritual needs are supported which promote their academic success (Herndon & Hirt, 2004). According to the Higher Educational Research Institute (HERI) spirituality increases and religious engagement declines among college students (Astin, Astin, & Lindhom, 2010). However, this change in engagement may vary according to race and ethnicity (Baxter et al. 2019; Pew Research Center, 2018; Weddle-West et al. 2013). Less is known about how religiosity may be significant to Black culture, which would help faculty and administration to support this group. Therefore, research further supports understanding of the role religion plays in the academic lives of Black students.
Black Male College Students and Religiosity

Religiosity appears to be significant for Black men with about 69% identifying religion as very important (Diamant and Cox, Pew Research Center, 2018). However, researchers have not used rigorous methods (i.e., quantitative) to investigate the relationship between Black males and religiosity. Most research examines religiosity among Black male college students from a qualitative approach (Dancy, 2010; Herndon, 2003; Herndon & Hirt, 2004; Jett, 2010; Riggins et al. 2008; Wood & Hilton, 2012). Understandably, religiosity can be difficult to codify. The following section offers a synthesis of qualitative studies to capture themes related to religiosity, Black male undergraduate students and academic success.

Religiosity for African American males has been identified as reading scripture, prayer, and worship to create a connectedness with God, a religious deity, or a higher power (Herndon, 2003). In addition, their connectedness with a divine God is synonymous with their spirituality (Herndon, 2003). Again, their divine connection derives through having a relationship as opposed to rituals and practice (Bennett-Carpenter, McCallion, & Maines, 2013).

Herndon (2003) reported students who identified as Christian, and read scripture also believed God and the Word (i.e., Logos) are one. Next, attending church services offered communal support to Black male college students through opportunities to connect with others (Dancy, 2010; Jett, 2010). Worshipping through song and listening to a motivational message from the Bible created an existential synergy to connect members, spiritually (Adkison-Bradley, Johnson, Sanders, Duncan, & Holcomb-McCoy; Bierman, 2006; Breland-Noble et al. 2015; Newberg, 2014; Newberg & Iversen 2003; Yaden, Iwry, & Newberg, 2017). Inspirational writing can be used to cope with adversity through spiritual-transcendent journaling and
collecting thoughts and feelings (Jett, 2010). Although the literature reviewed identified how Black males practice religiosity, less is known about how their practice leads degree completion.

The researcher conducted a thematic analysis to conceptualize the qualitative literature on religiosity and Black male undergraduate academic success. The researcher utilized the following search terms to (1) purpose, (2) resilient, (3) adversity, (4) racism, (5) prayer, (6) choice, (7) community, and (8) grounded. As a result, the researcher of the study developed five themes throughout each study: (1) a sense of purpose, (2) resilience, (3) framework for decision-making, (4) social support, and (5) spiritual groundedness.

**Sense of Purpose**

Many Black male college students indicate that religiosity offers them a sense of purpose (Herndon, 2003; Jett, 2010). Purpose is defined as the purpose for one coming into the world, which connects the individual to God’s overall redemptive plan for humanity (Herndon, 2003; Jett, 2010). Religiosity guides purpose for Black males on their vocational journey and sustain them through degree completion (Dancy, 2010). From a religious perspective, some men used the term “called” to their degree fields, which means “invitation” in the original Greek language (Strong, 2010). Their calling helps them with career decision-making to align with their purpose (Jett, 2010). Consistent across studies, students use their purpose to avoid pursuing degrees in fields unaligned with their gifts (Dancy, 2010; Herndon, 2003; Herndon & Hirt, 2004; Jett, 2010; Riggins et al. 2008; Wood & Hilton, 2012). Students stated purpose offered existential motivation and resilience to complete their degrees.

**Resilience**

Resilience was a common theme among multiple research studies which indicated Black male undergraduate students, who said they were religious, demonstrated a resilient attitude
through degree completion (Herndon, 2003; Riggins et al. 2008). Black male students stated their need to navigate predominantly White environments became a central reason for using religiosity as a resource for resilience (Riggins et al. 2008). According to resilience theory, individuals can experience a deeper sense of self-efficacy and -esteem through their source of resilience, which religiosity may offer Black men (Rutter, 1987, 2007). Black males identify God as their primary source of strength in the face of adversity among a White majority. They pray when faced with adversity. For Black men, prayer is the method to communicate and connect with God. Prayer helps them experience a sense of calmness in times of great difficulty, which makes them resilient (Wood & Hilton, 2012). Black male students described the importance of remaining strong when faced with negative racial interactions on PWI campuses (Herndon, 2003). However, the idea of allowing negative racial encounters to cause them to dropout supports their reliance on religiosity as a resource of resilience (Jett, 2010; Herndon, 2003; Riggins et al. 2008).

**Framework for decision-making**

Religiosity offers Black male undergraduate students a framework for decision-making through degree completion (Herndon, 2003; Wood & Hilton, 2012). Individually, Black men convey a belief that God or a supernatural deity desires a specific plan and outcome for every human. However, everyone has free-will to decide (Dancy, 2010; Herndon, 2003). Therefore, the deeper the relationship with God, the clearer they understand their purpose. Purpose is related to a career choice, which is a means of service which both glorifies and benefits God. As part of the journey in pursuit of purpose, Black men identify an understanding and expectation of encountering adversity. Therefore, Black men recognize the need for a framework for making decisions when challenges arise.
Religiosity helps Black male college students process their poor choices and identify the negative experience as a source of knowledge for future decisions (Riggins et al. 2008). Specifically, Christians relate this to the scripture, “all things working together for those who love the Lord and are called according to His purpose” (Rhodes, 2011, p.12). The verse highlights how life is serendipitous and things can align by fate. Religiosity helps Black men navigate unfamiliar environments (Hiebert, 2018) toward their degree completion. Last, religiosity offers a framework for choosing relationships (Jett, 2010). Black men reported that religiosity helped them distinguish between distracting individuals and individuals who support them spiritually as they pursue their degrees (Jett, 2010). And religiosity helps them discern which individuals should occupy intimate spaces in their lives and which ones should only be cordial encounters (Dancy, 2010; Riggins et al. 2008). Discernment is the ability to perceive beyond the obvious (Bernard, 2016). This becomes essential to Black male students’ success because college relationships change so frequently, and religiosity is a compass to guide Black male students to degree completion. Black male college students identified the significance of relationships, supported them and served as a source of accountability. For example, they do not pursue relationships with individuals who do not share the same values for education (Herndon, 2003). Social support is important because it is another resource that contributes to the success of Black males.

Social Support

Social support through religious communities (i.e., Black Church), (Herndon, 2003) serves as an extended family and resource for coping. Support may be especially important for students who live on campus and away from home. Black men experience community and explore spirituality to overcome feelings of isolation and discrimination (Dancy, 2010; Riggins
et al. 2008). Black men report feeling embraced by a social community that accepts their identity (i.e., race and gender) and positively influences them academically during the school week (Dancy, 2010; Jett, 2010). Similar to peer relationships, church members may act as accountability partners to reaffirm their purpose for pursuing education. Faced with adversity, church members encourage students to evaluate their choices and “choose their battles wisely” (Dancy, 2010, p. 81). Following a long week of academic rigor, the church community connects students with other members, through communal devotion, meditation. The church environment aids Black male students to overcome adversity (Dancy, 2010; Jett, 2010). Many Black male students report attending religious services helps keep them grounded (Riggins et al. 2008). Spiritual groundedness became a theme throughout the literature.

**Spiritual Groundedness**

Religiosity offers Black male students a spiritual groundedness by connecting them with God and members of their religious community (i.e., other believers) (Dancy, 2010; Riggins et al. 2008). Spiritual groundedness is an internal relationship with God or religious deity that increases awareness and supports Black men through degree completion (Herndon, 2003; Jett, 2010). Awareness can be defined as one’s capacity to center their thoughts, emotions, and experiences (Ferran, 2019). The internal experience Black men experience through religiosity has many similarities and implications with spirituality. For example, religiosity helps center their thoughts and fulfills the need for something greater beyond their five senses. According to the Judeo-Christian faith, in every human, there exists a void, emptiness, and desire for God (Gault, 2008). However, among Black Muslims, individual purpose relates to overcoming systemic racism through empowering the economic plight of African Americans (Abdullah, 2008; Rashad, 1994). And Black Hebrew Israelites believe that a God gave them a purpose
before their spirit had a body (Craigie, Kelley, & Drinkard, 2018). Overall, all three religions appear to overlap in the belief that humans are called to a specific purpose, whether it be career choice, economic empowerment, or divine providential. Some people aimlessly seek to fill this void (Crescioni & Baumeister, 2013) and religiosity provides Black men with direction. Spiritual groundedness is often described in terms of internal revelation and messages (Dancy, 2010). Black males report receiving instruction from God through meditation on scriptures (Jett, 2010). For example, one participant reported God accesses him through his “spirit-man,” soul, or conscience to create an awareness that helps to keep him grounded as he pursues his degree (Jett, 2010, p. 329). And the participants claimed to hear God’s voice through difficulty, ambiguity. Finite limitations can create anxieties because of apprehension about a possible outcome.

