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AFRICAN AMERICAN DOCTORAL STUDENT EXPERIENCES: FACTORS THAT IMPACT PERSISTENCE AND GRADUATION

By

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ABSTRACT

AFRICAN AMERICAN DOCTORAL STUDENT EXPERIENCES: FACTORS THAT IMPACT PERSISTENCE AND GRADUATION

By

Lloyd Glen Bingman

This study examines the experiences of African American doctoral students and the factors that impact their graduate school successes. In so doing, it helps fill the current void in the graduate student literature. The data derive from one-on-one interviews with ten African American men and women who received their Ph.D. degrees within the last four years. The interviews explored the factors that contributed to the participants' persistence in completing their degrees, the role race played in their student experiences prior to and during their doctoral studies, and how their perceptions of their race impacted their student successes.

The findings of this study, which counter the findings of some scholarly research, demonstrate that race, rather than erecting potential barriers to success, can positively impact the success of African American graduate students. The participants received profound emotional and academic support from ethnic minority college professors, administrators, or student-peers who understood the potential racial barriers that African American students can face on predominately White college campuses. Pride in being African American also contributed to the participants' successes. Instilled early by their families, this pride impelled the participants to perform well in their fields of study so that they could serve as positive role models for African American students to follow and, by disproving negative stereotypes of African Americans' academic abilities, serve

as good representatives of their race. The study concludes with recommendations for future research and actions derived from the findings.

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Chapter 1

Introduction and Statement of the Problem

African Americans make up a small number and percentage of the doctorates earned in the United States (Isaac, 1998; National Opinion Research Center, 1999; Willie et al., 1991). One would expect, however, that the percentage of African Americans who earned doctorates should parallel the percentage of the African American United States population. According to a 1999 national study conducted by the National Opinion Research Center (1999), African Americans earned 1596 or approximately 3.8% of the 41,140 doctoral degrees received in 1999. Given that the proportion of the African American population was approximately 12% in 1999 (U.S. Census Bureau, 2000), the percentage of the African American doctoral degrees earned was between three to four times less than the proportion of the African American U.S. population.

Whites, however, earned 26,450 or approximately 64% of the doctoral degrees received in 1999 (National Opinion Research Center, 1999). As a result, the proportion of White doctoral degrees earned in 1999 was closer to their actual percentage in the U.S. population—approximately 70% (U.S. Census Bureau, 2000). Hence, there is an imbalance in the percentage of African American doctoral degrees received compared to that of Whites.

There is another point that involves completion or graduation rates. The point is that approximately 50% of all doctoral students who begin their doctoral studies at colleges and universities obtain their degrees within ten years (Bair & Haworth, 1999; Bowen & Rudenstine, 1992; Nerad & Cerny, 1991; Tinto, 1993).

Based on the data at Michigan State University (MSU), there is not much difference between the completion or graduation rate of African Americans and other doctoral students. At MSU, the 1999 graduation rate for African American doctoral students was approximately 47% over a nine-year period (Michigan State University, 2002). This completion rate of African American doctoral students closely parallels that of the national doctoral student completion rate (approximately 50% over a ten-year period). Therefore, based on the information obtained from MSU, it appears that persistence is not any more of a problem for African American doctoral students, at least at MSU, than for any other doctoral students.

It is of great concern, however, that only about 3.8 % of the degrees offered in 1999 were earned by African American students. Since a relatively few number of African Americans enter graduate school, colleges and universities should be especially concerned with helping these individuals persist or encourage their graduation efforts. In addition to reporting completion rate data of African American doctoral students, it has also been stated in the literature that "race" plays a significant role in the experiences of African American graduate students, which can also affect their graduation efforts (Banks, 1996; Steele, 1990; Thernstrom & Thernstrom, 1997). Therefore, in this study, I examine what role "race" plays in African American graduate student experiences and how African Americans perceive their racial identity as part of those student experiences.

Information that is lacking from the literature is the voice of African American doctoral students explaining their experiences in graduate school. Therefore, in this study, I conducted personal interviews of African Americans who

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succeeded in completing Ph.D.s to gain an understanding of their perceptions of their graduate student experiences.

Significance of the Problem

The recent percentage of African American doctoral degrees offered in the U.S. (about 3.8%) is significant because if this percentage does not increase and become more in line with the African American U.S. population, there will not be enough African American scholars to meet the workforce demands of our country. Based on the projected African American and the Hispanic American U.S. populations by 2010 (approximately 50% of the entire U.S. population), more African American scientist and technological scholars will be needed to fill positions in the scientific community (Green, 1989). Willie et al. (1991, p. 19) maintained, "minorities will be needed increasingly to occupy positions in the scientific community that were filled by white males." The authors stated that the "production of doctoral degrees among blacks is an indicator of the potential strength of the United States as a world power in science and technology (1991, p. 19)." Therefore, a major increase in the percentage of African American doctoral degree recipients will be needed, especially in the biological sciences.

To further explain this point, in 1999, African Americans earned 116 or about 2% of the 5600 biological science doctorates received in this country, compared to Whites who earned 3,139 or approximately 56% of the biological science degrees (National Opinion Research Center, 1999). Therefore, as the U.S. African American population increases and African American scientists are needed to meet the

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projected workforce demands, the number and percentage of African American doctoral degrees received must also increase.

In addition to increasing the percentage of African American scientists to meet expected workforce demands, more African Americans will also be needed to meet the academic and workforce needs in other areas. For example, Isaac (1998) maintained that there is a need for more African Americans to earn doctoral degrees because they must serve as role models and contribute to the knowledge base of industry, business, science, human services, the arts, and other fields. Therefore, based on the expected diverse needs of the U.S. workforce, efforts should be made to increase the percentage of African American doctoral degrees earned so that a larger proportion of African Americans will be available to meet diverse workforce demands.

Purpose of the Study

The purposes of this study are to examine the nature of graduate experiences of some African American doctoral students, the factors that contributed to their decision to pursue a doctoral degree, what role race has played in their student experiences prior to and during their graduate study, and their awareness or perception of being African American as it relates to their graduate experience. Given the problem presented in this study, I have focused on one major research question: What are the experiences of some African American doctoral students in graduate school? Sub-questions include:

- What prior experiences before graduate school may have affected their graduate experience?

- What experiences in the discipline/department or more broadly in the institution were critical in framing their graduate experience?

- What is their understanding or awareness of their racial and ethnic identity?

- How does race impact or play a role in their experiences prior to graduate school and as doctoral students?

- What kept them motivated to persist in completing their doctoral degrees?

To answer these questions, I have interviewed ten African American doctoral students who have succeeded in completing their doctorates within the last three years. For the purpose of this study, success is defined as "degree completion." Also, the terms African Americans and Blacks will be used interchangeably.

Chapter 2

Review of the Literature

Introduction

This section discusses the role "race" plays in the experiences of African American students, as well as studies and factors pertaining to graduate education regardless of race or ethnicity. Some of these studies and factors focus on graduate student experiences in general, while others focus on graduate student experiences of ethnic minority groups, particularly African Americans. This review of the literature is organized in several subsections: 1) The role of race in the academy, 2) Race and/or ethnicity: factors that impact African American persistence, 3) Racial and ethnic identity theories, 4) Key concerns and findings of graduate education and graduate education research, 5) Studies on doctoral student attrition, 6) Studies of factors that impact doctoral student success, 7) Comparisons between African American and other doctoral students' experiences, and 8) Recommendations for impacting doctoral student persistence and graduation rates. The section will conclude with a summary of the literature review.

According to the literature, one concern of graduate education researchers is the increase in student attrition among doctoral students for the past three decades (Michigan State University, 1973; Tinto, 1991, 1993; Tucker et. al., 1964). As a result of this concern, studies on doctoral student attrition and graduation rates are examined to identify some of the causes of high attrition rates among doctoral students (i.e., type of academic discipline and lack of academic and social integration of the students within their departments or institutions).

After a discussion of the causes of attrition, studies on factors that impact doctoral student success are examined. Some of these factors include maintaining quality faculty-student and student-peer relationships, maintaining enthusiasm for work, working independently, obtaining financial support, and planning ahead and keeping records of data collection and other pertinent information. These factors often impact doctoral students regardless of race or ethnicity. Other factors, however, impact ethnic minority doctoral students as a result of their race or ethnicity. To address these factors, comparisons between ethnic minority and other doctoral students' experiences are made. After making comparisons between ethnic minority and other doctoral students' experiences, a discussion pertaining to recommendations for impacting doctoral student persistence and graduation rates is presented. This discussion provides some recommendations found in the literature for institutional leaders to follow that could positively impact the persistence and graduation rates of all doctoral students, particularly African American doctoral students.

The Role of Race in the Academy

It has been argued in the literature that race plays a significant role in the experiences of African American graduate students (Turner & Myers, 2000; White, 1984; Willie et al., 1991). Some graduate experiences have adversely affected these students' learning outcomes, and as a result, have led many African American students throughout the country to seek ways to experience a more pleasant and supportive learning experience and environment. African American students have

sought to obtain such pleasant and supportive learning experiences and environments by trying to sort out the meaning of their presence on campus (to themselves, to Whites, and to their family and communities), and to fight against racial discrimination within their college campuses (Banks, 1996; Thernstrom & Thernstrom, 1997; Turner & Myers, 2000; White, 1984; Willie et al., 1991).

Banks (1996, p. 173) maintained that at many colleges and universities today, African American students "contend with academic challenges while sorting out the meaning of their presence on campus—to themselves and to whites." He reported that often African Americans want to prove to themselves and to others on campus that they can succeed academically and at the same time, make their campuses more desirable places for their racial group to attend.

Prior to leaving for college, African American students often are reminded by their families that in order to become successful in college, they have to perform two times better, academically, than their White counterparts (Banks, 1996). Not only do African Americans feel compelled to work harder than other students; their families frequently maintain that because there are few Blacks attending predominately White institutions, they are "representing the Black race" so they have to be careful about how they present themselves (Banks, 1996). This sentiment of high achievement and positive representation for the Black race has existed for decades.

Banks (1996, p. 182) reported that since the desegregation of schools, Blacks are often told by their families, friends, and community leaders that they have "to be brilliant," while Whites can "afford to be simply satisfactory scholars." Consequently, many African American students attend college with the burden of

being paragons of their race because of the expectations that are placed on them by their families and some community leaders (Banks, 1996). Not only do African Americans feel the added pressure of performing well academically; they also believe that they have to maintain an image that would positively represent their families—many of whom have not attended college. In addition, they have to maintain a positive image as a representative of "the entire Black race."

For many years in society and particularly at college campuses, African Americans are stereotyped or characterized as being lazy, non-productive, stupid, inferior, or often complaining about their circumstances more than any other ethnic group (Steele, 1990). Although African American parents instill in their children that they are not inferior to any person or ethnic group, there still remains an important question for African Americans: "If I am not inferior, why the need to say so (Steele, 1990, p. 134)?" Mixed messages are conveyed to these individuals, and because of the added pressure to prove these myths and stereotyping invalid, African Americans often take the initiative to make their learning environments and experiences more positive for themselves and for their particular ethnic group.

Thus, Steele (1990, p. 138) explained that to disprove certain myths and stereotyping of African Americans, African Americans often have to suppress their feelings of inadequacy, inferiority, and inability to perform well in college and "burn the midnight oil" studying (Steele, 1990, p. 138). Dr. Martin Luther King, Jr. stated: "When you are behind in a footrace, the only way to get ahead is to run faster than the man in front of you" (Steele, p. 138). Dr. King's comment suggested that if Blacks expect to be able to compete with other ethnic groups in any task, particularly

with Whites, they must try much harder than Whites to become successful in their endeavors.

Even though African Americans have tried harder academically to prove to others that they are deserving of being acknowledged and respected as scholars and intellectuals, often times, they are not recognized as such (West, 1991). Some White scholars do not consider African American graduate students as scholars and intellectuals because of perceptions of affirmative action programs and past student activism (West, 1991). West (1991) maintained that some White individuals believe that affirmative action programs assist minorities in gaining employment and educational opportunities without having the appropriate credentials to obtain such opportunities. West (1991, p. 133) argued, "perceptions fueled by affirmative action programs" impact many Black student-White professor relations. He maintained that the academy has been less receptive to embracing African Americans into its culture because of "heated political and cultural issues such as the legacy of the Black Power movement" and the "invisibility of Africa in American political discourse (p. 133)." As a result of these events, relations between Black and White intellectuals have suffered (West, p. 133). West further maintained that because of these events, White scholars often view African American students and Black intellectuals as "trouble makers" and distance themselves from these individuals.

As a result of not being welcome in the academy, African American scholars often find that opportunities for publishing in major journals are unavailable. West (1991, p. 133) suggested that "this hostile climate" required African American graduate students and African American professors to "fall back upon their own

resources—institutions, journals, and periodicals—which, in turn, reinforces the de facto racially separatist practices of American intellectual life." Furthermore, maintaining high academic achievement and being unwelcome in the academy are not the only challenges African American students and African American professors face at predominately White colleges and universities. Many of the African American communities also shun these individuals (Black intellectuals) because they perceive them as "uppity" or opportunists who cannot be trusted (West, 1991).

Because of some perceptions formed by African American communities that Black intellectuals think more highly of themselves and sometimes belittle people in their communities for not taking the same educational opportunities that are provided to them, Black intellectuals as a whole often lack the respect and support of their communities (West, 1991). West (1991, p. 135) maintained that some individuals in the Black community refuse to support Black intellectuals because they feel that Black intellectuals' efforts to become integrated into the academy are politically self-serving and not in line with the "Afro-American cultural life." Additionally, West (1991, p. 135) posited that "the relatively high rates of exogamous marriage, the abandonment of Black institutions, and the preoccupations with Euro-American intellectual products are often perceived by the Black community as intentional efforts to escape the negative stigma of Blackness or viewed as symptoms of self-hatred."

Though some Black intellectuals seek to provide a better way of life for themselves and their families, and to become positive role models and representatives for their communities, they are often viewed unfavorably. Many

individuals of the Black community view these Black intellectuals as power, status, and wealth driven—useless to their communities (West, 1991). West (1991, p. 136) maintained that Black intellectuals' "inability to transmit and sustain the requisite institutional mechanisms for the persistence of a discernible intellectual tradition, bouts with racism of American society, lack of Black community support, and hence the dangling status of Black intellectuals, have prevented the creation of a rich heritage of intellectual exchange, intercourse, and dialogue." In other words, some Black intellectuals have experienced difficulty when trying to engage in intellectual dialogue because of negative perceptions of them from some Whites in the academy and some members in the African American community. As a result of these circumstances, many Black intellectuals are finding it difficult to gain respect as scholars from academic institutions and their communities.

Another way in which African American students seek to obtain supportive learning experiences and environments is to become political and social activists, to break down racial injustices in order to ensure better learning and social experiences for themselves and other African Americans students in the future (Steele, 1991). In the early 1900s, Carter G. Woodson, a Harvard-educated historian, maintained in his book entitled: *The Miseducation of the Negro* (1933) that Blacks can only succeed at predominately White institutions if they release their sense of self and cultural integrity and embrace the integrity of mainstream culture. African American student activists today, however, often do not follow this stance, and consequently, fight for parity within all facets of academic life.

From the time Black college students protested at White restaurant "sit-ins" during the Civil Rights Era, to current protests of African American college students fighting for respect as intellectuals and scholars, African American students have become instrumental in instigating changes for better academic and social conditions at predominately White colleges and universities throughout the country. African American student activists have been left with the challenge of protesting against racial injustices and acts of discrimination. Although many African American student activists have made great efforts throughout the years to ensure positive learning outcomes for themselves and other African American students in the future, racial tensions and injustices still exist today on college campuses throughout the country.

Steele (1990) reported that in 1986, Whites beat an African American student at the University of Massachusetts at Amherst because of an argument related to the World Series. He stated that the argument apparently turned into a "racial bashing, with a crowd of up to three thousand whites chasing twenty blacks—to the harassment of minority students and acts of racial or ethnic insensitivity (p. 127)." Other racially motivated incidents have occurred at Yale University, the University of Michigan, the University of Wisconsin at Madison, Auburn University, and Stanford University.

At Yale University in 1989, the words "white power" were painted on the university's Afro-American cultural center. Steele (1990, p. 128) also reported that not long after the Yale University incident, "racist jokes" were aired on a campus radio station at the University of Michigan. Furthermore, Steele (1990, p. 128)

stated that at "the University of Wisconsin at Madison (year not reported), members of the Zeta Beta Tau fraternity held a mock slave auction in which pledges painted their faces black and wore Afro wigs."

Similar incidents occurred on October 25 and 27, 2001, at Halloween parties on Auburn University's campus where members of two White fraternities, Delta Sigma Phi ("the nation's first fraternity," whose membership consisted of several "Christians" and "Jewish" persons), and Beta Theta Pi Fraternity, were suspended from the university campuses for racially insulting African Americans. An internet website article dated November 5, 2001 and entitled: "Fight Hate and Promote Tolerance," posted pictures of both fraternity's Halloween parties where members of these fraternities (Delta Sigma Phi and Beta Theta Pi) dressed in Ku Klux Klan attire and "black face" and slave attire. Additionally, these fraternity members depicted a lynching of a slave, where they posed near confederate flags. Furthermore, some members of these White fraternities were dressed to mock an all Black fraternity—wearing large Afro-wigs, gold chains around their necks, and the Black fraternity's Greek letters "Omega Psi Phi" on purple t-shirts (BAI: 101, 2002). Both fraternities and members of the fraternities were suspended from the campus—pending a full investigation of apparent violations of the university's harassment and discrimination policies (BAI: 101, 2002).

Thernstrom & Thernstrom (1997, p. 386) reported that in 1988 on Stanford University's campus, "two intoxicated white students defaced a Beethoven poster in such a way as to make the composer look black." This incidence took place in an African American residential house on the campus, which escalated to the point of

fliers being posted throughout the campus with the word "nigger" printed on them (Thernstrom & Thernstrom, 1997). Although one would like to believe that racially motivated occurrences such as these are isolated, we must realize that incidences like these can and do occur.

As a result of the many racially motivated occurrences throughout college and university campuses in this country, it is clear that race does play a major role in the experiences of African American students at all levels of higher education. While African Americans students come to college with the intent to perform well, they also bring with them perceptions of how their actions and discussions will be judged by their professors and classmates, how their actions and behaviors may represent their racial group or communities in the eyes of others, and what their roles are and how they "fit in" the institution (Banks, 1996; hooks, 1994, West, 1991).

Some African American students also feel compelled to promote social and political equality for themselves and for African Americans who attend these institutions in the future (Banks, 1996). Therefore, because of family expectations, the Black community, and how African Americans are treated by others on some college campuses, African American students at all levels of education attend college facing a host of circumstances and potential occurrences that White doctoral students may never have to encounter (Banks, 1996). Therefore, "race" plays a significant role in African American students' lives, which often begins long before they enter college (White, 1984). The following section will address how race and ethnicity have impacted the lives of many African Americans, which could also affect how

these individuals view themselves and their roles in society prior to attending doctoral programs.

Race and/or Ethnicity: Factors That Impact African American Persistence

The race and/or ethnicity of African Americans can impact their persistence and achievement in various venues. One way in which race and/or ethnicity can impact African Americans' persistence and achievement is through discussions about race issues between Blacks and Whites. Some Blacks and Whites choose not to discuss race or ethnicity when conversing with others, particularly in classroom settings where discussion participants include individuals of both races (Anderson, 1994; hooks, 1994). When race is brought up in discussions, some ethnic minorities may find it difficult to participate in such discussions because of how they may be perceived as spokespersons or experts concerning issues related to their race or culture (hooks, 1994). These misperceptions sometimes make these individuals feel uncomfortable, and consequently, cause them to not participate in such group discussions (hooks, 1994).

Also, White group members often find it difficult or uncomfortable to participate in discussions of race because of their lack of knowledge concerning this topic (hooks, 1994). Unfortunately, this lack of discussion on race may also be one reason why little information is presented in the literature from African American doctoral students' viewpoint concerning the role that race plays in their experiences as they persist toward graduation. To shed light on how the role of race impacts African American doctoral student experiences prior to graduate study, this section

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will include information about how the nature of race and the lack of self-empowerment and motivation have adversely impacted the persistence and opportunities for African Americans to collectively obtain quality living conditions in general.

To illustrate how issues of race have impacted African Americans' quality of life, Herbert (1989, p. 64) maintained that the "Black experience in the United States has been and continues to be consistently and significantly different from the White experience." He posited that these experiences are different because of how the nature of race has evolved over the past 300 years.

For example, past acts of racial discrimination against Blacks during the slavery era and civil rights movement (Anderson, 1994) to present day occurrences of racism demonstrate that there still are racial problems and tensions throughout American society. For example, in June 1998, a Black Texas man, James Byrd, Jr. was killed after being chained to a pick-up truck and dragged for two miles on a rural East Texas road by three White men. Members of the Ku Klux Klan rallied in support of the murder suspects in front of the county courthouse in Jasper, Texas soon after the murder of Mr. Byrd (CNN. Com., 1998). These acts continue to occur in America, which according to the United States Constitution prides itself in fostering equal treatment and opportunity for all Americans, regardless of race, color or national origin. Fortunately, not all Americans treat others differently or prejudge them based solely on their race or ethnicity.

According to Herbert (1989), "racism can broadly be defined as the transformation of race prejudice and/or ethnocentrism through the exercise of power

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against a racial group defined as inferior by individuals and institutions with the intentional or unintentional support of the entire culture (p. 67)." He further asserted that racism could be characterized as individual, institutional, or cultural. Individual racism involves the belief of an individual that his/her race is superior over another person's race, and as a result, the discriminating individual treats that person or ethnic group as inferior or unequal (Herbert, 1989). Herbert (1989) further maintained that this type of racism is not inherited. He contended that it is "transmitted and nurtured by the socializing influences of institutions (1989, p. 68)." Institutional racism, however, involves individuals who affiliate with particular institutions to use or manipulate constitutions or rules to maintain an advantage over others whose race or ethnicity is different from the majority of the institution's group members (Herbert, 1989). Cultural racism, however, is somewhat different from individual and institutional racism.

Herbert (1989) suggested that cultural racism "is the individual and institutional expression of superiority of one race's cultural heritage over that of another race (p. 68)." Therefore, Herbert suggested that individuals or a group of individuals who dislike or treat others differently or unfairly because their culture is different from theirs might be considered to be practicing cultural racism. These types of racist behaviors or acts can adversely impact the persistence of African Americans to have a better quality of life for themselves and for their ethnic or cultural groups. Furthermore, African American students might internalize such behaviors—resulting in lack of self-empowerment or motivation (Anderson, 1994; Haymes, 1995; Lusane, 1997; West, 1994).

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According to Anderson (1994), lack of self-empowerment or lack of motivation of African Americans can hinder African American students in obtaining better living conditions. For example, since the Civil Rights Era, African Americans have collectively made great strides in obtaining opportunities for a higher education, employment, better housing, and positions in the political arena (Anderson, 1994). Furthermore, income levels and opportunities for African Americans to own businesses have increased over the past few decades (Anderson, 1994). Many of these individuals have obtained these advances because they were either encouraged intrinsically or by others to obtain a better quality of life. This type of encouragement has prompted African Americans to become self-empowered to do better for themselves and their communities (Lusane, 1997; West, 1994).

West (1994, p. 11) stated that African Americans "must admit that the most valuable sources for help, hope and power" consist of themselves and their "common" history. In other words, if African Americans are to prosper, they should look within themselves or look into the lives and contributions of famous Black leaders who inspired them such as: Dr. Martin Luther King, Jr. (Civil Rights leader) (West, 1994) and Thurgood Marshall (first African American Supreme Court Justice).

Although some circumstances related to African Americans' race or ethnicity and lack of self-empowerment and motivation adversely impacts their persistence and opportunities to collectively obtain quality living conditions, looking within themselves or into the lives and contributions made by Black leaders can positively impact how they perceive their racial and ethnic identity. Many African Americans

who come to grips with their racial and ethnic identity or who are aware of their racial and ethnic identity often are able to face many racial challenges in American society, a society which has traditionally discriminated against African Americans and other minorities. Thus, how some African Americans perceive their race and ethnic identity can also impact how they are able to face various racial challenges on college campuses. These racial challenges could strongly impact their student experiences if they are unaware of or unfamiliar with their racial and ethnic identity (White, 1984). Therefore, in the next section, three theories of racial and ethnic identity are examined.

Racial and Ethnic Identity Theories

Given that this study examines the role race plays in the graduate school experiences of African American doctoral recipients and their perception of being African American, it is important to consider the concept of race and ethnic identity. Although there are several racial and ethnic identity theories presented in the literature, below I discuss three of the more salient ones—provided by White (1984), Cross (1991), and Helms (1995).

According to several writers, African Americans must come to grips with their racial/ethnic identity in order to overcome or suppress feelings of oppression and personal worthlessness perpetrated by occurrences in mainstream society (Cross, 1991; Helms, 1995; Ivey, 1995; White, 1984). White (1984) contended that Black youth could establish their sense of worth through the network of family and peers in the immediate Black community. These types of nurturing and support systems are a

few strategies that often assist African American adolescents in fighting against or resisting the economic, psychological, and social effects of oppression (White, 1984).

White (1984) further maintained that African American youth and adolescent's problem-solving skills, self-confidence, and resilient attitudes that develop during their pre-adolescence years will assist them in persevering although their range of opportunities in society may be limited. However, if African American adolescents and young adults have not sufficiently internalized the African American culture and the philosophies provided by members of that culture, they may have a more difficult time in overcoming feelings of oppression and self-worthlessness (White, 1984). White (1984, p. 95) argued that African Americans can become "vulnerable to feelings of futility, despair, and doubt about their own worth as human beings, feelings that can prevent the healthy resolution of issues associated with establishing a solid identity."

African Americans can establish or become aware of their identity through knowledge of certain racial identity theories (Helms, 1995; Ivey, 1995; Leong et. al, 1995). These racial identity theories can help African Americans in the identification and acceptance of their race and ethnicity by explaining certain levels of developmental stages that people of color often transition through in order to gain an awareness of their racial identity (Dolby, 2000; Helms, 1995; Ivey, 1995). Therefore, one can speculate that the more advanced these individuals are in transitioning through these developmental stages, the more advanced they will become in identifying with their racial identity. Once people of color identify with

their racial identity, they will most likely be prepared to overcome societal barriers that can adversely impact their graduate student experiences (White, 1984).

One racial identity theory that is primarily used to explain certain identity developmental stages African Americans encounter is Cross' (1971, 1991) "Negro-to Black Conversion Model," also known as "Nigrescence Racial Identity Model." In his Model, Cross (1971, 1991) maintained that there are five different stages of racial identity development that African Americans can move through as they interact with individuals from other racial groups. These stages are the pre-encounter stage, the encounter stage, the immersion-emersion stage, the internalization stage, and the internalization commitment stage (Cross, 1971, 1991; Marks, 2000). These stages are described as follows:

- The pre-encounter stage exists when African Americans do not acknowledge the importance of race in their lives and concentrate on another group affiliation such as religion (i.e., Baptist, Catholic, Jewish), socio-economic status (i.e., working class), or gender affiliation (i.e., woman or man).

- The encounter stage is Blacks' first encounter with identity that often shapes their early development with immediate family, extended family, neighborhood and community, and schools. This stage covers persons' years of childhood, adolescence, and early adulthood. Also, in this stage, Blacks often experience an incident or event that may cause them to move from the pre-encounter stage to the encounter stage. For example, when Dr. Martin Luther King, Jr. was

assassinated, many Blacks felt a need to explore or gain a deeper understanding of the Black Power Movement. Furthermore, in this stage, college students often become student activists—trying to foster better student experiences and outcomes for themselves and other African American students who will attend their institutions in the future.

- The immersion-emersion stage is a two-part phase. In the immersion phase of this stage, African Americans immerse themselves in the Black or African culture. These persons often attend political or cultural meetings that focus on Black issues, drop memberships from groups attended while in the pre-encounter stage, or attend Black "rap" sessions, seminars, and art shows that focus on "Blackness" or Afro-centricity. The second phase of this stage is when African Americans think about liberating themselves of the "old-self" or the immersion phase. Although they have yet changed, they have made a decision to commit themselves to change—viewing their Blackness less emotionally than in the immersion phase. The emersion phase allows individuals to gain a better sense of their Blackness through certain encounters or experiences that are significant. For example, African Americans who meet a well-known Black role-model who brings a sense of quality to their Blackness, or read about the life of one, may rid themselves of the immersion phase that caused them to become totally immersed in the Black culture. Blacks in the

immersion-emersion stage have not made a change because they are unfamiliar with the "new-self" and are awaiting clear-cut indicators that confirm that they are moving in the right direction.

- The internalization stage exists when African Americans have identified themselves as Black or African American and have psychologically agreed to balance their cultural needs with the cultural demands of mainstream society in order to adapt.

- The internalization-commitment stage exists when Blacks have made a commitment to develop a plan of action and begin living their lives according to their plans. These plans may include obtaining higher educational opportunities, economic gains, or positions within the political arena. Furthermore, these individuals have determined that they will let nothing or no one interfere with these plans. Blacks in this stage also have come to the realization that in order to prosper, they must integrate into the majority culture.

Although Cross' racial identity model was a traditional model that only considered African Americans, it provided information concerning how African Americans established their racial identity.

Helms' (1995) Racial Identity Model, which was drawn from Cross' (1971, 1991) "Nigrescence Racial Identity Model," maintained that historically, racial identity theory focused on racial contexts as opposed to cultural contexts. First authors of racial identity theory only considered race when assisting African Americans in the identification and acceptance of their race or ethnicity and did not

take into consideration their cultural environments (Helms, 1995). Also, early racial identity theorists referred to race in terms of the skin color of African Americans or Whites (i.e., "Black" or "White") and did not take into consideration other persons of color (Peller, 1995; Thernstrom & Thernstrom, 1997). In other words, racial identity theory evolved from a historical conclusive view, particularly during the Civil Rights Era, that "race" would be used solely to describe the physical feature of individuals (the color of their skin) (Peller, 1995).

As a result of traditional racial identity theory not considering all persons of color (i.e., bi-racial, Latino/Latina) and societal racial stereotypes associated with oppression, non-traditional racial identity theorists have developed theories to accommodate all people of color (Helms, 1995). Helms (1995, p. 189) reported that the new way of viewing racial identity theory is for "all people of color to recognize and overcome the psychological manifestations of internalized racism"—"societal racial stereotypes and negative self-and own-group conceptions."

Helm's (1995) racial identity model points to five phases that people of color often go through to achieve racial identity:

- The conformity status pre-encounter phase defines self via external influences that devalue individuals' own group and up-hold White standards of merit.

- The dissonance status encounter phase suggests that individuals are unsure or confused about their own socio-racial group commitment and unsure or confused about how to define "self."

- The immersion/emersion status phase suggests that individuals' have recognized their own socio-racial group and have an understanding of the belittlement expression: "acting White."

- The internalization status phase maintains that individuals have a positive commitment to their own socio-racial group, internal definition of own racial attributes, and respond objectively to the dominate group.

- The integrative awareness status phase maintains that individuals are able or capable of valuing their own collective identities and able or capable of empathizing or collaborating with members of other oppressed groups.

As can be seen from the discussion of racial identity theory, it is highly likely that how one sees himself or herself racially will influence how one views life experiences and is able to deal with those experiences accordingly. In this section, I have discussed how some racial identity theorists have provided theories about how race and identity awareness can be used by African Americans to assist them in their racial and ethnic identity development.

Although the graduate education literature has provided information concerning how race plays a significant role in the graduate school experiences of African Americans, it has also provided much information about other factors that could play a significant role in the experiences of graduate students regardless of their race or ethnicity. In the next section, I closely examine these factors.

Key Concerns and Findings of Graduate Education and Graduate Education

Research

Recently, there has been significant dialogue and debate calling for reform and improvement of graduate education. Some graduate education researchers have expressed concern that there are few studies and institutional research concerning best practices for ensuring graduate student success. As a result, more research on graduate education is requested (LaPidus, 1998; Nyquist, 2001). Studying issues associated with graduate education and graduate education research is important because these data may enable leaders of graduate programs to gain a better understanding of whether they are meeting students' academic needs and providing them with the necessary skills to become gainfully employed after they have completed their programs of study (LaPidus, 1998; Nyquist, 2001).

Recent studies show that some graduate programs are not providing doctoral students with a sufficient variety of skills to meet their academic training needs to address expectations they will face in faculty positions. Chris Golde and Timothy Dore (2001) studied over 4000 doctoral students (via national survey) in eleven arts and sciences disciplines at twenty-seven selected universities. They concluded: "In today's doctoral programs, there is a three-way mismatch between student goals, training and actual careers (p. 5)." The authors maintain that "doctoral students persist in pursuing careers as faculty members, and graduate programs persist in preparing them for careers at research universities" (p. 5) despite other career options (i.e., non-academic settings) that are available for doctoral recipients. Therefore, according to some education researchers and graduate students, the preparation that

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some graduate programs provide to students does not adequately train graduate students for available faculty positions at non-research-based universities, nor do some of the graduate programs effectively train students to perform work outside of research settings (Nyquist, 2001).

Another concern from both researchers and students is that many graduate programs are not effectively communicating to students the amount of work and the level of persistence that are required to successfully complete the programs. For example, according to Golde and Dore (2001, p. 29), many doctoral students maintain that their graduate programs did not provide them with sufficient information pertaining to "time, money, clarity of purpose, and perseverance that doctoral education entails." Jerry G. Gaff, Vice President of the Association of American Colleges and Universities, urged, in his speech at the 11th Annual Teaching Renewal Conference held at the University of Missouri in February 2001, that the above-mentioned concerns of graduate students can be resolved, and many doctoral programs are working to resolve these concerns (Nyquist, 2001).

Austin (2002) cited four concerns that have emerged from a longitudinal qualitative study of doctoral students' experiences. These concerns include: 1) lack of systematic training and professional development for future careers in non-academic institutions, 2) lack of mentoring and advising from faculty, 3) lack of career exploration and knowledge about the realities of faculty work, and, 4) lack of opportunities for guided reflection (assisting students through various stages of doctoral study). These concerns are important to the study of graduate education and education research among doctoral students, regardless of race and ethnicity. Most

of the studies conducted, however, did not specifically address the concerns of ethnically diverse doctoral students.

Studies on Doctoral Student Attrition and Graduation Rates

Since improving graduate education and graduate research has been a concern of some doctoral student educators for several years now (Nyquist, 2001), educational researchers have conducted studies on doctoral student attrition to identify the causes of high attrition rates among doctoral students. Some of these causes are directly related to the type of academic discipline (field of study) in which students are enrolled, and the lack of academic and/or social integration of the students within their departments or institutions (Bair & Haworth, 1999; Lovitt's, 2001; Tinto, 1991).

According to some researchers, doctoral student attrition rates vary by students' field of study (Bair & Haworth, 1999). For example, the lowest attrition rates (approximately 38%) were found in the laboratory sciences, whereas the highest attrition rates (approximately 54%) occurred in the social sciences and humanities' fields between 1970 and 1998 (Bair & Haworth, 1999; Bowen & Rudenstine, 1992; Nerad & Cerny, 1991).

The low attrition rates found in the laboratory sciences are attributed to students being active participants with faculty and peers on research projects where students work in a closely monitored environment with continuous advisement (Bair & Haworth, 1999; Bowen & Rudenstine, 1992; Nerad & Cerny, 1991). Also, doctoral students who are in laboratory science fields generally receive funding

through faculty members' research grants to further their studies. On the other hand, doctoral students in the social science and humanities fields most often do not receive such funding opportunities (Bair & Haworth, 1999; Bowen & Rudenstine, 1992; Nerad & Cerny, 1991). As a result of these study findings, students enrolled in the sciences comprise more than fifty percent of the degree completers (Bair & Haworth, 1999; Bowen & Rudenstine, 1992; Nerad & Cerny, 1991). These types of close working relationships allow doctoral students to become academically and socially integrated into the departmental culture (Tinto, 1993). Therefore, without effectively maneuvering through these systems of integration into the academy, students may tend to "fall through the cracks," and, consequently, leave their programs without providing reasons for their departure.