Religiosity among a general college student population, African Americans, and African American male college students positively influenced academic success, decreased substance use, and promoted thriving. Religiosity may support Black males through degree completion by offering a framework for decision-making, resilience, and accountability. Although ‘religious coping’ may be considered their source of coping (Herndon, 2003; Jett, 2010; Wood & Hilton, 2012), some problems and challenges may become overwhelming to the point of experiencing clinical anxiety and depression. However, less is known about the influence of religiosity on symptoms of anxiety and depression among African American male college students. In the following section, the researcher reviews the literature, which focuses on anxiety and depression, contributors to mental health, the outcome of unaddressed symptoms, buffers against poor mental health outcomes, and barriers to treatment among Black Students. In addition, the researcher reviews literature about mental health and Black males.

**Conclusion**
The review of the literature on religiosity as a source for resilience operates as a potential protective factor for anxiety, and depression, and degree completion among African American males supports the necessity for the research study (Herndon, 2003; Herndon & Hirt, 2004; Jett, 2010; Wood & Hilton, 2012; Weddle-West et al. 2013). The noted limitations include the (1) preponderance of qualitative research studies with small samples of individuals compared to larger quantitative studies from which more power for effects may be determined, (2) use of GPA as an indicator of academic success opposed to academic achievement evidenced by degree completion, (3) limited representation of African American males in quantitative studies, and (4) the examination of the constructs of interest independently of each other and from a deficit-lens of associations without grounding in resilience theory. The study expands knowledge related to using resilience theory in understanding religiosity’s role in protecting African American males with mental health symptoms from adverse academic outcomes (i.e., degree completion). In the following chapter, the researcher describes the current methodological approach to answer the following research questions based on the literature review: (1) whether single indicators of religiosity predicted degree completion for Black male undergraduate students, (2) whether mental health (i.e., anxiety and depression) predicted degree completion, and (3) whether single indicators of religiosity moderated the relationship between anxiety, depression, and degree completion for Black male undergraduate students.
CHAPTER 3

METHODS

Following a comprehensive literature review that examined religiosity as a protective factor and source of resilience, for anxiety, and depression, and degree completion among African American males, the lack of quantitative studies supports a need for a source of resilience. Using resilience theory, the study can aid in filling a knowledge gap related to whether religiosity moderated the relationship between anxiety, depression, and degree completion among Black male college students (Eakins & Eakins, 2017; Boyraz et al. 2016; Williams, Kanter, & Ching, 2018).

Research Methodology

Secondary data analysis was conducted using data from a larger university-wide research project, Spit4Science (S4S). The S4S data includes single indicators of religiosity (as measured by the National comorbidity survey), anxiety and depression (as measured by the short-item version of Symptom Checklist-90), and degree completion (as stated in the university student record registrar). The researcher reviewed the Spit4Science and study procedures, research design, statistical analysis, preliminary analysis and research design limitations in the subsequent sections.

Data Source

The study analyzed an archival dataset collected from an on-going longitudinal university-wide project (Dick et al. 2014). The interdisciplinary research team collected data related to environment, emotions, and behaviors among undergraduate college students at a Predominantly White Institution (PWI). The following section explores the purpose of the S4S study, participants, recruitment, data collection procedures, and research design. University
administration and stakeholders developed the S4S study to bring awareness to college undergraduate student behaviors related to (1) addiction, (2) emotional health, (3) romantic-peer relationships, (4) alcohol use, (5) sexual assault, (6) trauma, and (7) psychological symptoms. Specifically, the research project aimed to understand how genes influence behavioral outcomes such as substance use and mental health outcomes for undergraduate students enrolled at a Virginia Commonwealth University (VCU; e.g., mid-Atlantic PWI). The research team collected environmental, genetic, and developmental data to help understand student behavior and mental health. Transitional stressors related to financial problems, displacement from their social network, and emotional and physical problems can exacerbate the risk for many college students (Cole et al. 2020). Therefore, the target population focused on college students because most substance use and mental health onsets peak during late adolescence and early adulthood (Dick et al. 2014).

From 2011-2018, the research team collected data from incoming freshman students, which captured their responses longitudinally through degree completion and beyond. To participate, the students must have been age 18 or older, enrolled at Virginia Commonwealth University (VCU). VCU is considered a PWI with over 50% of the student population identifying as White. The sample reflected the general student population with 50.6% of the students identifying as White, 37.8% Black, 16.1% Asian, 6.3% two or more races, 6.1% Hispanic, <1% Native Hawaiian, and <1% Other. The research project (i.e., Spit4Science) collected survey information from over 9,025 students (Dick et al. 2014).

The S4S research team coordinators utilized passive recruitment through the email and mailed two weeks before freshman arrival on the campus (Dick et al. 2014). The S4S research team used a university email list to send invitations for students to participate in the study during
the upcoming fall semester. The students received weekly reminders for the first month and then randomly for the next six weeks of the fall semester. Following completion of the survey, students received an invitation to the university office to receive $10 compensation, a t-shirt, and an opportunity to provide a DNA sample (i.e., saliva) for an additional $10.

The S4S project was grant-funded (National Science Foundation: R37AA011408), and investigated student behavior, personality, health, and risk for substance use and potential protective factors (Dick et al. 2014). The research team collected data on students from Fall 2013 through Fall 2016. The students received email invitations, which included a link to the survey that prompted them to complete an informed consent form explaining the study purpose and participation. The survey also included questions related to experiences with family and peers, which took 15-30 minutes to complete. The surveys included these measures: (1) Semi-Structured Assessment for the Genetics of Alcoholism (SSAGA), (2) Symptom Checklist -90 (SCL-90), (3) Eating Disorder Examination Questionnaire (EDE-Q), (4) Brief Comprehensive Effects of Alcohol (B-CEO, (5) Drinking motive, (6) Big five inventory, (7) National comorbidity survey, (8) Parenting styles inventory, (10) Life events checklist, and (11) Medical outcomes study (Dick et al. 2014).

**Instruments**

The following section includes a synthesis of studies to explore the history, internal consistency, and internal validity of these measurements: National comorbidity Survey (NCS), Symptom Checklist-90 (SCL-90), Demographic survey, and Virginia Commonwealth University (VCU) student records.

**Religiosity Items**
Religiosity is a 7-item scale that asks questions about the importance of a God or deity, religious service attendance, and whether spiritual practice offers them comfort in times of great distress on a 5-point Likert scale (Kendler et al. 1997). The National Comorbidity scale (NCS) - originally developed by Kessler in 1994 (Kessler et al. 1994). The items were gathered from $N = 8,098$ in the original ‘Virginia Twins study’ (Kessler et al. 1994). The original scale included 7 items on (1) How important are religious or spiritual beliefs in your daily life?, (2) How often do you attend religious services?, (3) When you have problems in your life how often do you seek spiritual comfort?, (4) When you have decisions to make in your daily life, how often do you ask yourself what God would want you to do?, (5) Have you been "born again" that is had a turning point when you commit yourself to Jesus?, (6) Do you encourage people to believe in Jesus and accept Him as their Savior? and (7) The Bible is the actual Word of God and is to be taken literally, word for word. Therefore, the original scale focused on Christianity and excluded other religions and beliefs. Previous researchers used the scale in prior studies to understand religiosity (e.g., Kendler et al. 1997; Miller et al. 2000; Reiland & Lauterbach, 2008). Kendler et al. (1997) examined factor loadings as a form of item reliability, which is the correlation coefficient used to explain the variance extracted by each variable ($>.70$). The factor loading results suggested high variance in religiosity explained by items for religious importance ($0.82$), religious attendance ($0.75$), and spiritual comfort ($0.80$) (Kendler et al. 1997).

The study only used two of the original seven items, specifically the ‘How important are religious or spiritual beliefs in your daily life,’ ‘When you have problems or difficulties in your family, work, or personal life, how often do you seek spiritual comfort?’ Therefore, the version utilized for Spit4Science reflected broader conceptualizations of religiosity.
In 2000, Miller, Davies, and Greenwald developed an abridged four-item version of the religiosity survey and conducted confirmatory factor analysis (CFA) which resulted in good overall fit (Miller et al. 2000; Reiland & Lauterbach, 2008) – a goodness-of-fit index of greater than or equivalent to 0.9, and root mean square residual of less than 0.09. \( r = 0.77, p < .01 \). The four-item measures on religiosity appear to follow the nature of the construct. Last, Reiland and Lauterbach (2008) conducted a study using a four-item version to explore whether trauma and religiosity affected self-esteem among adults (Reiland & Lauterbach, 2008). According to the results of the confirmatory factor analysis, moderate correlations existed between variables (.55-.71). Overall, across studies, the religiosity items demonstrated acceptable factor structure and reliability, which offers evidence for appropriately using the NCS in the study.

The study utilized individual items from the religiosity scale as the independent variables for religiosity independently. The 'Religious Coping' item asked, “When you have problems or difficulties in your family, work, or personal life, how often do you seek spiritual comfort?” and was measured using a Likert scale that ranged from 1 *Almost always*, 2 *Sometimes*, 3 *Rarely*, 4 *Never*. The 'Importance of God' item asked, “How important are your religious or spiritual beliefs in your daily life?” and was measured using a Likert scale that ranged from 1 *Very Important*, 2 *Somewhat Important*, 3 *Not Very Important*, 4 *Not at all important*.