To successfully maneuver through academic and social integration systems, students must understand the dynamics of both systems. Academic integration, for example, is positional—in that there is a clear division of labor within the department or research group (Golde, 2000). This type of integration system suggests that those who hold authoritative positions within the academic environment (i.e., faculty) generally supervise students' work and determine whether students are effectively progressing in their programs of study. If the work is not meeting the expectations of the faculty member supervising the students' work, requests to make changes to the work may be required (Delamont et.al, 1997; O'Banion, 1997). This type of supervision most often allows students to become academically integrated into the academic community within the department (Delamont et.al, 1997).

Other ways in which students can become academically integrated into the academic community are to develop knowledge concerning fundamental theory in their disciplines, to participate in colloquia, and to write papers for presentation and publication (Anderson & Swazey, 1998; Golde, 2000). Faculty members can help guide students through these activities (Delamont et.al, 1997; Lovitts, 2001), which can assist them in gaining experiences that develop skills useful for future faculty positions within and outside of the academy.

Social integration, on the other hand, refers to the process of students making friends and being disciplined enough to becoming part of the department and the university community through activities such as attending social events, "hanging out" in the student or faculty lounge, or meeting socially or informally with faculty or peers (Golde, 2000; Lovitts, 2001). Social integration with peers and faculty enhances students' intellectual development and also the development of important skills required for program completion because students are able to learn from others who have completed different stages of the doctoral process that they may now be experiencing (Tinto, 1993). For example, students who hold research or teaching assistantships in their departments frequently have access to faculty and other graduate students with whom they work because of close proximity (i.e., shared office space) to these individuals. Working with and near faculty and other doctoral students provides opportunities to network and learn the culture of their departments and the demands associated with it. However, students who do not have access to such systems may find it difficult to become integrated into the departmental culture.

Although these studies provided useful information about some of the causes of doctoral student attrition and persistence, the studies did not report on subgroup analyses such as the racial or ethnic makeup of the study participants. Some factors may impact doctoral student persistence and attrition regardless of race, while other factors may impact the persistence and attrition of ethnic minority doctoral students differently because of their race or ethnicity (i.e., lack of ethnic diversity among faculty to serve as role models or racism) (Faison, 1996; Hamilton, 1998; Willie et al, 1991). As a result of these possible differences, it is important to identify and "give voice" to African American students' experiences. These studies did not enable African American doctoral students or recipients to tell of their graduate student experiences. This study will contribute to this area of research because it addresses the experiences of African American doctoral students who graduated from predominately White institutions by allowing the study participants to report their experiences.

Tinto's (1991) theory of doctoral persistence and attrition provided information about how the lack of academic and social integration within doctoral students' departments or institutions strongly impacts the persistence, attrition, and graduation rates among doctoral students. His theory, however, did not specifically report on what role race may play in the academic and social integration of African American doctoral students (Tierney, 1999). By asking specific questions related to students' awareness of their race and ethnic identity through one-on-one interviews, I was able to obtain the perspectives or the voices of some African Americans on whether race or ethnicity affected their levels of integration in their doctoral student

experiences. Thus, given my research questions, I was able to obtain information about factors that specifically impact the persistence and graduation of African American doctoral students.

Studies on Factors That Impact Doctoral Student Success

Educational researchers have conducted studies that show that the type of relationship that students have with faculty members, particularly with their advisors and/or dissertation supervisors or chairs, strongly impacts students' persistence in completing their degrees (Tinto, 1991; Willie et al., 1991). Therefore, it is important that students maintain quality faculty-student relationships so that they will have the necessary support and assistance that allow them to successfully maneuver through the doctoral process.

Quality faculty-student relationships strongly impact doctoral student success because these kinds of relationships allow students to meet formally or informally with faculty to talk about problems or concerns they may have during various stages in their programs. Moreover, meeting with faculty can also provide students with necessary information and knowledge concerning the expectations or demands of doctoral education and information about time management skills to meet assignments and deadlines effectively (National Academy of Sciences, National Academy of Engineering, Institute of Medicine, 1997; National Research Council, 1996; Willie et al., 1991).

Faculty members, particularly faculty advisors/mentors, play a critical role in students' doctoral education and professional careers (Golde & Dore, 2001;

Hamilton, 1998; National Academy of Sciences National Academy of Engineering Institute of Medicine, 1997). For example, faculty advisors can advise students about experiences to engage in during their graduate study to gain valuable experiences prior to graduation. Some of these experiences would be to join professional organizations that allow them to present their research at professional conferences, to attend workshops related to their research interests, to publish articles, and to become teaching and research assistants (Willie et al., 1991). All of these experiences are crucial for the development of scholars as they become teachers and researchers in various careers in higher education or in business and industry (Bair & Haworth, 1999; Berg & Ferber, 1983; Bowen & Rudenstine, 1992; Conan-Hillix et al., 1986; Smith & Davidson, 1992). If students, however, do not have quality relationships with caring and supportive faculty advisors, they will often become discouraged and, as a result, leave their programs (Golde, 2000; Tinto, 1993).

A good advisor is one who is easy to approach, accessible, personally supportive of students, encouraging of students, concerned about teaching, and able to provide academic coaching (Bair & Haworth, 1999; Bowen & Rudenstine, 1992; Willie et al., 1991). These characteristics exemplified in faculty advisors facilitate the integration of student participation in the culture of their departments. Students, however, also have a responsibility in the development of good advisor-student relationships by requesting visits pertaining to their work or research. When students feel comfortable meeting with their faculty advisors, they will often interact with or engage in conversations with other faculty members and graduate students, which

allow them to become socially integrated into the culture of the departments (Astin, 1984, 1985; Blackwell, 1991, Hall & Allen, 1983; Willie et al., 1991). These interactions can also lead to greater chances of networking and forming other student-faculty (mentor) relationships that will often enhance doctoral students' experiences (National Academy of Sciences National Academy of Engineering Institute of Medicine, 1997; Willie et al., 1991).

Another factor that often impacts doctoral student success is quality student-peer relationships. Quality student-peer relationships allow doctoral students to interact with other students who may enable them to gain different perspectives on suitable and supportive faculty as their primary and/or dissertation advisors. For example, by making friends with other students through activities such as attending social events, visiting with peers, collaborating with peers on research and class projects, and sharing office space, students can have opportunities to talk with one another about their problems or concerns as they relate to doctoral study. Many experienced students may advise new students to select an advisor who shares an academic specialization and has a compatible working style with theirs (Golde & Dorn, 2001). Moreover, student-peer interaction can enable students who come from various ethnic groups to learn from each other about the different race or ethnicity problems or concerns they face while in graduate school.

Another factor that can strongly impact doctoral student success is students' enthusiasm for their work or research. If students are enthusiastic about their work or research, they will most likely become motivated to persist in completing required tasks that lead to their degree completion (Cryer, 1996; Phillips & Pugh, 2000).

Phillips & Pugh (2000) reported in their study that those doctoral students who remained enthusiastic about their work (course-work and research) often met deadlines faster and were able to focus on their work for longer periods of time. Meeting deadlines and focusing on their work enable students to feel less stress and help them to develop self-confidence in the quality of work they perform. Furthermore, students who are enthusiastic about their work and research generally look for ways to enhance their time management skills, which produces better research and progression toward the doctoral degree (Cryer, 1996; Phillips & Pugh, 2000).

Students who are able to enhance their time management skills generally have been able to do so by planning ahead and keeping records of their work progress (Cryer, 1996). Students can revisit their records or notes to determine if they have spent too much time on certain activities they enjoy best or on activities they enjoy least. This type of monitoring can assist students in managing their time more effectively. Furthermore, keeping records on data that may be relevant to their research allows students to preserve the information for later processing (Cryer, 1996).

Last, keeping sufficient records or notes can provide information for setting targets, setting provisional dates, and planning schedules more effectively. This type of record keeping can provide students with the proper documentation that they need to keep their supervisors or advisors informed of their work progress. As a result, the advisors will be able to better advise them on their work efforts. This activity can also communicate to supervisors or advisors that students are capable of working

responsibly and independently. Also, students are often encouraged to work independently or to be self-directed in completing tasks. LaPidus (1998) and Phillips & Pugh (2000) suggest that students who are able to work independently or who do not require much assistance from their supervisors often become motivated or persistent in moving forward with their work. Phillips & Pugh (2000) further maintained that this type of motivation and persistence enables students to acquire "the ability to evaluate and re-evaluate their own work and that of others in the light of current development" (p. 22). The authors contended that this sense of independence allows students to rely on their own judgment of the quality of work they perform, while at the same time, gain the needed respect and support from their supervisors or dissertation chairs. As a result of the respect and support provided by their supervisors or dissertation chairs, quality relationships between both faculty and students can be maintained (McFarland & Caplow, 1995; Phillips & Pugh, 2000).

According to the above-mentioned research, doctoral students who have the experiences discussed will have better chances of completing degree requirements (McFarland & Caplow, 1995; Tinto, 1993). In summary, key variables or factors related to student persistence and success include: 1) forming quality student-faculty relationships, 2) forming quality student-peer relationships, 3) maintaining enthusiasm for work or research, 4) planning ahead, 5) keeping sufficient records for time management and data collection purposes, and, 6) maintaining a sense of independence and ability to rely on one's own judgment of the quality of work performed. Attention to these variables or factors enables students to maneuver through the doctoral process.

The information in this subsection discusses how doctoral students who experience some key variables or factors related to student motivation and persistence will have better chances of completing degree requirements, regardless of their race or ethnicity. The information does not, however, specifically address how race and ethnicity can impact students' experiences as they encounter these variables or factors. Following are studies that address some particular factors that ethnic minority students face when persisting to complete their degrees.

Comparisons Between Ethnic Minority and Other Doctoral Students' Experiences

Although some factors impact doctoral students similarly, there are other factors that impact ethnic minority doctoral students differently. To identify these factors, comparisons between ethnic minority and White doctoral student experiences have been made. Some of the factors or variables that impact ethnic minority doctoral students differently than White doctoral students are the location (region) of the institution, type of institution, mentoring opportunities, teaching and research assistantship opportunities, and student-peer relationships (Blackwell, 1981, 1983; Hamilton, 1998; Hood & Freeman, 1995, Neilson, 1997; Willie et al, 1991).

According to Hood and Freeman's (1995) study, which investigated the number of doctorates awarded to minorities by schools of Education at 185 U.S. institutions of higher education during years 1984 through 1992, the graduation rates for minorities were significantly higher within institutions located in the Eastern and Midwestern regions compared to those institutions in the Western region. The authors concluded that the geographical locations of Western region institutions

might have been undesirable to some minority students—resulting in lower persistence and lower graduation rates in the west. Unfortunately, the literature does not indicate why Western region institutions might be undesirable to some minority students. The authors, however, concluded that the type of institution the students attended impacted minority doctoral student persistence and graduation rates.

Hood and Freeman (1995) also found that the graduation rate of minority doctoral students at major research institutions was lower than the graduation rate of non-minority students at these same types of institutions. One reason why the graduation rate for minority doctoral students was lower than the graduation rate for non-minority students at research universities was because of the lack of mentoring relationships provided to minority students. Hood and Freeman argued that because many research institutions are not proactive in their retention efforts of minority faculty, and because of a lack of faculty of color available to offer mentoring at these institutions, a relatively small number of ethnic minorities attend these institutions. To support Hood and Freeman's assertion, I noted that the literature often revealed a relationship between African American doctoral student attrition from graduate programs in higher education and the lack of African American faculty in positions of mentors and role models (Blackwell, 1983; Clewell, 1987; Sloan, 1994; Willie et al, 1991).

The literature reported that when there is placement of faculty of color at colleges and universities, particularly research universities, these faculty members can promote student persistence because faculty of color frequently serve as mentors and role models for minority students in research universities, more often than do

White faculty at these institutions (Harvey, 1994; Nicholas & Oliver, 1994; Sloan, 1994; Turner & Myers, 2000). In Sloan's (1994) study, which consisted of interviews with six mentored African American doctoral students (3 male and 3 female), and six mentored White doctoral students (3 men and 3 female) at a mid-western public research university, mostly enrolled in the Education field, African American doctoral students showed a stronger desire to be mentored by African American faculty than White doctoral students. Sloan reported that African American doctoral students were more responsive to African American faculty as mentors than White faculty as mentors because of the tendency of African American faculty members to have more sensitivity to racial issues. On the other hand, White doctoral students in Sloan's study were not as concerned about racial issues determining their selection of mentors. Further, Sloan (1994) and Turner & Myers (2000) maintained that African American doctoral students and African American faculty often had similar research interests and cultural experiences.

Turner & Myers (2000) reported that because of the difficulty that African American doctoral students have finding faculty mentors with similar research and cultural interests, African American doctoral students often lack faculty mentors to assist them in maneuvering through the doctoral process. Promoting faculty of color at academic institutions, however, can yield positive mentoring outcomes for colleges and universities and the diverse student populations they serve (Council of Graduate Schools, 1992; Zamboanga & Bingman, 2001).

Other studies also have shown that doctoral students with different ethnic backgrounds often have different experiences with mentoring opportunities and

forming student-peer relationships. For example, Hamilton (1998) explored factors that influenced the persistence of minority doctoral students at a public research institution located in the Northwest. In her analysis, when comparing faculty mentoring and faculty and peer relationships of African American and White doctoral students, African American students generally reported "experiences of isolation, deficient faculty mentoring and lack of peer camaraderie" (peer relationships) (p. 37). However, a larger number of White doctoral students experienced positive faculty mentoring and positive peer relationships. Because of the lack of mentoring within their departments, many African American doctoral students seek mentors and other role models outside of their departments (Gold & Dore, 2001; Neilson, 1997; Phillips & Pugh, 2000). African Americans were more likely to gain advice from minority faculty who may have experienced some of the same types of concerns or experiences as they have encountered while in graduate school (Turner & Myers, 2000).

Neilson's (1997) study, which surveyed 78 African American doctoral students and 90 White doctoral students, reported that one in seven or 13.6% African American doctoral students named a second mentor who was a professor in another department; an equal number (13.6%) named someone outside the university; over eleven percent (11.4%) identified an administrator at the university; and 6.8% said their mentor was a professional in the field. Therefore, African American doctoral students who sought mentors outside of their departments totaled 45.4%. Fifty-four and one-half percent (54.5%), however, of African American doctoral students reported that their primary mentors were professors in their major departments. In

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contrast, lower proportions of White doctoral students named a second mentor outside of their departments. For example, few White students, 3.3%, had mentors in another department, 3.3% of them had mentors who were at another university, 6.7% had mentors who were university administrators, and 13.3% had mentors who were professionals in the field. The total number of White doctoral students who had mentors outside of their departments totaled 26.6%. The remaining 73% of White doctoral students reported that their primary mentors were professors in their major departments.

Neilson (1997) reported that students who had faculty mentors in their departments showed higher rates of productivity in their research and publication because they were more likely to have been involved in research projects than students who had mentors outside of their departments. Further, Neilson maintained that graduate students who had faculty mentors in their departments had greater access to teaching and research assistantship opportunities.

Teaching and research opportunities are provided by faculty members (Willie et.al, 1991), and in many cases, the absence of teaching and research opportunities and other types of funding may relate to many African American students' decisions to either decline to enroll in graduate programs or to leave their programs prior to completing their degrees because of the inability to meet financial demands associated with doctoral study (Cheatham & Phelps, 1995; Nerad & Miller, 1996; Smith, 1990). Lovitts (2001) concluded in her study that students who completed their degrees were three times as likely to have held research assistantships and two times as likely to have held teaching assistantships compared to those who did not

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have such funding available to them. This problem of obtaining research and teaching assistantships occurred more often among African American doctoral students than White doctoral students (Willie et al., 1991). For example, Neilson's (1997) study revealed that White students were more likely to hold teaching or research assistantships than African Americans (60.3% vs. 48.7%, respectively).

Neilson's (1997) study also indicated that African American students were more likely to report using student loans than White students (25.0% and 10.3%, respectively), while White students used their personal savings when teaching and research funding and other financial support were unavailable. Neilson suggested that students who used their personal savings were able to persist in pursuing their degrees more often than those who had to rely on school loans. Students who depend on school loans to attend graduate school are not as encouraged to pursue graduate studies compared with students who use personal savings or obtain assistantships. By using personal savings, students do not incur long-term debt associated with school loans (i.e., finance charges assessed by lending institution). This loan dependence concern was more apparent among African American doctoral students than among White doctoral students.

Syverson (1995) found that African American doctoral students incur indebtedness three times as much as their White counterparts when pursuing doctoral degrees. He also suggested that this level of indebtedness would most likely contribute to lower persistence levels of African American students completing their degrees because many of these students become discouraged about accumulating such debt. As a result of this excessive debt obligation, African American students'

attendance and graduation rates can be adversely impacted. Consequently, the absence of teaching and research assistantships or other funding that is unrelated to school loans, coupled with increasing tuition costs, fees, and housing associated with graduate school, may make it difficult for many doctoral students to complete their degrees at institutions of higher learning.

Comparison of the experiences of ethnic minority doctoral students with other doctoral students indicated some variables or factors that impact ethnic minority students differently than White doctoral students. These factors included: 1) location (region) of the institution, 2) type of institution, 3) mentoring opportunities, and 4) teaching and research assistantship opportunities. Based on studies found in the literature, these critical factors or variables often affect African American doctoral students more adversely than White doctoral students.

Recommendations for Impacting Doctoral Student Persistence and Graduation Rates

The literature provided some recommendations for institutional leaders to follow that can positively impact the persistence and graduation rates of all doctoral students, specifically, African American doctoral students. The literature suggested that faculty and/or administrative personnel should make great efforts to conduct exit interviews as soon as there are indications that the students are leaving their program studies. However, students must feel safe about divulging this information. Girves & Wemmerus (1988), Smith & Davidson (1992), and Tinto (1993) identified some early signs of exit:

- Lack of academic and social integration into the departmental culture

- Loss of motivation or persistence in completing their degrees

- Lack of academic and emotional support or interaction among departmental faculty/advisors and peers

Exit interviews revealed the range of reasons that motivate attrition. As a result of the interviews, the department is able to determine whether students are leaving because of lack of institutional support or whether the departure was beyond the department's control (Golde, 2000). Once information from the exit interviews has been obtained, faculty advisors of colleges and universities can assist in lowering attrition rates by implementing practices that may help students to become academically or socially integrated into the departmental culture. These practices may include facilitating opportunities for students to participate in group research projects and meeting regularly with students collectively and individually to monitor students' work, and advising them accordingly (Golde, 2000). For example, Willie et al. (1999) provided some ways in which to assist students in building "student-faculty" and "student-peer relationships."