**Anxiety and Depression Items**

S4S used 8-items to measure anxiety and depression: the items are: The four items measuring depression included: (a) feeling blue (b) worrying too much about things, (c) feeling no interest in things, and (d) feeling hopeless about the future. The additional four items measured anxiety include: (a) nervousness or shakiness inside, (b) suddenly scared for no reason, (c) feeling fearful and (d) spells of terror or panic. The researchers recorded responses on a five-
point Likert scale from 0 (Not at all) to 4 (Extremely). The results of the CFA showed goodness of fit with a CFI = 0.94 with the S4S population (Gnilka & Broda, 2019). The Gnilka and Broda (2019) was the first study to include only four items for anxiety and depression. Previous studies used 90-items (Derogatis & Cleary, 1977), and a 27-item revised version (Hardt & Gerbershagen, 2001). Derogatis, and Cleary (1977) originally developed Symptom Checklist-90 (SC-90) 90 items on Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism (Derogatis & Cleary, 1977). However, due to the results, the researchers decided nine dimensions were too strenuous for patients to complete. Hardt and Gerbershagen (2001) created a short version which included a 27-item scale to measure four items related to symptoms of depression ($\alpha = 0.84$) and an additional four items for anxiety ($\alpha = 0.88$) over the previous month. The mental health assessment has not previously been validated with diverse samples, which could create bias culturally (Snowden, 2003; Hairston, Gibbs, Wong, & Jordan, 2019) because Black and African American clients may present mental symptoms differently (Saleem & Lambert, 2016; Robinson et al. 2011). The study explored the validity and reliability of the four-item version for Black male undergraduate students. Therefore, total scores for anxiety could range from 0 to 20, where higher scores could be interpreted as more symptoms of anxiety. Total scores for depression ranged from 0 to 20, where higher scores could be interpreted as more symptoms of depression.

**Demographic Survey**

Age, sex, and, race-ethnicity were assessed using the demographic survey (Kendler, Myers, & Dick, 2015). The students were asked to provide their age, whether they were male or female, and if they identified as Non-Hispanic Black, White, Hispanic, Asian, Mixed Race, or
Other. For the study, the researcher only included students who identified as male and a race-ethnicity of Non-Hispanic Black and removed all other students for the analysis.

**Degree Completion**

Degree completion refers to the successful satisfaction of all necessary academic requirements and credits to graduate from a specific degree program. The S4S study included student consent to track their academic progress for cohorts 1 and 2 from 2011-2017 through the university records, registrations, and registrar office. The researchers collected data on degree completion (i.e., yes or no).

**Procedure**

**Current Study**

To gain access to the archival data set, the researcher sought permission through the VCU S4S Office. To obtain permission, the researcher completed a de-identified data sharing agreement, which included a brief abstract, rationale, and plan for the data analysis was approved, and contract agreement not to misuse, re-release the data, maintain confidentiality, and receive approval for all manuscripts that include the dataset. Approval was granted in 15 days and included a drop box with folders containing the study surveys, codebooks, measurement appendixes, and master archival data files from cohort years 2011-2017.

**Institutional Review Board Procedures**

The study utilized archival secondary data collected from the S4S university-wide project at VCU. And the study was exempt from submitting an Institutional Review Board (IRB) because the S4S research team received prior approval through the VCU’s IRB. The researcher ethically used and handled the data by securing it with a password on VCU’s apps2go application. The researcher followed ethical guidelines developed by S4S for using the data. And
the researcher completed ethical training to research human subjects (i.e., the CITI Program). Specifically, the researcher selected the responses from the SCL-90, single indicators of religiosity (Importance of God, Religious Coping) and degree completion from the University’s registrar office.

**Data Procedure**

The researcher used a combined data set, using data from freshman year (i.e., cohort 1 and 2), which would span 5-6 years, and then degree completion by 2017. The first dataset included the single indicators of religiosity, anxiety, and depression collected during freshman year. The second dataset included the degree completion variable. Once the data-sharing agreement was approved by the S4S PI, the data were released in a Dropbox folder. The first file is data from 2011-2014 and included my variables of interest (i.e., anxiety, depression, religiosity). The second dataset is derived from the university registrar's office and includes graduation status evidenced by degree completion. The researcher matched the two data files using student id numbers. Then the researcher only selected students who were male and African American ($N = 295$). The researcher merged the two datasets using the STATA command ‘_merge’. Last, the data was cleaned by removing students who did not complete the survey to have a database with only the variables of interest. Of the 295 respondents who identified as Black and male 13.5% did not complete the survey data for the variable of interest. Therefore, the researcher removed the respondents because missing data reduces power (Kang, 2013).

**Participants**

The researcher included participants who identified on the survey racially as Black, and male ($N = 281$). The participants were freshmen who participated in the study between the years of 2011-2014. The participants answered questions about their demographics, religiosity, anxiety
and depression. Last, the students' academic progress demonstrated by degree completion was tracked for six years.

**Research Design**

The study included a non-experimental correlational quantitative research design to investigate whether single indicators of religiosity (i.e., Importance of God, Religious Coping) relates to anxiety and depression and degree completion among Black male college students. Non-experimental is defined as studies that do not control or manipulate independent variables and rely on the interpretation of results (Fields, 2009). Correlational is defined as a relationship between two or more variables (Fields, 2009). Quantitative is defined as studies based on quantifiable data (Fields, 2009).

**Research Questions.** The researcher investigates the following research questions and respective hypotheses:

RQ1: Do single indicators of religiosity (i.e., Importance of God, Religious Coping) collected freshman year increase degree completion for Black male undergraduate students by year six?

\[ H_{01}: \text{Higher single indicators of religiosity (i.e., Importance of God, Religious Coping) collected during freshman year, does not predict degree completion by year six for Black male undergraduate students.} \]

\[ H_{a1}: \text{Higher single indicators of religiosity (i.e., Importance of God, Religious Coping) collected during freshman year predicts degree completion by year six for Black male undergraduate students.} \]

RQ2: Do higher symptoms of mental health (e.g., anxiety and depression) collected during freshman year predicted degree completion by year six for Black male undergraduate students enrolled at a PWI.
$H_{a2}$: Higher levels of anxiety and depression do not predict the lower likelihood of degree completion by year six.

$H_{a2}$: Higher levels of anxiety and depression do not predict the lower likelihood of degree completion by year six.

RQ3: Do single indicators of religiosity (i.e., Importance of God, Religious Coping) moderate the relationship between anxiety, depression, collected during freshman year, and degree completion at year six?

$H_{a3}$: No interaction exists between single indicators of religiosity would moderate the relationship between anxiety, depression, collected during freshman year, and degree completion at year six.

$H_{a3}$: An interaction exists between single indicators of religiosity would moderate the relationship between anxiety, depression, collected during freshman year, and degree completion at year six.

**Statistical Analyses**

The researcher utilized a binary logistic regression model that targets the categorical dependent variable (DV), degree completion. Logistic regression can accurately predict an outcome for an individual case to obtain a parsimonious model (i.e., explanation) (Agresti, 2013; Tabachnick & Fidell, 2013). The researcher used logistic regression to answer the three research questions, which assess whether (1) single indicators of religiosity (i.e., Importance of God, Religious Coping) collected freshman year increased the likelihood of degree completion for Black male undergraduate students by year six? (2) mental health (e.g., anxiety and depression) collected during freshman year decreased the likelihood of degree completion by year six for Black male undergraduate students enrolled at a PWI, and (3) single indicators of religiosity (i.e.,
Importance of God, Religious Coping) moderated the relationship between anxiety, depression, collected during freshman year, and degree completion at year six? The researcher conducted analyses with Stata 14 software (STATACorp, 2015). Below the researcher described the plan to address statistical assumptions, preliminary analysis, and power analysis.

**Statistical Assumptions**

Logistic regression model (LR) does not make the same assumptions as a linear and general linear model (Wright, 1995). For example, when using a LR linearity is not required between the independent variable (IV) and dependent variable (DV), residuals are normally distributed, homoscedasticity is not a requirement, and the DV is binary. The researcher explored these assumptions: linearity (using linktest), multicollinearity using the VIF, and regression outliers. The first assumption considers linearity using a linktest to assess whether the structural equation is misspecified or lacking other IVs. If the linktest suggests misspecification or link error, the researcher performed a link transformation to reassess the power of the independent variables (IV) (i.e., religiosity, anxiety, and depression) (Wright, 1995). The second assumption assessed for multicollinearity using the variance inflation factor (VIF) to assess whether the IVs correlate with one another. VIF detects whether IVs correlate (O’brien, 2007). To address multicollinearity, the researcher conducted a Principal Components Analysis and removed variables with high VIF (Bryant & Yarnold, 1995). High VIF would be considered any greater than 10, moderate to high greater than 4 or 5, and 1 means values are not correlated. The last assumption assessed regression outliers, utilizing a Cook distance test (Cook, 1977). The cut off of the results considered any values above one or above 4/281 (too strict) and dropped outlier from the observations (Field, 2009).
Last, the researcher used Little's Missing Completely at Random (MCAR) test to assess for patterns in missing values in the data. First, the researcher used Little’s MCAR test to assess whether data is missing at random for the target variables (i.e., single indicators religiosity, anxiety, depression, and degree completion). If the results of the test were not statistically significant \( (p > .05) \) this would mean the data is missing completely at random. In addition, the researcher conducted imputation techniques to replace the missing data (Little, 1988).

**Religiosity Moderator**

The second research question investigated whether single indicators of religiosity \((M)\) moderated anxiety, depression \((X)\), and degree completion \((Y)\) among Black male undergraduate students. According to Hayes (2017), a moderation process suggests religiosity changes the strength or direction of the relationship between anxiety, depression, and degree completion among Black male undergraduate students. The researcher assessed for simple moderation by testing a linear interaction between anxiety and depression \((X)\) and religiosity \((M)\) in a model of degree completion \((Y)\). This model follows the moderation process in resilience theory. For example, adversity (i.e., anxiety and depression) interacting with religiosity can change the strength of degree completion among Black male undergraduate students through a regression model. To analyze the interaction linear effects of mental health and degree completion, simple effects coefficients were computed for three values of religiosity, one standard deviation below the mean, at the mean, and above the mean. If an interaction exists, the researcher created graphs to display the effect and direction.

**Preliminary Analysis**

The preliminary analysis tested for instrument reliability with Black male undergraduate college students, correlation between variables, and demographic variables, which may be
specific to the sample that can influence results. To assess instrument reliability, the researcher conducted a Cronbach’s alpha analysis (Cronbach, 1951). To investigate the correlation between variables, the researcher conducted a Pearson's correlation test (Pearson, 1920) for the relationship between single indicators of religiosity, anxiety, and depression for Black male undergraduate students.

**Power Analysis**

For the research study, the researcher conducted a power analysis to assess for the appropriate sample size to achieve adequate statistical power (Cohen, 1992; Faul, Erdfelder, Lang, & Buchner, 2007) using the STATA command 'power r squared' to assess for power (STATACorp, 2015). The results of the power analysis suggest the model needs a necessary alpha level = .05, statistical power = .80 (Cohen, 1992; Tabachnick & Fidell, 2013), and 3.0 odds ratio. Also, the results recommend a sample size of at least 100 to achieve the power (Garson, 2019; STATACorp, 2015). The sample obtained from the S4S data ($N = 255$) meets the minimum sample size required for the model.

**Data Analysis Plan**

The results of the LR model equation test reported whether (1) single indicators of religiosity (Importance of God, Religious Coping) predicted degree completion (2) anxiety and depression predict degree completion and (3) single indicators of religiosity moderated an interaction between anxiety, depression, and degree completion for Black male undergraduate college students. The researcher entered the variables using a stepwise approach to assess whether single indicators of religiosity predicts degree completion for Black male undergraduate students. Stepwise regression offers benefits for taking an exploratory approach to understanding the predictive nature of the relationship (Field, 2009). To assess effect size, the researcher used
odds ratios to assess effect size by exploring how often greater the odds of one outcome between IVs (e.g., religiosity, anxiety, and depression) (Garson, 2019). The researcher interpreted the results of the logistic regression statistically significant if the scores are less than (p < .05). The researcher used the direction (+/-) of the odds ratio test to determine whether variables increased or decreased degree completion. To investigate sensitivity and specificity, the researcher used a binary classification test (Faul et al. 2007). Sensitivity assessed true and false positives, whereas specificity investigates true and false negatives. The researcher conducted a post hoc Wald Chi-Square Test to assess whether variables are significant, meaning they add something to the model and delete variables that did not add to the model (Fields, 2009). Last, the researcher assessed goodness-of-fit using a Hosmer and Lemeshow, which reports chi-squared value and p-value to assess the model fit (Fields, 2009). The researcher interpreted the predictive power of the dependent variable based on the independent variables. A Hosmer-Lemeshow result above p < 0.05 is considered significant for goodness of fit.

**Limitations**

Several methodological limitations were considered that may potentially influence the results of this dissertation study. Problems related to research design (e.g., internal and external threats), sampling, and instrumentation are all limitations to be considered. Threats to internal validity to be considered include maturation. For example, maturation can influence results because the variables were assessed during freshman and their responses on single indicators of religiosity and mental health may have changed during their senior year. Whereas, threats to external validity to be considered selection bias, population and ecological validity. For example, the S4S data sampled data using a convenience sample, which included Black male college freshmen who participated in the study. Therefore, volunteer bias may exist and results may not
be generalizable because the participants were not selected at random; the sample may not represent the VCU student population. Also, the S4S did not consider sub-groups for race, such as Black students who identify as Afro-Latina, Afro-Caribbean or Migrant Africans. Using a combined dataset, which includes another limitation because single indicators of religiosity, anxiety and depression collected at freshman year can change within 6 years as students complete their degrees. And degree completion creates another limitation because the data does not consider whether students did not graduate because they transferred to another school, which could compromise the data. There are quite a few more things to consider related to the statistical analysis model. Although the LR model can support statistical analysis using binary IVs, the model is not without limitations. For example, assumptions of linearity are one of the primary limitations when using LR. LR assumes a linear relationship exists between the IV and the DV may not always be true (Wright, 1995). Thus, whether a linear relationship exists between anxiety and depression and degree completion cannot be factored using an LR. Next, a single measure of association is another potential limitation because the strength and direction of the relationship is determined by the DV alone (Kraemer, 2004). Last, another limitation relates to LR lacking construct linear boundaries that separate between positive and negative predictive outcomes for the DV (Pohar, Blas, & Turk, 2004). However, despite the limitations, the study increased knowledge that examines potential buffers to support degree completion among Black male college students.

**Conclusion**

The study expanded knowledge related to degree completion and retention among Black men. With the combined understanding that religiosity is often important to Black students, and degree completion is imperative to their economic mobility and dually significant to higher
education administrators and other stakeholders in education. Thus, it is essential to further investigate whether a relationship exists between these variables. A plethora of literature focuses on deficit-based approaches regarding Black males experiencing higher dropout rates, attrition, and low degree completion. In addition, less is known about factors that may contribute to academic success demonstrated by degree completion. Therefore, the study can increase knowledge in whether religiosity predicts resilience evidenced by degree completion while factoring anxiety and depression among Black male undergraduate students attending a PWI.
CHAPTER 4
ANALYSIS

Chapter four includes the analysis results to examine the relationship between single indicators of religiosity collected during freshman year as a predictor of degree completion by year six among Black male undergraduate students and moderated by anxiety and depression.

The researcher utilized a binary logistic regression to analyze the following research questions: Do single indicators of religiosity (i.e., Importance of God, Religious Coping) collected freshman year increase degree completion for Black male undergraduate students by year six? Does mental health (e.g., anxiety and depression) collected during freshman year predict degree completion by year six for Black male undergraduate students enrolled at a PWI? Do single indicators of religiosity moderates the relationship between anxiety, depression, collected during freshman year, and degree completion at year six? The researcher hypothesized that higher religiosity (i.e., Importance of God, Religious Coping) collected during freshman year, would increase the likelihood of degree completion by year six for Black male undergraduate students. For the second research question, the researcher hypothesized that higher levels of anxiety and depression would predict the lower likelihood of degree completion by year six. Finally, for the third research question, the researcher hypothesized that single indicators of religiosity would moderate the relationship between anxiety and depression symptoms collected during freshman year and degree completion at year six.

One of the study purposes was to examine if a relationship exists between the student single indicators of religiosity (i.e., Importance of God, Religious coping), anxiety, depression collected during freshman year, and degree completion by year six. The chapter is organized into three continuous sections: (a) Preliminary analysis, a report of missing data and outliers; (b)
Demographic characteristics of the target sample and the results of variance tests; and (c) The results of the logistic regression analysis.

**Preliminary Analysis**

The preliminary analysis's purpose included cleaning the data, analyzing instrument reliability, linearity, assumptions, and testing for assumptions before running the logistic regression analysis. The researcher assessed for (a) instrument reliability using Cronbach's alpha (b) correlations between variables using a Pearson's correlations test, multicollinearity using a VIF with tolerance levels around 1, and regression outliers using a Cook's Distance test. Before analyzing the sample's demographics, the author addressed the missing data and removed outliers.

**Data Cleaning**

In the next section, the researcher focused on data cleaning procedures to assess for missing values. Since the researcher used a combined dataset, discovering missing cases was expected, and sometimes, participants completed one or two items of the survey but failed to complete all the questions.

The researcher utilized Little's Missing Completely at Random (MCAR) to assess missing data (Little, 1988). The results suggested the data were missing at random ($\chi^2$ (df =17, N = 288) = 33.848, $p = .288$). The default setting in Stat, maximum likelihood estimation, was used to address missingness (STATACorp, 2015). After using the Multiple Imputations (MI) technique (Meeyai, 2016; Razzak & Heumann, 2019), the researcher included 14 imputations for research questions one and two.

**Reliability Analysis**
Based on the data cleaning procedure, the researcher found it essential to ensure the mental health scale was reliable. To assess instrument reliability, the researcher conducted a Cronbach's alpha analysis (Cronbach, 1951). The researcher examined reliability for the two scales to assess Cronbach's coefficient alpha. As displayed in the results (see Table 1), the scale was above .7, which is considered good (Field, 2013).