Willie et al. (1991, p. 79) contended that the university could promote student relationships by "providing funds for small-scale research projects that students may undertake with the supervision of faculty members." These authors suggested that groups of students "matched with a professor with similar research interests could work to develop additional research projects, and identify potential funding sources, while concurrently providing each other with intellectual and interpersonal support during the pressure points of the graduate school experience (p. 79)." In addition to

facilitating the group research and faculty advising, institutions can also improve the doctoral persistence and graduation rates of students by promoting faculty and student mentoring and doctoral student cohorts (Dorn & Papalewis, 1997).

According to Dorn & Papalewis' (1997) case study, eight universities across the country utilized faculty and peer mentoring and doctoral student cohorts to improve doctoral student persistence and graduation rates. This study indicated that organizing students around cohorts improves their study and their task completion. Furthermore, the study maintained that encouraging faculty to be mentors to doctoral students enhances student learning and provides full-time working students with needed support while they earn their doctorates.

Dorn & Papalewis (1997) also suggested that encouraging the interaction between students and their cohort mentors improves the students' work productivity and the university's attention to facilitating the students' needs. Therefore, these types of student-faculty mentoring and student-peer relationships may enable doctoral students to meet their mentoring and relationship needs. Moreover, these mentoring relationships enable university faculty members to handle time constraints and to attend to other work-related activities (Dorn & Papalewis, 1997).

Other recommendations presented in the literature concerning the improvement of doctoral persistence consisted of faculty positively responding to recommendations presented by policymakers. Two of the recommendations included faculty taking the initiative in scheduling regular and periodic meetings with students to improve faculty-student communication, and faculty clearly stating their expectations of students during doctoral study (McFarland & Caplow, 1995).

Isaac (1986) suggested other effective activities to support ethnically diverse students such as hosting receptions or meetings at the residences of faculty, providing guest lecturers who visit campus for a couple of days to present their research and visit with students, and providing other social and academic activities that are appropriate and relevant to students' doctoral study. Recommendations for improving African American doctoral student persistence included university programs that attempt to make African American students feel welcome and important. For example, there are several programs and resources at Michigan State University that are provided to students that assist in recruiting and retaining them until graduation.

One particular resource that is provided to students of color and sponsored by MSU's Graduate School is the ALANA (African-American, Latino(a)/Chicano(a), Asian/Pacific American, and Native American) student organization. ALANA students have access to such resources as Project 1000 (a national program developed to assist underrepresented students in making application to graduate school) and the Multicultural Women's Association (designed to promote opportunities for professional growth and development, to recognize outstanding achievements, to provide academic and professional mentoring, and to create a network for women from diverse backgrounds) (Michigan State University, 2002). These kinds of activities and recommendations previously mentioned will most likely enable institutions to have more success in retaining students to the point of degree completion.

To further encourage student persistence and retention, Isaac (1998, p. 9) suggested that displaying program sensitivity to "minority issues should be part of the curriculum and training of all students" and departments should also welcome research topics on such issues. Willie et al. (1991) made several recommendations for institutions that can positively impact African American doctoral student persistence and graduation rates. Some of these recommendations include:

- Providing full financial assistance through the first four or five years of graduate study might decrease the period of study and increase the degree-completion rate of African American doctoral students.

- Providing African American doctoral students with foundation sponsorship is crucial since African-American doctoral students, as a group, often do not receive campus-based sources of funding such as research and teaching assistantships compared to White doctoral students.

- Providing faculty with development and training programs to assist White faculty members in mentoring ethnic minority students will most likely increase the number of mentors for African American students.

- Providing African American and other ethnic minority students with faculty of color will most likely increase their opportunities to serve as research and teaching assistants with faculty.

- Promoting student-faculty relationships will most likely strengthen research collaboration and network opportunities for students.

These recommendations provided useful information concerning how to increase the persistence and graduation rates of doctoral students. Although the literature has included some educators' thoughts and experiences on the role that race plays in the academy, there is still a lack of studies performed addressing the role that race plays in African American doctoral student experiences. As a result, there is a void in the literature concerning the voices of African Americans expressing the role that race plays in their doctoral student experiences. West (1991, p. 137) recommended that "only with the publication of the intimate memoirs of these Black intellectuals and their students will we have the gripping stories of how this defensiveness cut at much of the heart of their intellectual activity and creativity with White academic contexts." This study will contribute to graduate education research because it will fill a void in the literature by providing personal stories of African American doctoral students concerning the role that race plays in their student experiences.

Summary

This section discussed the role race played in the experiences of African Americans, as well as studies and factors that pertained to graduate education regardless of race or ethnicity. Some of these studies and factors focused on graduate student experiences in general, while others focused on graduate student experiences of ethnic minority groups, particularly African Americans. In addition to learning about studies and factors that affected African American student experiences and other student experiences, recommendations were made by various

researchers that could assist institutions of higher learning in implementing practices that would positively impact African American doctoral student experiences. Furthermore, the identification of institutional factors that impact doctoral persistence, attrition, and graduation rates can help colleges and universities to assist doctoral students in developing positive student-faculty and student-peer relationships.

The prior research conducted on ethnic minorities informed my study in several ways. First, it provided reasons why there is a small number and percentage of African American doctorates in the U.S. Second, it provided information from various researchers who have studied race issues and who have pointed out that race does play a significant role in the experiences of African Americans, which may also impact doctoral students' experiences. Third, it provided information about how some mentoring experiences may impact the graduation or completion rates of African American doctoral students. Fourth, since there is such a small number and percentage of doctoral degrees earned by African Americans, the prior research from the literature provided recommendations for academic institutions to follow concerning how these institutions can assist ethnic minority doctoral students to persist in completing their degrees.

The information that is missing from prior research, however, includes studies that provide more descriptive and detailed reporting on the experiences of African American doctoral students who have graduated from major research universities. As a result, African American students' voices are missing from these studies. The research also has not explored differences in African American doctoral

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student experiences based on discipline, or addressed how the role of race impacted their student experiences. This study would contribute to the prior research by including the voices of African American doctoral students (personal stories) and by explaining how race impacts their doctoral student experiences prior to attending a predominantly White major research university (i.e., Michigan State University) and/or while attending such institution. The study participants have provided this information through one-on-one interviews.

After conducting the interviews and analyzing the data, I reported whether the participants were affected by race and if so, whether the factors rose herein or other factors were relevant to the experiences of African American doctoral students. Thus, this research study will contribute a more descriptive analysis of the nature of the experiences of African American doctoral students.

Finally, the literature on racial and ethnic identity theories informs my study by providing theories that point to particular stages of racial identity awareness that may assist African Americans in their identity development. This information enabled me to pose questions to the study participants concerning their awareness of their racial and ethnic identity, and whether family, peers, and/or members from their communities impacted their student experiences before and during their graduate student years.

Conceptual Framework of the Study

Given that this study has focused primarily on the role race played in the graduate school experiences of African American doctoral recipients and their

perception of being African American, I have been informed conceptually by three salient theories of racial identity—provided by White (1984), Cross (1991), and Helms (1995). White suggested that African Americans must come to grips with their racial and ethnic identity in order to overcome or suppress feelings of oppression and personal worthlessness perpetrated by occurrences in mainstream society. These individuals can come to grips with their racial and ethnic identity through support systems such as family, peers, community members, and knowledge about racial/ethnic identity theory.

Cross (1991) maintained that there are five different stages of racial identity development that African Americans can move through as they interact with individuals from the dominant racial group. These stages are the pre-encounter stage, the encounter stage, the immersion-emersion stage, the internalization stage, and the internalization commitment stage. Also, Cross' concept of race is viewed strictly in terms of "Black and White" and does not take into consideration the ethnicity of other people of color or their cultures. Helms' racial identity theory, however, does take into consideration all people of color.

Helms' (1995) racial identity theory takes a postmodern approach to assisting African Americans in the identification of their race and ethnicity. Helms' theory of racial identity maintains that the new way of viewing racial identity theory is for "all people of color to identify and accept their racial identity and overcome the psychological manifestations of internalized racism"—"societal racial stereotypes and negative self-and own-group conceptions (p. 189)." Therefore, based on the role race plays in the experiences of African Americans, and the previously-mentioned

theories of racial and ethnic identity, I have constructed a model that I believe appropriately addresses the development of African American doctoral students in relation to their experiences.

A diagram of this interactive model can be found on page 54. The elements of this theory follow:

1. African Americans' personal life experiences (including, for example, experiences of family, peers, and community members) may impact their understanding, or awareness of their racial and ethnic identity.

2. African Americans' sense and level of racial and ethnic identity will relate to their experiences and perceptions of graduate education. For example, if students have been accustomed to address their undergraduate professors as "professor (last name)," and when they arrive at graduate school, the graduate school professors encourage them to address them by their first name to establish a collegial relationship, students might first feel intimidated or insecure about addressing such professors in this manner. As a result, students may not develop a close relationship with their professors, which could also impact their doctoral work.

3. African Americans' understanding or awareness of their racial and ethnic identity may impact how they view the context of a certain academic discipline. For example, students may perceive a particular academic discipline as exciting or their institution's role as student-centered if family members, peers, or community leaders have expressed their positive experiences in this discipline to those students. This type of input can positively impact students' experiences.