Table 1

*Reliability of Scale Scores*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Cronbach’s Coefficients Alpha</th>
<th>Range</th>
<th>Items</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptom Checklist (SC-90)</td>
<td>.82</td>
<td>1-5</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

**Checking for Assumptions**

Preparing the data for logistic and multinomial regression statistical analysis the researcher conducted a Pearson's correlations test, multicollinearity using a variance inflation factor (VIF), Cook's Distance test, and Hosmer and Lemeshow test (Cook, 1977; Kramer & Zimmerman, 2007; Pearson, 1920; Wright, 1995). Correlations were computed among religiosity collected during freshman year and degree completion by year six on data for 281 Black male undergraduate students. The results suggest 'Religious Coping' was significantly correlated with 'Religious coping' $r(295) = +.14$, $p < .05$, one-tailed. The correlations for degree completion by year six were not significant with anxiety $r(231) = -.02$, $p = .78$. and depression $r(231) = -0.02$, $p = .78$ one-tailed, among Black male undergraduate students, except for competence rating with common knowledge, $r(152) = -0.01$, $p = .80$. However, anxiety and depression were significant
for Black undergraduate males $r(152)= +.34$, $p = .01$, one-tailed. The results suggest a small but positive association between Black male undergraduate students who reported using 'Religious coping' during freshman year and degree completion by year six.

Before analyzing the sample's demographics, the researcher addressed these assumptions: linearity (using link test), multicollinearity using the VIF, and regression outliers. The first assumption considers linearity using a link test to assess whether the structural equation is misspecified or lacking other IVs. The link test results were significant, which suggests the structural equation model accurately predicted degree completion by year six ($\hat{\text{a}} = 1.01$) and the variables have no specification error. In addition, the non-significant ($\hat{\text{a}}^2 = .01$) suggested the model was specified correctly; the model includes correct forms of the IV and DV. Therefore, the data did not support the necessity of a link transformation test.

The results suggested the model failed to reject the null hypothesis because no misspecification errors existed (see Table 2), and therefore modifications were not needed (i.e., include or omit variables). The predicted Y-hat is almost identical to the real Y dependent variable values, which concludes that the model specification is correct.

Table 2

<table>
<thead>
<tr>
<th>Misspecification Error</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Average</strong></td>
</tr>
<tr>
<td>_hat</td>
</tr>
<tr>
<td>_hatsq</td>
</tr>
<tr>
<td>_cons</td>
</tr>
</tbody>
</table>
The Cox and Snell pseudo $R^2$ value for this model was .03. Regarding specificity and sensitivity, the model correctly classified 67.6% of the cases. The model predicted true negatives 100% correctly (i.e., specificity). However, the model did not predict true positive cases (i.e., low sensitivity). The hat squared statistic was not significant ($p = .87$), which indicates the model was correctly specified. And the model indicated a good model fit because the Hosmer and Lemeshow test ($p = .59$) was not violated. Last, the VIF was 1, which indicates the model displayed no multicollinearity.

Table 3

*Logistic Regression Classification*

<table>
<thead>
<tr>
<th>Classified</th>
<th>~D</th>
<th>D</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>-</td>
<td>91</td>
<td>188</td>
<td>279</td>
</tr>
<tr>
<td>Total</td>
<td>93</td>
<td>188</td>
<td>281</td>
</tr>
</tbody>
</table>

Note: Classified if + if predicted Pr(D) $\geq .5$; True D defined as Degree Completion $\neq 0$

Table 4

*Sensitivity and Specificity Table*

|                  | Pr( +| D) | Pr( -| D) | Pr( D| +) | Pr( D| -) | Pr( +|~D) | Pr( -| D) | Pr(~D| +) | Pr(~D| -) | Correctly classified |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------------------|
| Sensitivity      |         |         |         |         |         |         |         |         |         | 2.15%               |
| Specificity      |         |         |         |         |         |         |         |         |         | 100.00%             |
| Positive predictive value | |         |         |         |         |         |         |         |         | 100.00%             |
| Negative predictive value | |         |         |         |         |         |         |         |         | 67.38%              |
| False + rate for true ~D | Pr( +|~D) | 0.00%   |         |         |         |         |         |         |         |                     |
| False + rate for true D  | Pr( -| D) | 97.85%  |         |         |         |         |         |         |         |                     |
| False + rate for classified + | Pr(~D| +) | 0.00% |         |         |         |         |         |         |         |                     |
| False + rate for classified - | Pr(~D| -) | 32.62% |         |         |         |         |         |         |         |                     |
| Correctly classified |         |         |         |         |         |         |         |         |         | 67.62%              |
Next, the researcher assessed multicollinearity using the Variance inflation factor (VIF) to assess whether the IVs correlated with one another. VIF detects whether independent variables (IV) correlate (O’Brien, 2007). The results of the VIF suggested all the IVs have low multicollinearity and are all below 4. These results contradict the results of the Pearson's correlation test. In addition, the VIF for importance of God and religious coping were both under 4.

The researcher assessed regression outliers utilizing a Cook's distance test (See Table 5) (Cook, 1977). The cut off of Cook's distance test removed any values above one or above .02 to remove outliers from the observations. After removing the six outliers, 281 students remained in the Model, which included the single indicators of religiosity items (e.g., Importance of God, Religious Coping) and anxiety and depression variables.

Table 5.

*Cook’s Distance for Multivariate Outliers Test*

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>.114</td>
<td>.691</td>
<td>.333</td>
<td>.164</td>
<td>296</td>
</tr>
</tbody>
</table>

Last, the researcher utilized a Hosmer and Lemeshow test to assess goodness-of-fit (Kramer and Zimmerman, 2007). The results of the Hosmer and Lemeshow test suggested that the model is well fitted $\chi^2 = .77$. The model appeared to adequately predict degree completion in year six for the men who reported using 'religious coping' always or sometimes during freshman year compared to the respondents who do not.

Participants
The researcher examined descriptive statistics for the items of the religiosity scale within the full original sample to ascertain the cultural relevance of religiosity, whether it would be similar to the Pew Research findings (Pew Research, 2009). In the original data set with all students and races retained \((N = 8,989)\), a higher percentage of African American students (80.7%) identified 'Importance of God' compared to students who identified as White (43.5%), Asian (62.2%), Hispanic (58.9%), Native American (61%) and Multi-Racial (52.8%). Next, a higher percentage of African American students identified using Religious coping (72.4%) compared to students who identified as White (37.9%), Asian (53.2%), Hispanic (50.8%), Native American (47.4%) and Multi-Racial (45.7%). Last, a higher percentage of African American students identified ‘Believing in God’ (95.9%) compared to White (75.3%), Asian (83.3%), Hispanic (87.3%), Native American (90%), and Multi-Racial (83.4%).

Table 6.

*Race and Ethnicity of Sample as Compared to Institution at Time of Data Collection*

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>(N)</th>
<th>% at Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>1730</td>
<td>19.2%</td>
</tr>
<tr>
<td>White</td>
<td>4574</td>
<td>50.2%</td>
</tr>
<tr>
<td>Asian</td>
<td>1460</td>
<td>16.2%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>555</td>
<td>6.1%</td>
</tr>
<tr>
<td>Native American</td>
<td>59</td>
<td>.006%</td>
</tr>
<tr>
<td>Multi-racial</td>
<td>571</td>
<td>6.3%</td>
</tr>
</tbody>
</table>

*Black Male Undergraduate Students*

The researcher removed all participants who did not identify racially as Non-Hispanic Black \((n = 2)\) and identified their gender as male. Black male undergraduate students identified
'Importance of God' as important (80.7%), not very important (14.4%), and not important at all (13.2%). Next, 63.2% of Black male undergraduate students identified using ‘religious coping’ (i.e., defined by students who indicated 1 *Almost Always*, 2 *Sometimes*, or 3 *Rarely* to the religious coping for frequency of seeking spiritual comfort) compared to 36.83% who did not (i.e., defined by students who indicated 4 *Never* or other). Last, 91.7% of Black male undergraduate students identified ‘Believing in God’ compared to 8.3% who did not.

**Descriptive Statistics**

The descriptive statistic results for this study confirmed the degree completion problem, high religiosity and low mental rates for Black undergraduate male students. The Black and African American male college students in the sample had a 33% graduation rate which is consistent with the national rate for degree completion (Eakins & Eakins, 2017; Reeves & Guyot, 2017; Shapiro et al. 2017; Von Robertson & Chaney, 2017). More than half the sample (66%) did not complete their degrees by year six. In addition, Black male undergraduate students reported higher rates of single indicators of religiosity and lower rates of depression and anxiety.

Table 7.

Frequency

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete by Year 6</td>
<td>99</td>
<td>33.4</td>
</tr>
<tr>
<td>Did Not Complete</td>
<td>197</td>
<td>66.6</td>
</tr>
<tr>
<td>Total</td>
<td>296</td>
<td></td>
</tr>
</tbody>
</table>

**Variable**

<table>
<thead>
<tr>
<th>Importance of God</th>
<th>Religious Coping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>86.2%</td>
</tr>
<tr>
<td>No</td>
<td>13.7%</td>
</tr>
<tr>
<td></td>
<td>82.7%</td>
</tr>
<tr>
<td></td>
<td>16.1%</td>
</tr>
</tbody>
</table>
The first research question examined whether single indicators of religiosity collected during the fall of 2011 and 2012 freshman year (i.e., Importance of God, Religious Coping)
predicted degree completion by year six for Black male undergraduate students enrolled at a PWI (See Table 7). The researcher hypothesized higher religiosity (i.e., Importance of God, Religious Coping) collected during freshman year, would predict degree completion by year six for Black male undergraduate students. Descriptive statistics for the logistic regression observed variables are in Table 8. Based on the LR test, we can conclude the model containing the full set of predictor variables represented a significant fit relative to the null model \[ \chi^2(3) = 9.44, p < .02 \]. The researcher concludes at least one population slope equals non-zero. Based on McFadden's adjusted \( R^2 \), the model containing the full set of predictor variables represented a less than 2.9% fit relative to the null mode which suggests low predictive value. Religious coping collected during freshman year predicted degree completion by year six. The predictor Religious coping is positive and significant (odds ratio = 1.58, s.e. = .316, \( p < .05 \)). The model indicated that the variables' Importance of God' collected during freshman year did not predict degree completion by year six for Black male undergraduate students.

Table 11.

Logistic Regression Analyses of Anxiety and Depression Predicts Degree Completion

<table>
<thead>
<tr>
<th>Variables</th>
<th>( \beta )</th>
<th>SE Error</th>
<th>Wald</th>
<th>( p )</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>0.85</td>
<td>0.128</td>
<td>0.44</td>
<td>0.506</td>
<td>0.847  1.399</td>
</tr>
<tr>
<td>Depression</td>
<td>-.018</td>
<td>0.088</td>
<td>0.04</td>
<td>0.834</td>
<td>0.827  1.166</td>
</tr>
</tbody>
</table>

Research Question Two

The second research question examined whether mental health (e.g., symptoms of anxiety and depression) collected during freshman year predicted degree completion by year six for
Black male undergraduate students enrolled at a PWI (See Table 6). The researcher hypothesized higher levels of anxiety and depression would predict the lower likelihood of degree completion by year six. Descriptive statistics for the logistic regression observed variables are in Table 9. Based on the LR test, we can conclude the model containing the full set of predictor variables represents a significant improvement in the fit relative to the null model \( \text{LR} \chi^2(2) = 1.22, p < .05 \). The researcher concluded that at least one population slope equaled non-zero. Anxiety and depression symptoms collected during freshman year did not predict degree completion by year six. The predictor anxiety is negative and non-significant \( (b = -.122, \text{s.e.} = .297, p = .681) \). The predictor depression is negative and non-significant \( (b = -.051, \text{s.e.} = .416, p = .792) \).

Table 12.

Logistic Regression Analyses of single indicators of Religiosity Predicting Degree Completion

<table>
<thead>
<tr>
<th>Variables</th>
<th>( \beta )</th>
<th>SE</th>
<th>Error</th>
<th>Wald</th>
<th>( p )</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance of God</td>
<td>.32</td>
<td>0.44</td>
<td>.538</td>
<td>0.463</td>
<td>.948</td>
<td>.948 1.125</td>
</tr>
<tr>
<td>Religious Coping</td>
<td>.268</td>
<td>0.129</td>
<td>4.34</td>
<td>0.00**</td>
<td>1.016</td>
<td>1.683</td>
</tr>
</tbody>
</table>

Research Question Three

The third research question examined whether single indicators of religiosity (i.e., Importance of God, Religious Coping) moderated the relationship between symptoms of anxiety and depression collected during freshman year and degree completion at year six? The researcher hypothesized the single indicators of religiosity would moderate the relationship between anxiety, depression, collected during freshman year, and degree completion at year six. Using logistic regression to detect the main effects of anxiety, depression, and indicators of religiosity
(i.e., Importance of God and Religious Coping), and then the indicators of religiosity (i.e., the interaction of Importance of God and Religious Coping with anxiety and the interaction of religiosity items with depression), the researcher discovered neither interaction was significant; therefore, no moderation existed. The likelihood ratio chi-square test compared the fit of the model with the complete set of predictors with the intercept-only null (no predictors). The significant result suggested at least one of the regression slopes was statistically significant from zero. Based on the LR test, we concluded the model containing the full set of predictor variables represented a significant improvement in the fit relative to the null model \[ \text{LR} \chi^2(6) = 25.51, p < .001 \]. The researcher concluded that at least one population slope equaled non-zero. Based on McFadden's \( R^2 \), the model containing the full set of predictor variables represented a 14.7% improvement in fit relative to the null model.

**Conclusion**

In chapter four, several statistical analyses were presented to analyze these research questions: (a) Do single indicators of religiosity (e.g., Importance of God, Religious Coping) collected during freshman year predict degree completion by year six for Black male undergraduate students? (b) Do symptoms of anxiety and depression collected during freshman year predict degree completion by year six? and (c) Do single indicators of religiosity moderate the relationship between anxiety, depression, collected during freshman year, and degree completion at year six? The analysis included Cronbach's coefficients alpha, bivariate Pearson's correlations, and a Logistic Regression. Cronbach's coefficient alpha found the mental health scale was reliable (> .70). The bivariate Pearson's correlations found religious coping significant and positively correlated with degree completion by year six. The significant correlation between religious coping and degree completion by year six for Black undergraduate male students
answered part of the first research question. The second part of the research question was to investigate whether single indicators of religiosity predicted degree completion by year six for Black undergraduate male students. The logistic regression analyses found a small but significant effect from 'religious coping' to predict degree completion by year six at a 2.9% explanation of the variance. For the second research question, whether mental health (i.e., symptoms of anxiety and depression) predicted degree completion by year six for Black undergraduate male students. The logistic regression analyses found symptoms of anxiety and depression in freshman year did not significantly predict degree completion by year six for Black male undergraduate students, respectively. The final third research question investigated whether single indicators of religiosity moderated the relationship between anxiety and depression collected during freshman year and degree completion at year six using a multinomial logistic regression. The results of the logistic regression analysis suggest that the single indicators of religiosity did not moderate the relationship between anxiety and depression symptoms and degree completion by year six, with 14.7% variances explained, respectively. In the next chapter, I explore the interpretation of these findings, including limitations and recommendations for future research and religious coping interventions.
CHAPTER 5
DISCUSSION

Black male undergraduate degree completion rate remains a national concern for colleges and university stakeholders. This dissertation study aimed to investigate whether indicators of religiosity or symptoms of depression or anxiety in freshman year predicted degree completion for Black males (the researcher utilizes Black and African American interchangeably) who attend a predominantly white institution (PWI). The findings are preliminary, and future work is necessary to further conceptualize factors that contribute to degree completion, including the contribution of religiosity, anxiety and depression, and factors that moderate the relationship between mental health and degree completion among Black undergraduate males. This chapter includes a discussion of the findings related to the literature specific to (a) Black male undergraduate students, single indicators of religiosity (i.e., Importance of God, Religious Coping) and degree completion, (b) mental health and degree completion, and (c) religiosity as a protective factor. Also included is a discussion on the relationships between this study findings and resilience theory and Black undergraduate student retention. The chapter concludes with a discussion of the limitations of the study, recommendations for future research, and a summary.

Resilience Theory

The theory behind what encourages Black men to be resilient through degree completion is an under-researched area from a quantitative perspective (Cole et al. 2020; Morgan-Consoli et al. 2015). The findings may support the gap in knowledge about single indicators of religiosity (i.e., Importance of God and Religious Coping) and degree completion for Black undergraduate male students. Specifically, previous studies have explored religiosity, mental health, degree completion among Black male undergraduate students generally from a qualitative perspective.
Black undergraduate males may potentially benefit from religiosity as a resource for resilience to help them overcome higher dropout and low degree completion rates (Boyraz et al. 2016; Mortagy et al. 2018).

Traditionally, religiosity is described as a means for striving to be a better person by practicing rituals and good morals (Khazaei, 2019; McKay & Whitehouse, 2015). However, religiosity may have multi-dimensional implications for Black and African Americans. The multi-dimensional nature may help to explain the higher reporting of the single indicators of religiosity in the descriptive results. For example, religiosity offers (1) a worldview, (2) strategies for coping, and (3) a supportive faith-based community (Dancy, 2010; Herndon, 2003; Herndon & Hirt, 2004; Jett, 2010; Riggins et al., 2012). For many Black and African Americans religiosity offers a philosophy for understanding life situations related to adversity (Riggins et al. 2008; Wood, & Hilton, 2012). Additionally, they prefer using religion to cope with stressors (Adkison-Bradley, Johnson, Sanders, Duncan, & Holcomb-McCoy; Bierman, 2006; Brelan-Noble et al. 2015). Last, religion offers a faith-based community to support and hold them accountable (Herndon, 2003). These factors make religion dynamic for Black and African Americans.

**Higher Religiosity among Black Undergraduate Males**

To date, Pew Research Center examined three national survey studies highlighting Black and African Americans, as well as Black Millennials, tend to be more religious when comparing students of other races (Diamant & Mohamed, 2018; Pew Research Center, 2009, 2018). However, Pew Research did not include percentages of males explicitly. In the sample for the original S4S project, 80.7% of Black and African American students (i.e., both men and women)
identified 'Importance of God', another 72.4% identified using religious coping, and 95.9% reported believing in God.

And when considering Black males, 72.4% identified 'God as Important', 63.2% used religious coping, and lastly, 91.7% of Black male undergraduate students identified believing in God. Although the descriptive findings were not statistically validated, they suggest that religiosity may be important to Black students, endorsed by the Pew Research Center findings (Diamant and Mohamed, 2018; Pew Research Center, 2009, 2018). However, the results of the Pearson’s chi-square test for Importance of God ($p = .10$) and an ANOVA for Religious coping ($p = .11$) for Black students suggests that no relationship exists (See Table 8 and 9).