Bingman's Newly Constructed Model of African American

Doctoral Student Development

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┌─────────────────────────────────┐
│          Context                 │
│                                  │
│  • Overall institution           │
│  • Specific                      │
│    discipline/department         │
└─────────────────────────────────┘
```

Context
- Overall institution
- Specific discipline/department

African American's personal life experiences prior to graduate school

Experiences in Graduate School (Related and/or not related to race)

Understanding or awareness of racial/ethnic identity

Persistence
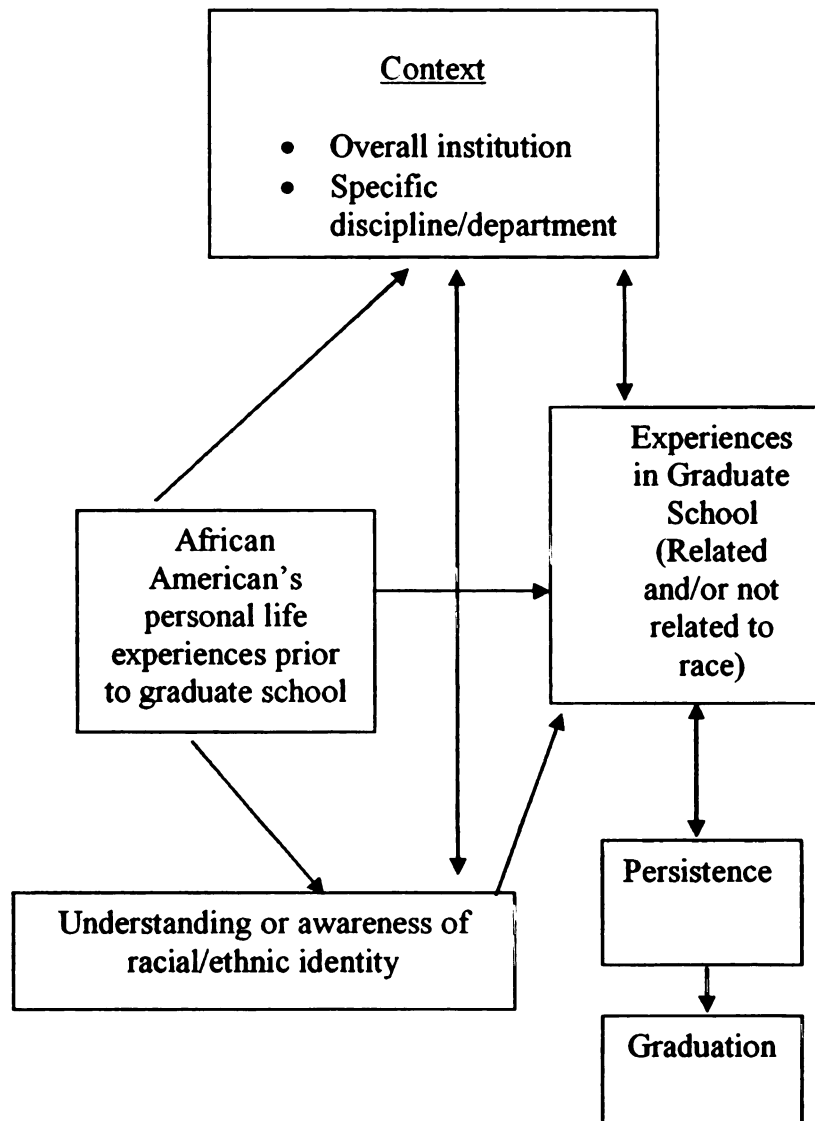
Graduation

This model leads me to questions (located in Appendix A on pages 196-200) pertaining to each of these areas and their relation to each other, and specifically, how they relate to the graduate school experience.

Research Design and Sample and Methodology

Research Design and Sample

The purpose of this study is to examine the nature of graduate experiences of African American doctoral students, factors that contribute to their persistence in completing their degrees, what role race plays in their experiences during their doctoral programs of study, and the level of awareness or understanding of their race and ethnic identity and culture. By examining these doctoral student experiences, the role that race plays, and the level of awareness or understanding of their race and ethnic identity or culture, I am able to shed light on what factors contribute to their successes in completing their degrees. Narrative interviews were conducted as a means of data collection and analysis for this study.

Anderson & Swazey (1998, p. 3) maintained, when "studying the doctoral experience, there is no substitute for on-site, interview, or observation-based collection." However, Dunbar et al. (2000, p. 280) argued that interviewers should become procedurally conscious "with regard to race." The authors stated, "the interview process and the interpretation of interview material must take into account how social and historical factors—especially those associated with race—mediate both the meanings of questions that are asked and how those questions are answered (2000, p. 280)." Furthermore, interviewers should not rely on using standardized interview procedures and methods because, according to Dunbar et al. (2000, p. 281), this process "has always been problematic with respect to nonmainstream subjects, especially in the area of race." Hence, the authors provided recommendations that should assist interviewers in obtaining needed data. First,

interviewers should treat their participants with the human dignity they deserve, and not take these individuals for granted. Secondly, interviewers should control any biases they may have about the participants and/or their personal or historical backgrounds. They should learn or have knowledge about their ethnicity and/or cultural backgrounds. Also, interviewers should obtain prior knowledge about race—as a subject, particularly, if they do not have any, and learn how race could potentially impact the lives of these participants.

Since I have knowledge about race, both through the literature and through lived experiences, when I conducted interviews with the participants, I think they were comfortable telling about their experiences—pre-doctoral study and during their doctoral study. Furthermore, to maintain objectivity before, during, and after the interviewing process, I took into consideration one recommendation that was provided by Dunbar et al. (2000). This recommendation was to control potential biases about the participants or their personal or historical backgrounds. I did not make assumptions that their graduate student experiences may be similar to mine and received as much information as possible without directing the conversation as it relates to their doctoral student experiences.

I interviewed ten African American 1999, 2000, 2001, and 2002 doctoral graduates who were enrolled in math and science and in the field of education at Michigan State University (MSU). I interviewed three men in the math and science disciplines, one man in education, and six women in education. The reason for the disparity of men and women in the listed disciplines was due to the responsiveness of the study's sample. Further, I chose these fields of study or disciplines of study

because according to the National Research Council (1998, 1999), African Americans represent smaller numbers of biological science graduates than most other fields of study, and, these individuals also represent larger numbers of education graduates than other fields of study. Therefore, interviewing participants who graduated in these academic disciplines is important because according to the literature, larger numbers of African American scientists will be needed to meet the expected academic and non-academic community by 2010 (Green, 1989). Thus, larger numbers of African Americans pursuing biological science degrees is necessary to meet future workplace demands. It is also important to interview African Americans who graduated with their doctoral degrees in education because in 1999, approximately 50% of these group members earned terminal degrees in the field of education (National Research Council, 1999). I randomly selected the sample participants from a list of names provided by the Graduate School of MSU, following UCRIHS approval to study human subjects.

Research Methods

This study is a qualitative research study. Although there are limitations to this method of research such as potential biases toward the data by the researcher, I believe that a qualitative research method, such as interviewing, was the most appropriate approach for this study. Qualitative research is an appropriate approach because it provides the participants opportunities to tell their story ("give voice") as they describe their experiences verbally (Bogdan & Biklen, 1998). On the other hand, quantitative research methods, such as surveys, do not allow participants to

elaborate or provide detailed information about their experiences (Bogdan & Biklen, 1998). One limitation of a survey is that it does not allow participants opportunities to provide information beyond what the questions ask.

I conducted one-on-one interview sessions with each participant—approximately one and one-half to two and one-half hours in length, taking specific notes, audio taping the participants' responses, and transcribing the interviews for data analysis purposes. An additional ten minute telephone interview with one of the participants was necessary to obtain information that was not previously received from the first interview. After the interview sessions, I kept a journal to reflect on my observations, impressions, feelings, and reactions throughout the research process. Many experienced researchers have found that writing thoughts in a journal is a valuable way to record insights, ideas, questions, and concerns about the interviews or the interview process (Lincoln & Guba, 1985). To ensure confidentiality, I maintained a list of each participant's name and pseudonym only for my own records. The interview protocol of this study is located in Appendix A of this document.

Data Analysis

To analyze data obtained from the interviews on the experiences of African American doctoral students in graduate school, I asked the participants to respond to the following broad questions and followed up with probing questions located in Appendix A (Interview Protocol):

- Tell me about your graduate student experiences.

- What prior experiences before graduate school may have affected your graduate experience?

- What experiences in the discipline/department or more broadly in the institution were critical in framing your graduate experience?

- Explain your understanding or awareness of your racial and ethnic identity.

- How does race and/or awareness of racial/ethnic identity impact or play a role in your experiences prior to graduate school and as doctoral students?

- What kept you motivated to persist in completing your doctoral degree?

After each interview session, I reviewed my field notes and wrote a one or two page summary of what I think I learned from the session and identified key themes that I believe emerged.

I analyzed my data by reviewing my typed field notes, interview transcripts, and journal notes to identify patterns and possible topics for thematic coding categories. I then listed possible coding categories to be used to code the units of data (sentences or paragraphs of the field notes or interview transcripts), and modified the codes as needed. These coding categories became my major coding categories—broad range of activities, behaviors, etc. I coded the data into broad categories, and then, coded the data into sub-codes. According to Bogdan & Biklen (1998), sub-codes break down major codes into smaller categories (Bogdan & Biklen, 1998).

The entire coding process included going through the data frequently. Once I coded the data, I combined information on certain themes, patterns, or issues with regard to the participants' prior and graduate experiences, academic discipline, and

experiences connected with race. This process enabled me to organize and manage my data for analysis purposes, and to report my findings.

Summary and Rationale for Study

For the past three decades, African Americans have made up only a small number and percentage of the doctorates earned in this country. For example, of the 31,239 and 41,140 doctorates earned in 1979 and 1999, respectively, U.S. universities conferred 1058 (3.3%) and 1596 (3.8%) African Americans for the respective years (National Opinion Research Center, 1999). Thus, the number of African American doctorates conferred in the U.S. has increased only by 538 within the past 20 years (National Opinion Research Center, 1999). This small number and percentage of African American doctoral graduates has caused some researchers to study factors that may impact the experiences of doctoral students (White, 1984; Helms, 1995). I have developed an African American doctoral student development model as a framework for my study. To assist in developing my model, I have used information taken from the literature concerning the role race plays in African Americans' experiences, as well as three theories of racial and ethnic identity.

Based on the findings obtained from this study, African American perspectives about their student experience—pre-doctoral study and during doctoral study—will inform the graduate education literature about some factors that can impact the experiences of African American doctoral student experiences while completing their degrees. Through narrative inquiry (interviews), I obtained

information about how African American doctoral recipients perceive their graduate

experiences, the role that race played in their experiences, their understanding about

their racial and ethnic identity, and factors that contributed to their motivation to

persist.

Exhibit 1

Participants' Biographical Sketches

This section introduces the participants of the study by presenting brief biographical narratives. The biographical sketches focus on the background and experiential factors that influenced the participants' successes in graduate school. Table 1 summarizes the biographical information.

Wilma

Wilma received her doctorate in the field of education and is currently a college administrator. After receiving her bachelor's degree in history from a Historically Black College or University (HBCU), in the 1970s, she attended a predominately White university where she obtained her master's degree in counseling psychology.

Wilma described growing up in a strong family environment where she was taught high morals and standards. Her parents were high school graduates, but they did not attend college. She was raised in the South and attended primary and secondary schools there. Later, she attended an out-of-state college. She was the first in her family to attend college, and she attributed her persistence in accomplishing her goals and her higher education pursuits to her nurturing mother and supportive husband.

Wilma had several role models and mentors, African Americans and Whites, throughout her childhood and college years. She got along well with many people from diverse backgrounds, which made it easy for her to establish mentor relationships. She often asked people, even at an early age, how they had reached

the current point in their careers. Through her willingness to receive advice and guidance from diverse people who possessed an array of knowledge and experience, she gained an understanding of school politics. This knowledge enhanced her academic achievements. The relationships built on Wilma's desire to obtain knowledge from these persons have connected her to many networks that have been helpful in her career pursuits. Wilma is married and has a child.

Lucy

Lucy received her doctorate in the field of education and is currently a college administrator. During the late 1970s and early 1980s, she received her bachelor's and master's degrees from a predominantly White university located in the southern state where she grew up and attended elementary and high schools. Her master's degree is in education. Her family members were civil rights advocates, and they participated in several marches and sit-ins. During her elementary school years, she helped integrate the school she attended. When she reached her late elementary and junior high school years, she encountered her first real experiences with blatant acts of racism. During her doctoral years, however, racism played little or no part in her experiences.

Lucy was often the first African American in her school to participate and become a leader in school activities. For example, she was the first African American cheerleader and the first African American head cheerleader. Lucy is married and has a child. Her immediate and extended family members are very proud of her accomplishments and have supported all of her educational endeavors.

She describes herself as a "strong Black women" who takes on challenges in order to meet her needs and goals.

Odessa

Odessa received her doctorate in the field of education and is currently employed in a professional position at a university. After receiving her bachelor's degree in Social Work from a university in Michigan, she worked in the criminal justice system. She decided, however, that the bachelor's degree would not qualify her for a higher-level position within that system. As a result, she pursued a master's degree in counseling from another university in Michigan. While working toward her master's degree, she developed a passion for counseling. Upon receiving her degree, Odessa performed one-on-one counseling with students and their family members for several years.

Despite having counseled people of all ages and ethnic and cultural backgrounds, Odessa thought that she would gain more respect from her colleagues and clients if she had a doctorate in her field. Therefore, her work experience was instrumental in her decision to pursue a doctoral degree in counseling. She chose to attend MSU because it was highly ranked and recognized for training professionals who are well known worldwide in their respective fields.

Two of Odessa's main role models were her mother and her aunt. Her mother always stressed to her the importance of a higher education. Her aunt, who teaches at a southern university, served as a professional role model and mentor because of her 20-plus years of experience as a college professor in the field of

education. Her aunt often discussed with Odessa the benefits and challenges of pursuing a Ph.D. She also recommended taking particular classes that she believed would best prepare Odessa for her chosen career. Her aunt, however, neglected to mentally prepare Odessa for the politics that are often involved in pursuing a Ph.D. Odessa is single and does not have children.

Sally

Sally received her doctorate in education and is currently a faculty member of a major university in Michigan. As a non-traditional Ph.D. student, Sally attended MSU several years after receiving her bachelor's and master's degrees in education. Since she had been employed in the education field full-time for the ten years prior to entering her doctoral program, she was able to focus on her studies and knew the type of education she needed to meet her career goal. She pursued her doctorate in order to meet her faculty responsibility of securing tenure.

Sally's family was very supportive of her educational pursuits. For example, when she was a high school student, her older sister invited Sally to her college campus on weekends so Sally could get a "feel" for college life and academic responsibilities. She also attributed her success in doctoral study to the support she received from her husband. Sally is married and has one child.

Delores

Delores received her doctorate in education and is currently a faculty member of a major research university located in the South. She received both her bachelor's degree in psychology and master's degree in education from an Illinois university.

Delores always knew she wanted to work in a profession that directly helped people. Initially, she considered becoming a medical doctor; however, after her third undergraduate biology course, and on the advice of her undergraduate advisor, she decided to pursue a doctorate in rehabilitative counseling.

Prior to her graduate studies, Delores counseled persons with disabilities. Although she really enjoyed this work, she decided to pursue a master's degree because the profession did not pay much. Her master's degree enabled her to meet her financial needs, but it did not allow her to be recognized as a scholar and a researcher. She attended MSU's doctoral program to meet these scholarship needs. Delores attributed her success in doctoral study to the support provided by her undergraduate advisor and her family members. She is not married and does not have children.

Kimberly

Kimberly received her doctorate in the field of education and is currently an administrator at a predominately White university in the Midwest. She received both her bachelor's and master's degrees in health sciences from a predominately White university in the Midwest. Kimberly decided to pursue a career in the health sciences because of the increasing problems of obesity, unhealthy eating habits, and lack of exercise in the U.S. population. Thus, she wanted to learn how she could help people get and stay healthy by assisting them with their diets and exercise programs. Kimberly's higher educational experiences were a bit different than most of the other participants in that she enrolled in her master's degree program straight out of undergraduate college, completed her master's degree, and immediately

enrolled in her doctoral program. Moreover, while pursuing her master's and doctoral degrees, she held a full-time job.

Kimberly's determination to obtain her Ph.D. without interruption was thwarted, however, when she became pregnant and ill from the pregnancy. She and her husband decided that she needed to prolong her doctoral pursuits. Kimberly was at the dissertation stage. She had collected her data and only the final write-up remained unfinished. Although completing her degree as soon as possible was important, she decided to put off writing the dissertation and spend more time with her children, who were far more important to her. Kimberly stated that she was unwilling to take on the additional stress that would have resulted from simultaneously working on her degree and attending to her newborn child. Kimberly is married and has children.

David

David received his doctorate in education and is currently working at a major university in Michigan (position title omitted for confidentiality purposes). He received both his bachelor's and master's degrees, in psychology and clinical psychology respectively, from another major university in Michigan. David described himself as a person who really tries to help others. His choice of psychology derived from his desire to help others attend to their mental and emotional needs.

David comes from a large, close-knit family. Although he is the middle child, he was the primary caregiver for his family, not only emotionally, but also physically because he performed many household tasks. He stated that his doctoral

studies could have been interrupted by illnesses and family deaths, but, because of his strong faith in God and unconditional love for his family, he was determined to complete his degree. David is single and does not have any children.

James

James received his doctorate in education and is currently a faculty member and the chairperson of his department at a Historically Black College or University (HBCU). Prior to attending MSU for his doctorate, he attended HBCUs for his bachelor's and master's degrees in chemistry. He pursued the Ph.D. in order to become a tenured faculty member and administrator of a college or university.

James suggested that all of his educational experiences had been positive, in part, because he had influential family members who were educators. James' father, who also had majored in chemistry, was his high school chemistry teacher. James had several other relatives (mother, aunts, and uncles) who were college educated. He maintained that attending college was not just a dream, it was also a family expectation. He attributed his success to having a strong relationship with God. He said that without the help of the Lord, it would not have been possible for him to have such consistently positive educational experiences. James is married and does not have children.

Patrick

Patrick received his doctorate in computer science and is currently a faculty member of a major, predominately White research university located in the South. He received his bachelor's degree from a HBCU, also located in the South, and his

master's degree from a major research university in the Midwest. Patrick went directly into graduate studies from his undergraduate college and received his postsecondary degrees without interruption. He believes that the level of funding provided to him by his department enabled him to continue his educational pursuits without having to work a full-time job. He said that, while many other college students have had to discontinue their educational pursuits in order get a job, he did not have to worry about having to do so.

Patrick attributed his educational success, in part, to attending a HBCU during his undergraduate years. His professors there, all African American, provided him with advice, guidance, and research opportunities that positioned him for graduate study. His parents stressed the importance of a higher education during his childhood years. Moreover, his father's career as an engineer motivated him to pursue math and science disciplines. Furthermore, his father provided the resources needed to learn about careers in math and science and challenged him to take more difficult math courses than his schools required. Patrick is married and has one child.

Brandon

Brandon received his doctorate in the biological sciences and is currently a postdoctoral student at a major research university located in the Midwest. He received his bachelor's degree in biology from a HBCU. Since his undergraduate college grades were good, he was not required to have a master's degree to be admitted to MSU's Department of Microbiology. He was able to "go straight through" and work on his doctorate. His desire to achieve academically derived

from his parents and grandparents, all of whom were college educated. He attributed his choice of discipline, however, to exposure to and encouragement from his junior high and high school math and science teachers. Brandon stated that his love for math and science did not come from his family members, who, though they were educators, taught in other areas or disciplines. Brandon's involvement in Black organizations on the MSU campus benefited him socially and academically. He stated that the interactions within these organizations provided the means to communicate his frustrations and other experiences to other African Americans who might have confronted similar challenges. He asserted that this type of communication eased the demanding schedule and research involved with his discipline. He further asserted that his close relationships were solely with African Americans because he felt more comfortable with others from similar backgrounds and with similar experiences. Brandon is married and does not have any children.

Table 1

Summary of Participants' Biographical Sketches

Names of Participants	Family Influence	Academic Experiences	Experiences Connected with Race
Wilma	*Father's lack of support for graduate studies *Mother & husband were supportive of education *Parents not college educated--only husband	*Positive experiences at all educational levels *Mentor support— helped plan graduate studies & career *Decided undergrad. and master's degrees not sufficient to meet career goals	*First Black to receive H.S. Honors award *White community located near H.S. protested her becoming a drum major *Attended HBCU
Delores	*Mother and uncle supported educational goals *Uncle was college educated	*Decided that undergrad. & master's degrees alone were not sufficient to meet career goals	*Experienced negative comments from White high school teacher— stating that she would not be successful in college *Positive experience with Italian undergraduate & Black master's advisors *African American student-peers provided social and academic support

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Kimberly	*Family members were not reported as being influential in doctoral pursuit—only coworkers & friends were influential in doctoral pursuit *Husband was college educated	*Did not report any academic experiences that impacted doctoral study or success *Decided that undergrad. & master's degrees alone were not sufficient to meet career goals	*K-12 experiences as only Black swimmer competitor Spectators and other Swimmers not accustomed to seeing a Black female competitor in the sport *Often was not invited to receptions or victory parties after team won because of her race
David	*Father's death motivated degree completion *Brother's illness motivated degree completion *Family members depended on him as primary caregiver *Brothers went to college	*Decided that undergrad. & master's degrees alone were not sufficient to meet career goals—helping people resolve emotional problems	*Reported that many Blacks & other ethnic minorities tend to polarize race *Believes that race is not as important as social class status
James	*Family supportive of success *Father was high school chemistry teacher *Father's field of study (chemistry) impacted his choice of	*Overall positive experiences in K-12 grade and in undergraduate and master's degree years at HBCUs *Decided that undergrad. & master's degrees alone were not sufficient to meet career goals	*Reported one negative experience with race—Black master's degree advisor treated White students better than Black students

	discipline *Mother and father were college educated		
Patrick	*Family supportive of educational goals *Father's field of study (engineering) impacted choice of discipline *Parents & wife were college educated	*Positive experiences at all educational levels *Junior high & high school math teachers impacted interest in math *Non-stop education from kindergarten to Ph.D. *College math & science summer programs prepared him for college-level coursework *Practiced taking standardized tests in high school to prepare for testing requirement for college admission	*Did not allow race concerns or issues to hinder his educational goals or worldview *Maintained that he has never experienced racism or unequal treatment in his schooling

Chapter 4

Prior Experiences That Influenced Success in Graduate School

Introduction

Based on the data taken from the interviews, prior experiences of the participants had an influence on their success in graduate school. Some of these experiences involved family members, junior high and high school, undergraduate college, co-workers, and spirituality. In this chapter, I discuss how the prior experiences of the participants had an influence on their success in graduate school.

Family Influence

Family members such as parents, siblings, aunts, uncles, cousins, grandparents, and spouses strongly influenced the participants' success in graduate school. For example, James and Patrick's fathers influenced their choice of academic discipline and careers by being role models and through their teaching experiences. Seven (7) of the participants, Wilma, Sally, Odessa, Delores, David, Lucy, and Brandon's parents and/or siblings influenced their sense of the importance of academics by attending college themselves, discussing with them their own beliefs in the importance of an education, or providing them with support and motivation. Four (4) of the participants, Odessa, Delores, James, and Lucy, had aunts, uncles, cousins or grandparents who motivated or encouraged them to persist in completing their graduate degrees; and three (3) of the participants, Lucy, Sally, and Wilma, had husbands who provided them with guidance, advice, emotional support, or took on extra household responsibilities that assisted them in completing

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their degrees. In this chapter, I discuss how parents, siblings, other family members, and spouses had an influence on some of the participants' success in graduate school.

Parent's influence on choice of discipline and career.

Educational researchers maintain that family is the "major educational influence in the life of the child (Levine & Havighurst, 1992, p. 89)." This theory supports how James and Patrick's family members, particularly their parents, had an influence on their choice of discipline and careers. For example, James' father strongly influenced his choice of discipline and career by being his primary role model and high school chemistry teacher, which impacted his success in math and science. James said that his father has been the "strongest influence" in his life as far as education was concerned because he enjoyed how his father taught chemistry while he was a student in his father's chemistry class. He maintained that his father taught chemistry in an interesting way that kept his interest and enabled him to see how the discipline could be applied in real-life situations. He suggested that this kind of teaching and real-life math applications motivated him to choose chemistry as his discipline and career. James is currently the chair of the Department of Chemistry and a professor of chemistry at a HBCU.

Patrick's father also had an influence on his choice of discipline and career because of his previous occupation as an engineer and secondary math teacher. Patrick reported that his father often shared with him how "math problems [were] connected to the physical world" and challenged him to solve difficult math problems in junior high and high school, which prepared him to solve difficult math

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problems in college. Patrick had great respect for his father and his occupation as an engineer. He said that since his father was an engineer, educator, and his role model, he decided to also become an engineer and educator. Patrick is now a computer-engineering professor at a major research university in the south.

Parents and siblings: providing a sense of the importance of academics.

Parents and siblings have provided the participants with a sense of the importance of academics by encouraging them to participate in school activities and events, urging them to attend college, modeling their own sense of the importance of academics by attending college themselves, discussing with them their own beliefs in the importance of an education, or providing them with support and motivation. According to the interviews of Wilma, Sally, Delores, Odessa, David, Brandon, and Lucy, their parents and/or siblings influenced their success in graduate school by providing them with a sense of the importance of academics through the above-mentioned efforts.

For example, Wilma suggested that her parents provided her with a sense of the importance of academics by stressing the importance of attending college and participating in activities and events that were related to academics. She said that attending college was particularly important to her father because he wanted Wilma to reach her career goal as an administrator of a college. She also reported that her father wanted her to attend college, mostly because he was forced to forfeit his dream of attending college when he was called to perform military duty in World

War II. Wilma said that her father's strong urging that she attend college influenced her success in graduate school.

Wilma's mother, on the other hand, influenced her success in graduate school in a different way. She ensured that Wilma was involved in activities and events that were related to academics during her pre-college years and often insisted on doing Wilma's chores in order to ensure that nothing came between her academic and her educational experiences. She said that her mother "spoiled" her. While Wilma's mother influenced her success in graduate school by doing Wilma's chores to enable her to freely participate in academic-related activities and events, Wilma's father influenced her success in graduate school by stressing the importance of attending college so that she could accomplish her goals as a college administrator.

On the other hand, Sally's sister influenced her sense of the importance of academics by allowing her to visit the college she attended. Sally stated that when she visited the college that her sister attended, she often spoke with her about how to succeed in college, and her sister was able to "provide…some understanding of what college was about." She said that being able to visit her sister on campus also enabled her to visualize herself as a college student as her sister discussed some of the opportunities and challenges associated with being a college student. Sally also stated that although her mother, sister, and father were extremely supportive of whatever she wanted to do, whether it was pursuing her master's degree or focusing on her career goals, it was her sister who educated her about the responsibility of being a college student, which helped her prepare for college life. Furthermore, through the experiences of visiting her sister at the college she attended, Sally was

able to gain a sense of the importance of academics, which led to her success in graduate school.

Odessa stated that her mother influenced her college experience by conveying to her that a college education would enable her to become "self-sufficient." She said that "she [mother] was really instrumental in pushing me to go on to further my education." Therefore, because of her mother's strong commitment to instilling in Odessa the importance of being college educated, she was motivated to pursue and become successful in graduate school.

Delores, on the other hand, gained a sense of the importance of academics not only from her mother, but also from her father and sister. Delores' parents and sister influenced her sense of the importance of academics through their support and motivational efforts. She said, "My immediate family was always there and supportive...my mom, sister, and a little by my dad, were just always there throughout... so they were very integral... and motivated me to do well in school." She further stated that because of their support and inspiration in obtaining a college education, she was motivated to pursue graduate studies. She said that she performed well in school not only because it was required of her, but also because she "wanted to make them [parents and sister] feel good that they played a large role" in her completing her degrees. This effort to please her parents and sister also influenced her success in graduate school.

Brandon's parents influenced his sense of the importance of academics by being good role models for him. He stated that since both of his parents held bachelor's and graduate degrees, graduating with a bachelor's degree was important

and expected. Brandon stated, "There was not a question of whether I would attend...being a college graduate was an expectation." In other words, Brandon suggested that while some parents try to encourage their children to attend college, attending college was an expectation, not an option for him. Therefore, the legacy of Brandon's college-educated parents heavily influenced his sense of the importance of academics, which led to his success in graduate school.

Unlike the other participants' parents and/or siblings' role in influencing their sense of the importance of academics, Lucy's mother influenced her sense of the importance of academics not only through her own belief in the importance of an education, but also by requesting, during her illness, that Lucy complete her doctoral degree. Lucy's mother, who died approximately 2 years ago, stressed the importance of an education throughout Lucy's life. Lucy said that because of her mother's wish for her to achieve graduate school success, she was determined to complete her doctorate degree. Lucy said, "It [the completion of her doctorate degree] was for her [mother]." According to Lucy, therefore, her mother's efforts to instill a sense of the importance of academics in her strongly influenced her success in graduate school.

Other Family Members: Motivating, Coaching, or Encouraging

Similar to parents and/or siblings having an influence on the participants' success in graduate school, other family members such as aunts, uncles, cousins, and grandparents have also had an influence on Odessa, Delores, James, Brandon, and Lucy's success in graduate school by motivating, coaching, or encouraging them to persist academically. For instance, Odessa's aunt, who is a college professor and

Odessa's primary mentor and role model, was influential in her decision to pursue her doctorate degree. She was Odessa's primary motivator and coach who provided her with information about the doctoral experience.

Delores' uncle, who is a medical doctor and served as her primary mentor and role model had an influence on her graduate school success. Her uncle encouraged her to go straight through school and complete her master's and doctoral degrees. He stated that she would risk not completing her doctorate degree if she started a full-time job or got married before completing her degree. She said that he was the one person who truly understood why she wanted to pursue her graduate degrees and encouraged her until she received both master's and doctorate degrees.

Delores also implied that completing her undergraduate degree was a monumental event. She said that since "nobody in my immediate family had gone through school that far [receiving a bachelor's degree]...it was a big deal, I guess, in the family—that I had gone for my undergraduate degree and that I was finishing school." Delores reported that "five out of her six aunts, three uncles, and six or seven cousins" came to her undergraduate graduation. She was extremely pleased by their support. Delores stated that her family members were "integral" in "motivating" her to complete her degree because she also "wanted to make them feel good" when she completed the degree.

James also reported that family members other than his parents also had an influence on his graduate school success by encouraging him to become a college graduate like themselves. According to James, some of his aunts and uncles who were college graduates and educators (i.e., elementary and secondary teachers) often

encouraged him through their motivational talks and words of encouragement. These acts influenced James' academic success in graduate school.

Brandon, on the other hand, was the only participant who reported that his grandparents were also college educated. He said that his grandparents passed along their strong belief in family members receiving a college education, which in turn, influenced his commitment and success in undergraduate and graduate school. Brandon stated that he is proud to be a part of his family's legacy of achieving a higher education.

Lucy reported that since she grew up in a close-knit family that has held family reunions three times a year for the past 30 years, she was often exposed to aunts, uncles, cousins, and grandparents who had an influence on her success in graduate school. Lucy said that because of these family gatherings, she was encouraged, academically, by her family, which shaped her into who she is as a person, academically. She stated that she was often reminded of her family history and the family's strong belief in education during the family reunions. As a result, Lucy embraced a sense of the importance of academics and success that her family values.

Spouses: providing guidance, advice, emotional support, or taking on extra duties.

While other family members played a part in the participants' graduate school success, Lucy, Sally, and Wilma's husbands played a significant part in influencing their academic success by providing them with guidance, advice,

emotional support, or taking on extra household responsibilities/duties. For example, Lucy's husband assisted her academically to achieve graduate school success by providing her with guidance and advice. She suggested that her husband often advised and guided her academically by sharing with her certain strategies that would enable her to complete her coursework easily. For example, since he was a doctoral graduate, through his experiences in graduate school he was able to advise her to take most of her required statistics courses during her first two semesters. He told her that by taking these statistics courses during her first year she would become more familiar with researching early in her program. He also stated that once she completed the statistics courses, she would then be able to focus on other courses that were directly related to her program focus and research interests. Focusing on her program and research interests would also enable her to start research and writing on topics related to her dissertation early in the program.

Sally maintained that without the emotional support of her husband during her graduate experience, it would have been extremely difficult for her to succeed in graduate school. She referred to his support as being "overwhelmingly supportive." She also stated that although there were days when she felt "low" or lacked self-esteem, her husband was there to support her emotionally by cheering her on and encouraging her to persist.

Wilma's husband also had an influence on her graduate school success by taking on extra household responsibilities/duties. She said that not only did her husband provide her with emotional support to succeed in her graduate school, he also showed his support by playing the role of both dad and mom during times when

she needed to study. She said that her husband was often available to assist their son with his homework and attend to other household responsibilities/duties while she studied at the library.

In summary, family has strongly influenced several of the participants' success in graduate school by influencing their choice of academic discipline and careers, motivating or encouraging them to persist in completing their graduate degrees, providing them with guidance, advice, emotional support, or taking on extra household responsibilities, which assisted them in completing their degrees. Thus, without the family's role in influencing various aspects of their academic success, the participants might not have been successful in graduate school.

Junior High and High School Experiences

Based on the data taken from Patrick and Brandon's interviews, some of their experiences in junior high and high school, and some of their junior high and high school math and science teachers strongly influenced their participation in math and science, which ultimately influenced their success in graduate school. In this section, I discuss how Patrick and Brandon's participation in junior high and high school math and science courses, activities, or programs influenced their success in graduate school. Also, I discuss how Patrick's and Brandon's junior high and high school teachers influenced their participation in math and science courses and programs through their teaching style or encouragement, which ultimately influenced their graduate school success.

Junior high & high school experiences: participation in math & science courses and activities/programs promote success.

Experiences during junior high and high school impacted Patrick and Brandon's success in graduate school by enabling them to participate in various math and science courses, activities, or programs. Also, opportunities to practice taking standardized tests during high school enabled Patrick to perform better on standardized tests, which also contributed to his success in graduate school. Patrick said that much of his success in math and science derived from taking math and science courses in junior high and high school. He enjoyed algebra, geometry, and English—although English was not a required course for the sciences. Patrick stated that his English course provided him skills that helped him prepare to write in a scholarly manner. Furthermore, the experiences Patrick gained through memberships in math and science organizations and by attending math and science fairs during his junior high and high school years helped him become knowledgeable about various math and science opportunities.

If for example, Patrick said that joining math and science organizations is essential to becoming successful in the field of math and science. "There was an organization called Technology Student Association, which is an organization that I joined in junior high, and continued through high school," he maintained. According to Patrick, this organization allows students to go to state events to speak and to design and build bridges (architecturally). Through this organization, Patrick also designed and built race-cars (architecturally and through models). All of these

activities involved mathematics and Patrick was able to apply knowledge gained by taking the English courses to enhance his speaking and writing abilities.

He further stated that if a student won the state level competition, the student could move on to the national competition. "The idea is for you to go in a room and someone will give you several topics and you have to write an essay on the topic and then speak about the topic on the spur of the moment," he reported. He further maintained that "you could be given an opportunity to write some notes or an essay about the topic and then give a speech related to the topic; or, you could simply be asked to present information about a topic they choose; you're given a few minutes to get your thoughts together and then give a speech on the topic."

Patrick also attributed his success in graduate school to practicing taking standardized tests such as the ACT and SAT, which is a required test that many colleges and universities use as a tool to determine whether students were accepted for admission. During his junior year in high school, Patrick stated that he found out from students in another school district that they were taking practice standardized tests to get them familiar with the types of questions that would be on the tests. These practice test materials not only included the practice tests; they also included instructions and strategies that enabled test-takers to increase their test scores.

Once Patrick found out about the practice tests, he believed that he and other students in his school district also could perform well on the tests if they had access to these test materials and strategies. Therefore, he reported this information to other students in his school district and followed through by obtaining practice tests and practicing. By taking the practice tests during his junior and senior years in high

school, Patrick was able to perform well on the tests and make a score that was acceptable for college admission.

Brandon maintained that participating in math and science courses, activities and programs enabled him to achieve success in these subjects. He recalled that his interest in math and science developed, primarily, from taking math and science courses in junior high school and high school. He stated that he "always liked asking questions" in class about math and science-related problems, and as a result, "gravitated towards these classes more so than any other classes." He further suggested that because of his interest and knowledge of the sciences, he participated in accelerated science programs and enjoyed what these programs had to offer. He said that through the science programs, he learned about this field of study, and how science could be applied to real-life situations. He further stated that "by eighth and ninth grade, I was into science courses...and apparently it was a natural transition" [from junior high to high school, and then to college]. Therefore, according to Brandon, experiences related to math and science contributed to his success in graduate school.

Junior high & high school teachers: promoting success in math & science.

Secondary math and science teachers have promoted the participants' success in math and science by keeping them interested in the subjects through their teaching styles, or by encouraging them to pursue careers in math or science. For example, Patrick attributed much of his math success to his junior high school algebra teacher and her teaching style. He said that because he enjoyed his algebra teacher, who

gave him interesting problems as opposed to just tedious ones, he was able to understand how math connected to the physical world, hence, influencing his success in graduate school.

Brandon's high school science teacher also had an influence on his success in graduate school by influencing his decision to pursue a career in science. He said that because one of his high school science teachers encouraged him to pursue science by telling him that he was "going to graduate school to become a scientist," he was encouraged to become a scientist. Brandon is now a scientist at a major research university in the Midwest.

In summary, experiences during junior high and high school impacted Brandon and Patrick's success in graduate school by enabling them to participate in various math and science courses, activities, or programs. Also, opportunities to practice taking standardized tests during high school have enabled Patrick to perform better on standardized tests, which also contributed to his success in graduate school. In addition to Brandon and Patrick's math and science-related experiences encountered during their junior high and high school years impacting their success in graduate school, their secondary math and science teachers also promoted their success in math and science by keeping them interested in the subject matter through their teaching styles, or by encouraging them to pursue careers in math or science, which also contributed to their success in graduate school.

Undergraduate College Experiences

Based on the data taken from Brandon and Patrick's interviews, undergraduate college experiences with professors had an influence on their success in graduate school. In Brandon's interview, he reported that some of his undergraduate college professors provided him with opportunities to participate in summer research and job-shadowing programs, and by giving advice on which college to attend graduate school. Patrick also reported in his interview that his undergraduate professors made it possible for him to participate in various science and research programs, which gave him exposure to math and science on a scholarly level. In this section, I discuss how Brandon and Patrick's undergraduate college professors provided them with opportunities to participate in summer research, job-shadowing, or science and research programs, and advice on which college to attend graduate school, which directly affected their success in graduate school.

Undergraduate college professors: providing research & job-shadowing program opportunities, and advice.

Undergraduate college professors have impacted the participants' success in graduate school by providing them with research and job-shadowing opportunities, and advice on where to attend graduate school. For example, one of Brandon's professors encouraged him to participate in summer research programs away from campus. He said that these programs helped him to become familiar with known researchers who provided valuable information about the different kinds of research that he would conduct in graduate school. He stated, "I took advantage of those

[summer research programs]...I've been placed in different research programs for three years before I came to Michigan State...and these programs are helpful."

Brandon was extremely pleased to have gained research experience during his undergraduate years in college. He asserted that at his undergraduate university, "there's more of an emphasis on how you relate to students, because you're going to be in the classroom, you're going to be teaching, and because we're a small university and pride ourselves on turning out students who are capable and ready to perform at the next level, be that graduate school or going out into the workforce, or professional healthcare."

Brandon said that he was a pre-med major (in the professional healthcare field) at his undergraduate college. He said that his undergraduate college prides itself on having one of the largest disciplines (healthcare) at the university and it was not unusual for the population at the university to have a great number of pre-health professional biology students because of its reputation in the health areas.

Brandon's professor also encouraged him to participate in a job-shadowing program that was designed to help students become familiar with jobs in certain career fields. By participating in the job-shadowing program, Brandon was allowed to observe individuals on their jobs in order to gain knowledge about the types of work activities and responsibilities associated with jobs that may be of interest to them.

Brandon stated that one of the things that impressed him about the shadowing program was that students could gain academic experience in the field (biological sciences). Brandon reported that at these program settings, "they place you in the

summers in different positions where you go around and do hospital rounds with them." "So that experience taught me that I wasn't cut out to be a healthcare provider; but by that time, I had taken quite a few science courses," Brandon said. He also said that since he had taken many science courses, two of his undergraduate professors/advisors brainstormed ways with him about how he could apply these courses to another science discipline. As a result of the brainstorming, it was suggested that Brandon attend graduate school so that he would not lose his accumulated science credits.

Brandon argued that this undergraduate experience with his advisors strongly influenced his graduate student success and career because "it was just a process of exposing me to research, essentially, and helping me understand what type of careers would be possible with a graduate degree and staying in scientific research." He further commented, "Those two experiences—deciding on whether to go into the health profession, and receiving good advice from faculty advisors about what graduate education would mean in terms of a research career, led to my decision to pursue a scientific research career."

After his decision to go to graduate school, Brandon's advisors assisted him in obtaining exposure to the field of science. "That's where the summer program started—going to different labs and just getting your hands wet doing the research," he further stated. Furthermore, Brandon stated that he chose MSU to attend graduate school because his advisor, who was also an MSU graduate, motivated him to attend MSU. Another reason why Brandon chose MSU was because MSU did not require their science students to have a master's degree prior to attending doctoral study. As

a result, Brandon made application to attend MSU's doctoral program in microbiology prior to attending graduate school. He is now a scientist at a major research university.