Research Question One

Indicators of Religiosity and Degree Completion

This dissertation study examined whether single indicators of religiosity items (i.e., Importance of God, Religious Coping) collected freshman year increased the likelihood of degree completion for Black male undergraduate students by year six. To answer the research question one, the researcher used logistic regression to examine whether single indicators of religiosity (i.e., Importance of God and Religious Coping) increased the likelihood of degree completion. The results provided partial support for the study hypothesis. The hypothesized predictive relationship for ‘Importance of God’ as an indicator for religiosity for degree completion was not supported. Yet, 'Religious Coping' significantly predicted degree completion; although the strength of this association reflected a small practical effect size and only explained 2.9% of the degree completion variance. Although the results were statistically significant, the strength of the relationship between 'Religious Coping' and degree completion is small. The findings may somewhat align with resilience theory even though there may not be
much practical significance due to lack of model sensitivity and small effect size. Black male undergraduate students may experience some protection through degree completion because they report using religious coping. Besides the small strength in the relationship between religious coping and degree completion, this could potentially be an emerging finding and opportunity for future research to explore further.

According to resilience theory (Rutter 1987, 2007) individuals use resources to help overcome adversity and Black male undergraduate students need resources to help them overcome risk for dropout (Mortagy et al, 2018). Given the complexity of religiosity, previous research (e.g., Dancy, 2010; Herndon, 2003; Herndon & Hirt, 2004; Jett, 2010; Riggins et al., 2008; and, Wood & Hilton, 2012) find great difficulty providing empirical evidence to support the resilience theory. Some Black male undergraduate students use religiosity to achieve academic success (Boyraz et al. 2016; Mortagy et al. 2018). However, previous research studies, which include a quantitative methodological approach have not explicitly focused on Black males, religiosity, and degree completion, together (Cole et al. 2020; Mooney, 2010; Morgan-Consoli et al. 2015; Sprung & Rogers, 2020).

The non-significant finding for 'Importance of God' may suggest religious views alone, instead of using religion as a source for coping, may not relate to degree completion or academic success. A student can believe God is important and never use their beliefs as a source for coping (Dancy, 2010). Future research could continue investigation of Black male undergraduate students' use of religious coping when facing stressors both on- and off-campus.

**Research Question Two**

**Anxiety and Depression and Degree Completion**
To answer research question two, this study used logistic regression to examine whether anxiety and depression collected at freshman year predicted degree completion by year six. The hypothesis that anxiety and depression would predict a lower odds ratio of degree completion was not supported. Contrary to existing literature on the higher rates of mental health symptoms among Black males (Campbell & Allen, 2019), the Black male undergraduate students in our sample tended to report low rates of mental health symptoms. Consequently, in a sample of Black males reporting low levels of anxiety and depression, we found no significant relationship between mental health and degree completion.

Although it is gradually changing, a stigma exists regarding accessing mental health services among the Black community (Avent-Harris & Wong, 2018). Therefore, if Black male students are experiencing distress, they may be less likely to report their symptoms transparently (Corrigan, 2004). Especially on a student-wide survey such as the original data set collected for this study. Last, Black male undergraduate students may experience and report anxiety and depression differently from the sample originally validated using the scale (e.g., PSI-90). Therefore, the scale may not have accurately detected symptoms of anxiety and depression in ways experienced by Black male undergraduate students. Another possibility is that mental health is not a static variable – symptoms of anxiety and depression may vary over time. Therefore, baseline mental health from a student’s first semester of their freshman year does not seem to be the best predictor of completion. Also, future research may examine mental health in subsequent semesters which may be more influential to degree completion. Last, instrument bias related to the mental health instrument used in the current study is further discussed in the limitations section.

**Research Question Three**
**Single Indicators of Religiosity as a Moderator**

Finally, to answer research question three, logistic regression was used to examine whether indicators of religiosity moderated the relationship between anxiety and depression and degree completion. The hypothesis that Black male undergraduate students would use single indicators of religiosity (Importance of God, Religious Coping) to moderate the relationship between anxiety and depression and degree completion. However, the results of the analysis did not support the hypothesis. Since the findings for anxiety and depression were not significant, and because reported symptoms were so low in this sample, it was assumed the interaction between the indicators of religiosity and mental health would be non-significant. The non-significant findings may relate to Black and African Americans reporting lower mental health symptoms in comparison to previous research (e.g., Campbell and Allen, 2019; Chen, Stevens, Wong, & Liu, 2019). Also, mental health assessments are culturally biased (Snowden, 2003; Hairston, Gibbs, Wong, & Jordan, 2019), and Black and African American clients present mental symptoms differently (Saleem & Lambert, 2016; Robinson, Paxton, & Jonen, 2011). The studies included symptoms such as distress, anger, aggressive behaviors, loneliness or unhappiness.

**Implications**

**Practitioners**

The Council for Accreditation of Counseling and Related Educational Programs (CACREP, 2016) and the Association for Spirituality, Ethical, and Religious Values in Counseling (ASERVIC, 2009) established competencies endorsed by the American Counseling Association (ACA, 2016). Despite these competencies, The ASERVIC counseling competencies require that counselor educators train students to broach conversations and integrate religiosity within treatment for their clients (e.g., who identify religiously). This dissertation's findings
might add cultural relevance to how important God and religious coping is for Black and African Americans, specifically Black male college students. Counselors who assess to determine the importance of religiosity to their Black male clients might better build rapport and address recovery needs (Bryant-Davis, 2005). For example, previous literature research supported using religiosity in counseling decreases mental health symptoms (e.g., depression, anxiety, suicide, dementia, and stress-related illnesses) (Oman & Lukoff, 2018). Although, future research is necessary to further validate the statistical significance for cultural relevance. Counselors can use this study's findings to inquire about indicators of religiosity for Black male undergraduate students.

**College Counselors**

College counselors may respond to students in crisis who pursue university counseling services. However, many college counselors experience struggles to build rapport with their Black clients (Benn, 2018; Bryant-Davis, 2005). Black students report practitioners lack empathy and may prefer to receive faith-based counseling services (Avent-Harris & Wong, 2018). Therefore, assessing religiosity and use of religious coping might help college counselors overcome problems building rapport with Black clients or to address mental health concerns. Black college students access college counseling services as a last resort or when they feel they have completely lost control in their lives (Avent-Harris & Wong, 2018). This dissertation study's findings could potentially help college counselors break rapport barriers for Black college students and especially Black males. A majority of our sample of Black male college students reported ‘believing in a God', using religious coping, and identifying God to be important. Therefore, college counselors with access to students' religious beliefs on intake forms could explore indicators of religiosity and its relation to their clients presenting problems.
**Student Affairs**

College student affairs professionals support academic and personal development with their students (Brooks et al. 2013; Gasman et al. 2017). The findings of this dissertation, although tentative given the nature of the small effect sizes, may inform recommendations for student affairs related to (a) career services, (b) retention programs, (c) faculty-student mentorship, (d) partnership, and (e) speaker engagements. Previous literature related a religious sense of purpose to career development for Black undergraduate students (Dancy, 2010; Herndon, 2003; Jett, 2010). For some people, 'a sense of purpose' is their reason for existence, connected to one's gifts, talents, and abilities (Damon, 2009). The findings from the study might support student affairs advisors to explore whether religiosity is important to Black male undergraduate students and inquire how faith could connect to their vocational journey through degree completion. From a religious perspective, Black males may even associate their career choice with discovering their calling, that they believed to be a divine invitation by God (Strong, 2010). Student affairs advisors who understand the language of calling can use the findings to support aligning career choice with their purpose (Jett, 2010).

Next, student affairs divisions are committed to supporting academic development through retention programs. Retention programs provide opportunities for African American male college students to participate in accessing focus groups, receive tutoring services, career planning, and build peer and faculty relationships with other Black men (Brooks, Jones, and Burt, 2013). These programs have been monumental to the success of Black male undergraduate students through degree completion as evidenced by increases in GPA in comparison to students who did not participate in programs (Brooks, et al. 2013). This dissertation study's findings could support exploring the inclusion of religiosity in specific programming for Black Males.
Additionally, including religiosity within the retention curriculum might encourage personal development for students at risk for dropout (Brooks et al. 2013; Gasman et al. 2017).

Potentially, student affairs officials could use the findings to support student personal development which includes faculty-student mentorship, partnerships, and planning speaker engagements. Previous studies report Black students felt encouraged to succeed when forming a mentorship relationship with faculty members of a similar race and ethnicity (Brooks et al. 2013; Gasman et al. 2017). Therefore, the findings may support, considering religion, when pairing students and faculty based on race and ethnicity. However, it should be noted that there are dissenting opinions, related to race based matching practices; for example, Soto et al., (2019) suggested matching may be less effective and the relationship and the trainees’ perception of multicultural competence and cultural humility (regardless of match) seems to influence rapport. Religion appears to be important to Black and African Americans, regardless of age (Pew Research Center, 2009, 2018). Also, universities could consider partnering with local churches to offer resources such as connect groups, volunteer opportunities, and a spiritual home away from home. Last, universities may consider inviting religious leaders and speakers to campus such as Dr. A.R. Bernard (Bernard, 2016), Rizza Islam (Islam, 2019), Steven Furtick (Furtick, 2010), or Michael Todd (Todd, 2020). These events could engage students who identify as Black males but open to all interested students. Overall, the findings of the study could potentially be useful for promoting student academic and personal development.

**Counselor Education**

According to Bohecker, Schellenberg, and Silvey (2017) a discrepancy exists between endorsements for spiritual and religious competencies (ACA, 2016; ASERVIC, 2009; CACREP, 2016) and counselor training programs. As a result, many client spiritual and religious needs
continue to go unmet. The following section highlights implications for counselor educators: (a) include cultural relevance for the importance of God and religious coping for Black students and specifically Black males, and (b) add to the supportive literature to help students-in-training contextualize their clients' religious worldview (Bohecker, Schellenberg, & Silvey, 2017; Rose, Westefeld, & Ansley, 2001). Possibly, the dissertation findings could add more context on the increased religiosity rates among Black respondents. Due to the higher rates, it is important for counselors-in-training and supervisees to be aware of the potential for high religiosity among Black clients.

According to Magaldi-Dopman (2014), most counselors-in-training consider religiosity to be an "afterthought," and they lack specific training opportunities in their graduate degree programs. This combination may relate to counselor educators feeling unprepared in their understanding of how religion relates to treatment (Burke et al. 1999; Helminiak, 2001; Henriksen et al. 2015). However, training materials specifically for counselors are available, such as the 'Integrating Spirituality and Religion into Counseling: A Guide to Competent Practice’, which highlights trainees are mandated to research and learn as much about their clients' religious worldview (Cashwell & Young, 2011). Despite the available materials some counselor educators still report feeling unprepared to train students as it relates to religion (Burke et al. 1999; Crabtree et al. 2020; Helminiak, 2001; Henriksen et al. 2015).

Spirituality, as opposed to religion, maybe a more neutral territory for counselor educators and students in training (Barto, 2018). Therefore, students may not feel comfortable, including religion, in treatment. However, religiosity may be an important factor for African Americans reflected in this dissertation results as well as Pew Research Center (2009, 2018, 2020). The lack of religious competence may be related to counselor education programs' failure
to offer a stand-alone course dedicated to religiosity, which may be the most practical strategy for preparing future clinicians (Robertson, 2010). However, future studies could help counselor educators validate religiosity's cultural relevance for Black and African American undergraduate students and, at the least, consider asking Black clients if they prefer to include religion in therapy.

Recently, CACREP subgrouped spirituality and religion in a core curriculum under Social and Cultural Diversity, which included a recommendation for understanding how spiritual beliefs impact worldviews for clients and counselors (CACREP, 2015). In addition, the 2016 CACREP Standards glossary removed spirituality and its definition from the standard glossary (CACREP, 2015). Students face barriers with understanding religion and spirituality, therefore, removal from the glossary stifles further clarity and hurts the ability of students’ comprehension. Bohecker, Schellenberg, and Silvey (2017) suggest religion and spirituality should be included as the “9th CACREP core curriculum” (p. 132). Creating a core curriculum could standardize integration and practice for counselor educators, trainees and supervisees. Previous literature suggests that practical integration should include (a) classroom activities (Meyer, 2012) (b) offering religion and spirituality courses (Curtis & Glass, 2002; Pate & Hall, 2005), (c) experiential exercises (Meyer, 2012), (d) didactic, and process exercises (Curtis & Glass, 2002), and (e) including religion and spirituality in the CACREP core could make the counselor education pioneers of the helping professions for holistic wellness (Myers & Sweeney, 2008). Last, this dissertation study might support the need for future research to explore the intersection between race-ethnicity, gender, religion, and spirituality among Black male undergraduate students.

**Recommendations for Future Research**
The recommendations for future research on religiosity and mental health to predict degree completion among Black male undergraduate students include:

1. Longitudinal design to collect indicators of religiosity at multiple time points
2. Mixed methods approach to include qualitative narratives
3. Include dropout and transfer variables
4. Account for subgroups within Black ethnicity (Afro-Caribbean, Afro-Latina, and African Migrant)
5. Use a mixed-methods approach with qualitative narratives
6. Include negative racial encounter scales
7. Use revised instruments for religiosity and mental health previously normalized with diverse populations.

Future research should consider using a longitudinal study design to measure religiosity, anxiety, and depression at multiple time points over the course of an academic career. According to spiritual development theory, students' views on spirituality may change over time (i.e., increase or decrease) (Conn, 1993; Fowler & Dell, 2006). Furthermore, students between the ages of 18-24 struggle with religion and spirituality, and religious commitment is not stagnant for most people (Parks, 2000). Hence, measuring religiosity at different time points could capture any changes. Next, future research could consider including a dropout and transfer variable to account for students who may not have dropped out of the university but transferred or graduated from another institution. Future studies should also consider accounting for subgroups within Black ethnicity (Afro-Caribbean, Afro-Latina, and African Migrant) as well as an intersectional account of student identity. Nuances could exist between the subgroups, although the students may identify racially the same. Future studies could examine whether nuances exist between
subgroups within Black ethnicity such as Afro-Caribbean, Afro-Latina, and African Migrant. Although African Americans identify religiosity higher than other groups, less is known about sub-groups in Black and African Americans. Previous studies (Taylor et al. 2009) include such demographic data to assess religiosity reported African Americans and Afro-Caribbeans identified higher religiosity levels than White participants. Last, future research could consider mixed methods and updated instruments. The Center for Disease Control (2017; 2019) reported African Americans have lower anxiety and depression rates. According to Asnaani et al. (2010), African Americans are less likely to be diagnosed with anxiety disorders (i.e., social, generalized, panic) than White Americans. However, African Americans frequently meet the criteria for Post-Traumatic Stress Disorder (PTSD) compared to White Americans (Asnaani et al. 2010; Himle, Baser, Taylor, Campbell, & Jackson 2009). Future studies could benefit from including instruments to capture stress by measuring experiences of discrimination a student experienced to better understand the influence of the PWI environment upheld by white supremacy culture. A mixed-methods approach to include qualitative narratives to help further conceptualize the complexities of religiosity and mental health. Last, future studies could use updated instruments on spiritual or religiosity populations. Astin, Astin, and Lindholm (2011) identified 12 new measures that have been normalized using undergraduate college student populations, which demonstrate satisfactory reliability. Future studies should consider normalizing these instruments with Black undergraduate males.

Limitations

The study is not without limitations. The study included several limitations, such as research design, maturation, sampling, instrumentation, and selection bias. Logistic regression may have benefits for investigating binary outcomes; however, LR creates limitations related to
linearity, strength, and direction, and does not consider boundaries between constructs (Pohar, Blas, & Turk, 2004). Another limitation is merging two datasets, which creates a potential for errors, incorrect matching between datasets, problems with labeling, decoding, and overlapping labels (White, Royston, & Wood, 2011). Last, the variable degree completion may not be the most efficient measure because the variable does not consider whether students transferred to another school. Maturation is another limitation to be considered. Student self-reported religiosity and mental health symptoms may not remain steady for six years or until degree completion. However, prior research found college students' views on religion change throughout their college experience (Uecker, Regnerus, & Vaaler, 2007). Some studies suggest students become more religious over time, whereas others remain steady or become non-affiliate after graduating (Schwadel, 2016). This limitation to consider is selection or volunteer bias because the project used a convenience sample for the secondary analysis. The Black male college freshmen who participated in the study may not represent all Black males who attended the university. The sample was limited to students who were freshmen the years of the study and did not include Black males classified as sophomores, juniors, or seniors. The original project did not include sub-groups for race-ethnicity (e.g., Afro-Latina, Afro-Caribbean, or Migrant Africans). The assumption all Black males who identify as Black define religiosity the same is another limitation. Last, the instrumentation is another limitation that may have negatively influenced the results because the study did not include full versions of the scales, the measures were not standardized, and anxiety and depression were not significantly correlated. In addition, other measures may accurately reflect religiosity, which includes spirituality; no previous literature validated the instruments used in the dissertation with Black students, specifically

**Conclusion**

Religiosity may offer Black male undergraduate students a source of resilience for overcoming lower rates of degree completion and higher dropout rates with a small practical significance. This study's findings attempted to connect the gaps in knowledge between religiosity as a protective factor to increase degree completion for Black male undergraduate students enrolled at PWIs. Besides, this study findings may be the first step in increasing understanding to help counselors, counselor educators, and student affairs workers encounter Black male undergraduate students. The findings might also help provide contextual empirical evidence for the cultural relevance of religiosity for Black male undergraduate students. Previous research attempt to validate the cultural relevance of religious coping (i.e., God, prayer, scripture reading, fellowship) for Black people (Avent, Garland, McKinney, Fripp, 2019; Baxter et al. 2019; Bierman, 2006; Chatters, Taylor, Jackson, & Lincoln, 2008; Ricks, Golman, Kirby, and Gallegos, 2019; Taylor, Thornton, & Chatters, 1987), however no studies specific to Black males. Black male undergraduate students remain in need of resources to protect them from adversity, and religiosity may be promising.
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LIST OF FIGURES

Observed Value

Histogram

Standardized Residual for GRADUATION_STATUS

Frequency

Standardized Residual for GRADUATION_STATUS
127