Patrick said that because his undergraduate professor provided him with many opportunities to attend various science programs during his tenure at Commerce University [fictitious undergraduate college name], he was exposed to math and science on a scholarly level. "While I was an undergraduate student, I attended research programs at the University of Canton (fictitious name), and a technical research program at Strong University (fictitious name)," he said.

According to Patrick, these types of exposures captured his interest in pursuing a graduate degree in math and science. He said, "One of the things that motivated me to pursue a Ph.D. was actively doing research and teaching." Patrick maintained that prior to graduate school, he had an opportunity to teach an undergraduate course as an undergraduate student, further motivating his interest to pursue the Ph.D. Hence, Patrick attributed his discipline choice and career decision to his interest in research and teaching, and in math and science.

In summary, undergraduate college experiences with professors had an influence on Brandon and Patrick's success in graduate school. For example, Brandon's undergraduate college professors provided him with opportunities to participate in summer research and job-shadowing programs. Also, Patrick's undergraduate professors made it possible for him to participate in various science and research programs, which provided him with exposure to math and science on a scholarly level. This exposure to math and science on a scholarly level prepared

Patrick to write scholarly papers and publications while in graduate school, which affected his success in graduate study.

Spirituality: An Important Motivating Force to Persist

Spirituality has been instrumental in motivating at least eight of the participants (David, Delores, Wilma, James, Patrick, Odessa, Kimberly, and Sally) to persist in completing their graduate degrees through having a relationship with God, attending Sunday morning church services, reading the Bible, gaining faith through spirituality, praying, and obtaining divine intervention from God. For example, David emphasized the importance of prioritizing the important things in life. He stated, "The important things in life are relationships with God, family, and friends; those are the most important things to me." David believed that God motivated him to persist in his educational attainments through prayer and reading the Bible, which had an influence on his success in graduate school.

Delores stated that because of her "spirituality, and knowing God and having a relationship with Him," she succeeded in completing her degrees. She said, "I felt I had a strong connection with God and I intentionally made sure that that [relationship with God] was in place...not just for a graduate student, but for my own life experience." Another reason why Delores believed that God was a motivating force in her graduate school success was because she stated that she "was exactly where God wanted me to be [in graduate school]." She further commented, "oftentimes, He [God] was all I had to lean on...and that was very important...if I

had not have had Him in my life, I know I would not have been able to do it [become a success in graduate school]."

Wilma suggested that because of her spirituality, which motivated her to become successful in graduate school, she often arrived to church on Sunday mornings at 7:30 a.m. to make sure that she started her week early "thanking God for all of His blessings." James reported that without his spirituality and his relationship with God, he would not have been successful in completing his doctorate degree. He said, "I don't think I could have survived that experience [graduate experience] without God and my church."

Patrick also reported that his spirituality motivated him to become successful in graduate school because of his relationship with God, and by reading the Bible. He said:

There were times when I took an exam, and did not do well....it was important for me to understand the scripture [in the Bible] and know that all of these things [hardships] would end...that was what was important for me...and how I enjoyed being able to have that peace and then have people ask me about it...so then I can tell them why I have this peace and that is important to me....There are some people who are intelligent academically, but they have no perspective on anything else or don't realize what's really important....so being able to be a part of the church and have plans where we did other things, helps maintain a sense of what's really important...it helps maintain your perspective.

Odessa also maintained that her spirituality motivated her to gain faith in completing her educational goals. For example, she stated, "I think my spirituality

and my faith...pulled me through [graduate school success]...because I'm a strong believer in God, and I think that God is not going to bring you to any experience without bringing you through it....so that helped me to kind of persist and keep going in spite of all the obstacles."

Sally reported that because of her spirituality and relationship with God, she was able to gain "divine intervention" through prayer to write well on papers. She said:

I've had experiences where I'm writing a paper, and writing is hard for me, very hard for me ...I'd rather give a presentation to a million people than write for a journal...anyway, I might be sitting at my computer with a blank screen and I'd say, 'Okay Lord, I need to compile these citations'...I've got all these articles and papers and stuff near me...I've spent the last half an hour trying to find it [citations and relevant-articles]...and again, I'd say, 'Okay Lord, where is it?'...and literally, I'd reach over, pick something up, and there it was...I mean literally.

Sally also stated, "I have written papers in the shower...divine intervention...I mean, literally, the entire paper would come to me in the shower...I've gotten out of the shower and rewritten a ten page paper." Therefore, Sally suggested that her spirituality and divine intervention from God motivated her to persist in writing better papers throughout her college studies, which ultimately led to her success in graduate school. Kimberly did not provide specific examples of how her spirituality motivated her success in graduate school, but she did state that by attending church, she was motivated to succeed in graduate school.

In summary, spirituality has been instrumental in motivating David, Delores, Wilma, James, Patrick, Odessa, Kimberly, and Sally to persist in completing their graduate degrees through having a relationship with God, attending Sunday morning church services, reading the Bible, gaining faith through spirituality, praying, or obtaining divine intervention from God. According to the participants, without their spirituality, it would have been extremely difficult, or even impossible, if their spirituality had not motivated them to persist in performing well academically.

Summary

According to the participants, various experiences prior to graduate study had an influence on their success in graduate school. Some of these experiences involved family members who had an influence on their choice of academic discipline and careers, and their sense of the importance of academics. Also, some of the spouses of the participants provided guidance, advice, emotional support, or took on extra household responsibilities that assisted them in completing their degrees.

In addition to family members having an influence on the participants' success in graduate school, experiences encountered through participation in junior high and high school courses, activities, programs, and relationships with junior high and high school math and science teachers have promoted the participants' success in graduate school. Furthermore, experiences during undergraduate college study with professors enabled participants to perform well in their math and science

disciplines, which ultimately impacted their success in graduate school and career

decisions.

Chapter 5

Aspects or Issues Connected with Race That Contributed to Success

Introduction

    The term "race" has been defined and used in a variety of ways; however, for the purposes of this study, "race" was defined as "an arbitrary classification of populations conceived in Europe, using actual or assumed genetic traits to classify populations of the world into a hierarchical order, with Europeans superior to all others" (Carter & Qureshi, 1995, p. 250). This definition identifies individuals by virtue of their racial or ethnic background—African American or Black in the present study. African Americans often have encountered similar experiences, arguably because of their race, in which others treat them differently than they would Whites.

    Several scholars have argued that race plays a significant role in the experiences of African American graduate students because any attendant racist behaviors and prejudices create many barriers to success (Anderson, 1994; Haymes, 1995; Lusane, 1997; Turner & Myers, 2000; West, 1994; White, 1984; Willie et al., 1991). Is this statement true? What does it mean? Is it an indication that colleges and universities sometimes deliberately construct racial barriers to hinder the success of African American graduate students? Alternatively, does it mean that academic deficiencies caused by societal racial discrimination diminish African American graduate students' chances of succeeding in the academy? These are important questions because many persons in and out of the academy view "race" as negatively impacting the academic experiences of African Americans.

The results of this study, however, run contrary to that opinion. They demonstrate, in fact, that race can be a positive factor in the lives and experiences of African American graduate students. According to nine of the ten study participants, race played a positive role in their doctoral student successes. This assertion does not suggest that racial barriers were not present, nor does it imply that participants were unaware of possible racial barriers. Instead, the findings suggest that, if racial barriers were present for the study participants, they were able to overcome those barriers by turning them into motivators for academic success. To gain a clear understanding of this process, I discuss six key ways in which race played a positive role in the participants' graduate experiences.

Several scholars have contended that the development of a positive perception of their race better positions African Americans to overcome racial barriers such as racism or discrimination in order to achieve academically (Cross, 1991; Helms, 1995; Ivey, 1995; White, 1994). Since the participants in this study overcame racial barriers and achieved academic success, I first examine the participants' perceptions of their race and the importance of their race to them. Second, I discuss if, and how, family members shaped the participants' views of their race during their youth. Third, I discuss how a sense of pride in their race motivated some of the participants to perform well in their fields of study (math and science or athletic training), so that they could effectively serve as positive role models for African American students to follow. Also in this section, I examine how a sense of pride in being African American inspired some of the participants to perform well specifically in math and science, allowing them to serve as good

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representatives for their race by disproving stereotypes suggesting that African Americans may have difficulty in succeeding in these disciplines.

Fourth, I discuss how ethnic minority college professors, administrators, or student-peers provided support (i.e., guidance, advice, or knowledge/wisdom) to the participants. As ethnic minority persons themselves, they understood and could relate to some of the potential racial barriers that African American students sometimes face on predominately White college campuses. Fifth, I discuss how the participants' minority status as African Americans made them eligible to receive minority-based fellowships, which lessened financial barriers to success by paying their tuition and other college-related fees. Sixth, I discuss how the participants' confrontations with racial barriers actually contributed to their successes as they transformed the barriers into motivators for academic achievement.

Following the discussion of the key ways in which race played a positive role in the participants' graduate experiences, I discuss three instances in which race did not contribute to success. Three of the study participants claimed that they confronted racial barriers about which they could do nothing. They just had to deal with or succumb to racism, discrimination, and stereotyping. Before concluding, I discuss some experiences in which the participants did not perceive race as a salient issue at all. These individuals asserted that other issues, such as socio-economic status, the nature of a particular discipline (math or science), or self-determination and hard work, played larger roles in their experiences.

Participants' Perceptions of Race

As previously stated, African Americans are better positioned to overcome

racial barriers such as racism or discrimination and to achieve academically when

they hold positive views of their race. Without exception, the study participants had

positive views of their race. All ten were very proud to be African American. For

example, one participant stated, "Some people have said. . . that they don't see color.

. .I want them to see color, because a Black woman is what I am. . .and it's very,

very, very important."

Cross (1991) has described the process of developing positive race

perceptions from a reference group orientation. This development is a five-stage

maturation process in which external negative images of one's race are replaced with

positive internal images. At each stage, the growing positive perceptions of race link

to an increasing importance of race to the individual. Movement through the stages

is sequential and dependent upon personal experiences encountered in the larger

social world and the internalization of those experiences. In the first stage, the

importance of race to the individual is low, and there is little awareness of racial

discrimination. By the fourth stage, however, Blacks attach great importance to

being African American. They perceive their race as a positive attribute, understand

discrimination, and devise strategies to resist it.

The link between positive perceptions of race and importance of race

suggested by Cross (1991) applied for the participants. During the interviews, I

asked them to rank the importance their race held for them in relation to their life and

academic experiences. On a scale from 1 to 4, (#1—very important, #2—somewhat

100

important, #3—not important, #4—not sure), eight of the participants reported that their race was "very important;" while two reported that it was "somewhat important." Because all of the participants had positive perceptions of their race and most of them viewed their race as being "very important," they were able to overcome potential racial barriers and, as a result, successfully met their academic goals. The participants who ranked their race as being "very important" suggested that their family members were instrumental in the development of their views of their race.

Family Members' Influence on Participants' Perceptions of Their Race

Given the overall influence of family members in shaping the views and values of children generally (Elkin & Handel, 1984), it is reasonable to argue that family members have the greatest influence on their children's views of their race. In the African American community, for example, family members play a key role in shaping the views of African American youth and adolescents toward their race. Encouraging their children to view their race positively ultimately helps children cope with certain racial problems or barriers that could stand in the way of their success (Cross, 1991; Helms, 1995; Ivey, 1995; White, 1984). This argument seemed to be reflected in the experiences of most of the participants in this study. They believed that family members strongly impacted their positive views of their race.

Participants mentioned three of the ways in which family members shaped their views of their race. Family members attended Historically Black Colleges and

Universities (HBCUs) for their formal education, participated in civil rights marches and sit-ins, and fought racial injustices in the workplace within their communities. Following are stories from two of the participants that illustrate how family members shaped their views of their race.

Family members who attended HBCUs, for example, helped shape the participants' views of their race because attending HBCUs promoted the family members' own pride in their race through their support of colleges that primarily consisted of African American students, faculty, and staff. One study participant, Brandon, encouraged by family members' efforts to promote their race by attending a HBCU, went to a HBCU for his own undergraduate studies. His student experiences there were positive, and he consequently decided to pursue a career at a HBCU: "I started off my academic career at an HBCU, so that tells you something there. . . it's [race] important to me. . . .Race factors in because, for instance, I want to start my career at an HBCU. . .I feel like I'm going to be a part of a HBCU," Brandon asserted.

The strong influence that Brandon's family members had on shaping his positive view of his race supported his goal of academic achievement. He happily reported that he graduated from a HBCU with a B.S. in microbiology. Later, Brandon graduated from MSU with a Ph.D. in the biological sciences and is now a post-doctorate student and researcher at a major research university located in the Midwest. Brandon reported that he still plans on having a career at a HBCU.

Family members' participation in civil rights marches and sit-ins within their communities shaped another participant's view of her race. By observing her

family members' participation in the fight against racial injustices, Lucy (who is in her early 40s) received the clear and profound message that having pride in one's race meant participating in civil rights marches and other similar peaceful demonstrations as a means to overcome racial barriers and demonstrating to others a lack of tolerance for racial injustices. Lucy stated, "I come from a family of persons who were willing to step out and take a risk…it was experiences like these [civil rights activism] that shaped me into the Black woman that I am now." She further said:

> One of my earliest memories involved a community march for civil rights of Native Americans. . . .There was this state-wide campaign and they [family members] marched throughout different towns in the state. . . .When I was a small child, my aunts, uncles, cousins, my mom and dad, and my brother marched for freedom. . . .As I think back, I didn't even know what a Native American was.

Lucy stated that family members also took part in other civil rights activities such as restaurant sit-ins to show their pride in their race and to achieve racial equality:

> I also have a brother who is eight years older than I am; he integrated a restaurant when I was very young, but I remembered my mom pacing on the day that it was happening—pacing back and forth because my brother and a first cousin entered a restaurant where Blacks were not allowed to enter the White side.

Lucy's pride was evident when she reported that, because her brother and cousin sat down at the restaurant counter and refused to move, "the restaurant subsequently was integrated."

On another occasion, Lucy's family members demonstrated their pride in their race and their desire to fight against racial injustices by participating in a sit-in at a public library in their community. "I have another first cousin who, along with two other relatives, all cousins, integrated the public library." According to Lucy, prior to the integration of the town's public library, Blacks had to arrive at the library's back door, give a list of books they wanted to the clerk, receive the books, and then vacate the premises. She said that Blacks were neither allowed to enter nor browse in the library. "And what do you do in a library but browse?" asked Lucy.

Another of Lucy's family members, her mother, demonstrated her pride in being an African American by fighting racial injustices in the workplace. When she was a child, Lucy witnessed her mother being discriminated against because of her race. Until the time of her death in 2000, Lucy's mother "was the first and still only Black head nurse the local hospital ever had." Her mother was overlooked for promotions and was paid less than her White counterparts. "That was a way of life in our hometown," Lucy asserted. Lucy remembered her mother speaking out against unfair practices. "She was a fighter. She would go in and say, 'Look, I know so-and-so has the same qualifications I have and she's getting paid this amount'— there are no other characteristics that differ other than race," Lucy argued.

Lucy also remembered family conversations about the injustices her mother faced and the concern that nothing was being done to correct them. For instance,

Lucy stated that the hospital administration "would bring nurses in—she [mother] would train them because she was a sharp nurse, very professional." According to Lucy, everyone thought that her mother did an excellent job. Lucy's mother trained the new nurses, but it was the new nurses who were promoted to supervisory positions by the hospital administrators. Lucy's mother, in fact, consistently found herself in a position of being supervised by the very nurses she had trained. Lucy suggested that her mother's efforts to end the unfair treatment she confronted were an inspiration to Lucy and instilled in her an even greater appreciation for her race.

In summary, family members helped shape participants' views of their race by example. As shown in Brandon and Lucy's stories, many of the participants' early family experiences promoted and supported pride in their race. This sense of pride provided most participants with a source of inspiration and a motivation to overcome racial barriers and achieve academically as they encountered the challenges of graduate school.

Role Modeling and Dispelling Stereotypes

While pride in being an African American motivated the participants to overcome racial barriers and succeed academically, it had effects beyond individual achievements. Some of the study participants were motivated by their strong sense of pride in their race to perform well in their fields of study and be effective role models for other African American students to follow. Pride in their race also motivated them to be good representatives of African Americans generally. In this section, I present stories of three of the participants that illustrate how they came to

the realization that they should be good role models for other African American students. I also offer stories from two of the participants that illustrate how pride in being African American and the desire to be good representatives of their race motivated them to do well in math and science so that they could disprove stereotypes sometimes held by the general public.

Role modeling for the success of future students.

Brandon, Patrick, and Sally all wanted to be good role models for other African American students. To do so, they knew that they had to perform well in their chosen fields of study. Brandon was in a great position to interact with African American math and science graduate students because he was on a committee to help his department recruit and retain African American students. He explained:

I think it [being a role model for other African American students] reminded me in a way of another reason why I was here in graduate school—not just to get this degree, but that other students [African American graduate students] would benefit from people like myself finishing the [math and science] program and establishing themselves in a research institution. . .and then to help other [African American] students to achieve if they decided they wanted to do graduate school.

Brandon's desire to achieve and serve as a self-appointed role model for future African American graduate students to emulate motivated him to succeed in his doctoral program.

Patrick also wanted to be a good role model. He felt that gaining the respect

necessary to encourage other African American math and science students to perform well required that he excel in math and science. Furthermore, he felt tremendous pressure to succeed because he was the only African American Ph.D. student in his field of study on campus. Patrick maintained:

> As an African American, you feel you're not just working [performing academically] for yourself. . . .You feel like what you do is going to reflect on people [other African American math and science students] that come behind you. . . .Being a Ph.D. [student], you realize that you have some influence over younger people [African American students] who come to the university, African American students who visit the university, and they need somebody to talk to. . .you're that person, that only person. . . .And so you realize that you have some influence over them; and so to me, it [race] has to play a role, because of those facts alone.

Patrick admitted that, although being a positive role model for other African Americans math and science students was somewhat stressful, he felt privileged to be a successful graduate student whom other African Americans could emulate.

Sally also was motivated to perform well in her chosen field of athletic training because she worked directly with African American student athletes. Sally liked the fact that she was in the perfect position to serve as a role model for these students. Not only were she able to relate to the African American student athletes because she was an African American and a former athlete, she also was their professor. Sally made herself accessible to listen to their concerns and to meet their emotional needs. She could give advice and guidance to help them overcome

adversities that were connected with either racism or the stereotyping of African American athletes. She said:

> There are often privileges there [working at her college]. . . .I had an opportunity to work with African American athletes, particularly, on predominately White campuses. . . .They [African American athletes] don't see very many folks that look like us [African Americans] in the discipline. . .they go to practice, they have White coaches or there might be one Black coach. . .but it's sometimes difficult to go talk to the coach about issues they're facing with the team [issues related to race]. . .so as a Black woman member of the athletic staff, they can come and talk to me about issues of racism or feeling isolated or being the only one [African American] in their class. . . .Also, if they're a football or basketball player, then they have those other types of stereotypes that come along with being the 'dumb jock' type. . . .So my race and my gender privileged me [provided certain opportunities] and allowed me access in a different kind of way to those athletes, where they might not have had that [opportunity to confide in an African American professor who was also an athletic trainer].

As a proud "Black woman" member of the athletic staff at her college, Sally was in a much better position to serve as a role model for African American student athletes because they would be able to relate to her and respect her as a successful African American athletic trainer.

Pride in their race and the opportunity to serve as positive role models for other African American students to emulate especially motivated these participants

to perform well in their graduate school fields of study. They felt that their own successes would encourage other African Americans to succeed.

Dispelling stereotypes.

Two of the participants wanted to disprove stereotypes attached to African American abilities in math and science. These participants felt that, if they "raised the bar" and excelled in math and science, they would demonstrate the talents of African Americans to people inside and outside of the academy. Brandon, however, found that his sense of responsibility to dispel stereotypes could be a burden. He said:

> I certainly felt an obligation at this point [in graduate school] to do well in science. . . .I've always actually felt that. . . .Sometimes it's more of a burden than a positive feeling. . .although, I certainly feel proud of where I am now [a doctoral graduate], my potential to give back to the African American community [be a resource for members of his community—African Americans—to achieve], and by doing so is an intrinsic pride. . .that's what I intend to do. . . .That's what I would like to do. . . .And so, race is important .. . I don't ignore it.

Patrick also felt, at times, that his efforts to represent his race positively became a burden. He asserted:

> As an African American, you feel like you're not just working for yourself [in representing other African Americans academically]. You feel like what you do is going to reflect on people [African Americans] that come behind

you. You feel like you're carrying the load alone because I was the first

Black to graduate with a Ph.D. in _____ [his field] from Michigan State .

. . and so you feel that you have to carry yourself professionally . . . because

obviously these people [faculty and staff within his department] have not

dealt with African Americans before [on the doctoral level] . . . since I was

the first one to go through at the Ph.D. level. . . .And so they don't really

know what to think, how to act, whether to just treat me like just another guy,

and so you feel like you're representing not only yourself, but people that

come behind you [other African Americans].

Of the ten participants, only Brandon, Sally, and Patrick reported feeling a

self-imposed responsibility for helping to ensure that other African American

students achieve and disproving stereotypes. They also reported that their sense of

responsibility was sometimes burdensome. My analysis caused me to wonder

whether being one of a very small minority of African American math and science

students creates a particular kind of challenge for African Americans who strive to

set examples of excellence.

College Professors and Administrators: Providing Support for Success

It is no secret that college professors or administrators, regardless of their

race or ethnicity, play key roles in the academic success of African American

students. College professors or administrators often help students by providing them

with academic and/or emotional support. According to most of the participants in

this study, however, ethnic minority college professors or administrators were

especially helpful in providing them with guidance, advice, or knowledge that helped them meet their academic and career goals.

Several participants reported that ethnic minority college professors or administrators made extra efforts to ensure their successes, particularly if they attended predominately White colleges and universities. I present stories from several of the participants that illustrate how ethnic minority professors within the participants' departments or study programs provided the participants with support to achieve academic success. Then, I provide stories from participants that illustrate how ethnic minority college professors or administrators who held positions outside the participants' departments or programs provided the participants with support. Finally, I offer stories from participants that illustrate the supportive role played by African American faculty members at HBCUs.

Support from African American professors inside the department/program.

Delores asserted that an African American female professor within her department, who was also close to Delores in age, provided guidance, advice, and knowledge about how to complete her doctoral program:

> She really helped me by telling me what to do [when preparing for graduate success], what type of job I should look for, what type of salaries I should look for—things my advisor [White female professor] told me about; however, toward the end [of the doctoral process]. . . .She gave me the kind

of down and dirty [information] that I needed to get through [graduate school].

According to Delores, the information from this particular professor enabled her to complete the doctoral degree within four years. She also maintained that, although her White advisor did not thoroughly explain the doctoral process in the beginning stages of her program, she still considered her a good advisor.

Another African American professor, who also was close in age to Delores, helped her to plan her career as a college professor. Originally her master's study professor was a good role model for her because he exemplified success as the program coordinator. "Seeing him in that role [young African American faculty member] and his role as the coordinator of the program [master's degree program] inspired me to become a faculty member and coordinator of my program," Delores maintained. As a result of the impact of this professor, Delores is now a faculty member and program coordinator at a major research university located in the South.

This professor further supported Delores's success by informing her of some of the obstacles African Americans face on predominately White college campuses and providing knowledge about surviving in graduate school. "He was very realistic to me about the graduate school experience and some of the obstacles that Blacks face," she asserted. Moreover, he enabled her to gain research experience by including her in two research projects similar to the types of doctoral research she would conduct. She said that involvement in these projects gave her experience with and knowledge of the research process, and, consequently, she "came to like performing research."

Students sometimes call upon professors with whom they developed positive relationships during their undergraduate years for help during their graduate studies. By obtaining help from professors whom they already know and with whom they have worked, students can spend less time building student-professor relationships and more time attending to their academic work. Maintaining relationships with past professors has been particularly important for African American students, as illustrated in Sally's experiences.

Sally was excited when she discovered that her undergraduate mentor had accepted a faculty position at MSU because she knew that, if she was admitted into MSU for doctoral study, she would likely have her mentor's support during her doctoral work. Sally felt a connection to this professor because she was an intelligent African American woman who was extremely knowledgeable in her field of study and research area—athletic training. According to Sally, her advisor was the "main reason for my wanting to attend MSU." Furthermore, Sally and her mentor were both members of a primarily African American sorority, so they were connected as sorority sisters.

Prior to Sally's applying to MSU, she contacted her advisor for help in planning her doctoral studies. "She was extremely helpful from the onset in terms of my [doctoral] application . . . things I needed to include in my application. . . .She gave me guidance from before day one, and it really set the tone for me [completing the degree]." Sally sought out her mentor because of their previously developed mentor-student relationship and because she also knew that her mentor would be

helpful in providing her with the knowledge and support she needed to succeed in athletic training.

Support from other ethnic minority professors inside the department/program.

African American professors were not the only source of support for the participants. Other ethnic minority professors (non-African American minority faculty) also contributed to the participants' academic successes. Although not African American, other ethnic minority faculty members knew some of the potential pitfalls that ethnic minorities may face on predominately White college campuses.

Delores received support from an Italian professor during her undergraduate years. This professor was accessible and provided Delores with advice during evening hours. This particular professor was known for being sensitive to ethnic minorities who aspired to achieve. Delores said she was "one of those self-proclaimed liberals . . . who enjoyed having a Black student to advise . . . so she was always an advocate for me."

Lucy's professor and advisor, an ethnic minority female, supported Lucy with invitations to her home and assistance on certain projects. She also took Lucy with her to present at conferences and provided Lucy with opportunities to work on special projects. Lucy's advisor, however, showed her support of ethnic minority students quite differently than most advisors demonstrate their support. She was more demanding of them than of her other students. Lucy was not able to

understand the professor's rationale for being tougher on her ethnic minority students until her advisor revealed her intentions during an interview with a prospective faculty member.

Lucy's advisor asked the applicant what she would do to strengthen her abilities as an effective teacher. Not fully understanding the question, the applicant asked Lucy's advisor for clarification. In response, Lucy's advisor provided the following example: "If I were to say what issues I needed to work on, it would be that I'm harder on my ethnic minority students than I am on my other students."

Lucy believed her advisor's response could have meant several things. She could have meant that she was harder on ethnic minority students because she wanted them to know that they would not have it easy just because they were ethnic minorities. Alternatively, she could have meant that she was harder on minority students because she wanted to ensure that they succeeded. Lucy settled on the perception that the demands her advisor made of minority students were her way of challenging them to be better graduate students. Whatever the meaning behind her advisor's demands, Lucy knew that, as a minority student, she would have to produce quality work.

Lucy did not question her advisor's comment or intent because this advisor obviously supported her graduate success and the success of other ethnic minority students. Lucy truly believed that her advisor wanted her to succeed and went "well beyond the call of duty as an advisor" to accommodate minority students' needs. Since they had similar research interests, her advisor spent quality time guiding Lucy's research. She also formed a support group for students who shared research

interests relevant to ethnic minority issues, which allowed the students to receive feedback from each other. Lucy believed that the support from her advisor and student peers strongly impacted her success in graduate school.

The support provided by ethnic minority professors who were not African American often was instrumental in the academic success of the participants. These professors, because of their knowledge of or experience with potential barriers that ethnic minorities may confront on predominately White campuses, were able and willing to provide participants with guidance and knowledge that contributed to the participants' successes in graduate school.

Support from African American professors outside the department/program.

African American professors and other ethnic minority professors who are in the same departments or programs as African American students certainly play a key role in providing students with support to ensure success, but they are not the sole source of such support. African American professors outside of the students' departments or programs also have been known to help students by providing research opportunities or guidance to ensure their success.

For example, Delores said that she gained valuable research experience when invited by an African American female faculty member to participate on a research team with other African American students, even though the professor was in a different program and had a different research area than Delores's. The faculty member provided Delores with this opportunity because she wanted to make sure

that Delores had the experience of being part of a graduate research community. According to Delores, the professor's extra effort to include her on this research team made her feel a part of the academic community.

David also maintained that an African American faculty member outside his department provided him with support by spending many hours helping him to sort out his ideas for his dissertation research:

> I was struggling with this idea of the dissertation thing. Dr. Cannon [fictitious name] is a scholar in his own right and I met him at a party. . . .So I met him, and he immediately said that, from that moment on, he took an interest in my work, and an interest in me personally, in my development as a scholar and he would sit down with me and spend a lot of personal time [during the evenings]. . . .It was a good thing. He became a very good friend and mentor.

According to David, this African American professor took him "under his wing" after a party, provided him with the support he needed to sort out his ideas and possible approaches to maneuver through parts of his dissertation, and became his friend and mentor. This relationship contributed significantly to David's doctoral success.

Support from African American college administrators outside the department/program.

The support provided to the participants by African American faculty members was enhanced by the supportive efforts of African American college

administrators. African American administrators often approached the participants to ask whether they would allow the administrators to be their mentors or helped them to develop plans to meet their career goals. For example, David asserted that one of his primary mentors, an African American male, actually sought him out for mentoring purposes. "Dr. Retherford [fictitious name] selected me as his student . . . me!. . . .I met him before I came here [to MSU]. I was at the University of Kane [fictitious name] in one of the programs down there as a [workshop participant— fictitious name of title]." This administrator also was instrumental in David's decision to attend MSU.

Other participants benefited from African American college administrators who met with them on a regular basis to help them plan their career goals. While few students have opportunities to meet with high-ranking college administrators, even fewer have opportunities to meet with the president of the college or university ·they attend. However, Wilma was able to gain additional support by forming a student-mentor relationship with the African American male president of the college she attended for her master's degree studies.

Wilma said that she initially met and formed the relationship with the president in order to develop a mentor relationship with him. When that relationship developed, Wilma asked her mentor to "help lay out a plan" for her to become the president of a college. Thinking that she could bypass certain important steps and take an easier route to achieve her goal of a college presidency, Wilma asked the president whether she could become a college president without a Ph.D. His simple response to her inquiry indicated that he would not support this idea: "I will not be a

reference." She then asked if she could attend NOVA (a program in which a Ph.D. can be obtained relatively quickly through on-line computer courses). He again simply responded, "I will not be a reference."

The president indicated that, in order to receive a recommendation from him and gain respect from scholars, Wilma needed to obtain a Ph.D. from a creditable university with a quality Ph.D. program. Once Wilma agreed to attend an institution with a quality program (MSU), he agreed to help her plan her chosen career. Wilma stated that her president/mentor spent many hours helping her decide which program and courses would best prepare her for a college presidency.

Wilma liked her mentor's honesty regarding her weaknesses and strengths. Sometimes he would make comments such as "Wilma, you messed up on this [particular piece of work she submitted to him]." By forming a close relationship with her college president and mentor, she was able to gain valuable and honest input, information, knowledge, and support about how to become a college president, which motivated her to succeed in graduate school. According to Wilma, the supportive relationship with her mentor enabled her to become president of a college located in the South.

Support from African American professors at HBCUs.

Students who attend Historically Black Colleges and Universities (HBCUs) tend to have positive educational experiences because these institutions generally have a greater number of African American college professors, administrators, staff, and students with whom they can relate. HBCUs provide African American students

an environment in which they feel engaged, connected, accepted, encouraged, and supported (Fleming, 1991; Green, 2000). The participants who attended HBCUs for their undergraduate study concurred with this assertion. They maintained that college professors at the HBCUs they attended provided them with social skills, helped them plan their academic and career goals, and served as positive role models who encouraged them to have a sense of pride and assuredness that, as African Americans, they could and would succeed.

These participants believed that some of their most positive educational experiences occurred during their time at HBCUs. For example, Wilma reported that she was able to gain support socially, academically, and professionally from her undergraduate college professors:

> I feel like I got a very, very good grounding in terms of my academic
>
> background; but also, there was an emphasis on teaching us the social skills
>
> and setting a standard of excellence because the professors at Commerce
>
> University (fictitious name) felt that they had a role in producing the leaders
>
> of the future.

She felt supported in particular by one sociology professor at Commerce University who invited African American students to her home, fed them, and spent a considerable amount of time helping them plan their educational or career goals. This support motivated Wilma to pursue her graduate studies.

Brandon, who majored in the biological sciences, asserted that his undergraduate college professors at a HBCU served as role models, which

encouraged him to perform well in the sciences and have a sense of pride in his college. He said:

> It was not unusual to see African Americans as professors. . . .So I don't think I ever questioned whether that was something that I could do [succeed in his undergraduate science courses and become a college professor/researcher]. . . .Now, if you want to say that means that having a role model, someone to look to who's in that field [the sciences], helps you overcome issues that you may have had with self-esteem or saying 'Could I really be this?' I don't know. . . .I don't know what would have happened, for instance, if I would have gone to a majority school as an undergrad where there were no African Americans in science, in my micro [microbiology] department. I don't know if that would have made me question whether I could do it [succeed in the sciences]. So the only perspective I have is the perspective that I came from, which was everybody in my biology department was either African American, African, Asian, or Indian [Middle Eastern Indian]. But the majority [was] African American.

Brandon experienced special commitments to students from his undergraduate professors. He explained this by taking the professors' points of view:

> HBCU. . .there's more of an emphasis on well, how do you relate to students, because you're going to be in the classroom, you're going to be teaching, and we're a small university, we pride ourselves on turning out [graduating] students who are capable and ready to perform at the next level, be that graduate school or going into the workforce.

Therefore, the message that Brandon received from his college professors, through their role modeling or verbal expressions, was that he could succeed in the sciences. He claimed that the thought that being African American would hinder his success in the biological sciences never entered his mind. Furthermore, one particular African American professor's role modeling made such an impact on Brandon that he decided to undertake his doctoral studies at MSU, his professor's alma mater.

African American Student-Peer Support

When African American students meet and interact, they can provide one another with social and academic support, information about the availability of financial aid to meet student financial obligations, and perspectives related to academic achievement. The participants believed that these types of interactions enhanced their learning experiences. When they met and interacted with their African American student-peers, they discovered common social interests that made college life more enjoyable. I offer participants' stories illustrating how meeting and interacting with student-peers provided a means to meet their social and information-gathering needs.

Delores maintained that her interactions with African American students from other universities helped her overcome her loneliness. Since there were no other African American students in her particular doctoral program with whom to discuss issues related to graduate school, she often felt lonely. This feeling began to change when she was given the opportunity to host African American students from

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various colleges and universities at a conference co-sponsored by her department. She said:

> My race allowed me to do some things [i.e., host African American students attending the conference] just because I was Black, because they [college professors] wanted to say, oh we're conscious and we support minorities . . . and so that gave me some leeway to do certain things [meet and interact with other African American students] that maybe other [non-African American] students wouldn't be able to do. . . . I met other Black students from other universities during a conference that was co-sponsored by MSU, the University of Iowa, and Penn State . . . not realizing [initially] that these students were African American until they arrived in a van at my apartment, I was surprised to see several Black students unload out of the van and the other students and I started screaming [with excitement] once we all saw one another. . . . I had fun the entire time they [African American students] were at the conference. . . . I want to be around Black people . . . I want to know Black people . . . I want good things to happen for Black people in general.

Delores further stated that being asked to host students at the conference made her happy because such experiences allowed her to develop long-lasting friendships and networks that contributed to her success in graduate school and as a scholar. For example, at the conference, Delores and another Black female graduate student formed a relationship. A year later, they presented together at another conference, which added to Delores's scholarly accomplishments.

Odessa reported that she, too, often felt alone because she was the only African American in her particular program of study. Consequently, she began meeting and building relationships with other African American students within her department, though not in her program, and outside of her department to gain academic and social support. Odessa maintained that she was unable to interact with her White peers because the White students in her department did not share relevant information that would assist her in her coursework. Often, these students did not invite her to participate in study group sessions. She said that, although she tried to form student relationships with them and tried to discuss various course curricula or assignments, they were not willing to include her in their study sessions. In contrast, the African American students in her department often supported one another by discussing which classes to take and sharing information about homework assignments and financial aid opportunities such as scholarships and graduate assistantships. She also found support as a member of Black Graduate Student Association (BGSA). The friendships Odessa formed with African American student-peers in her department and in BGSA assisted her in meeting her academic, social, and information-gathering needs. This support impacted her success in graduate school.

Brandon also suggested that meeting and interacting with other African American students in BGSA provided him with information that influenced his success in graduate school. Brandon joined BGSA to fulfill his social needs and to meet students from other disciplines who could provide him with different perspectives on current events and other issues. He further maintained that he liked

to "be around" (socialize with) BGSA students because they were all close in age and shared experiences involving racism and discrimination. These commonalities made it easier to relate to one another, which opened the lines of communication. Brandon said:

> I got a chance to hear some of the struggles from a financial stand . . . and how they [BGSA students] have had to patchwork [gather] funding sources and things like that. . . .For them, it wasn't a given that they would have funding from year to year. . .and in the sciences, as long as you make the transition from year one to your advisor's research plan, which generally happens, you're funded as long as your advisor has funding. . . .[Also] BGSA helped me to maintain a grounding outside of the research world that I felt I needed. . . it [BGSA] also helped me maintain connections and develop connections with graduate students who were going through the process outside of sciences, because there were very few Blacks in the science degree programs here. Most of them were in other programs, in the social sciences, that kind of thing. If you didn't have some kind of way of connecting with them [African American students outside of the sciences], as someone going through a science program, you probably would never meet them. BGSA helped me to connect with them. And I didn't know at the time that it would be useful for me to be connected with people outside of science who were going through graduate programs here. But it was really nice. So outside of microbiology that [meeting other African American graduate students outside of the sciences] was the other piece that I think was a really good influence

on me. . . .I developed relationships with Black graduate students that I'm

almost certain I would not have developed had I not been a part of that

organization [BGSA] because I would have never known that they existed.

We would have just seen each other walking along this huge campus, and we

wouldn't have had a way of knowing that the other person was in a graduate

program. Yes, those relationships were very necessary relationships. . . .I

met a lot of people that I wouldn't have met, and I was able to get their

experience of graduate school from a non-science perspective, because they

went through a different program. Their time to degree is different [amount

of time to receive degrees]. Some of the things that they have to do are

different. Even the way they think and process information is different, in a

way, from the way sciences do things. It was good to start to see that then

because I've learned that as a science major, if you limit your circle of friends

to sciences, then your perspective and your world view is obviously colored

by that [science perspective], and I think it's colored to your detriment. One

should be required to develop a circle of friends outside of the scientific

community, in my opinion. And BGSA provided that, because like I said,

most of the graduate students in the program [BGSA] were not in the

sciences.

According to these participants, meeting and interacting with other African

American students through activities such as conference participation or joining

BGSA enabled them to not feel alone, to meet academic, social, or information-

gathering needs, and to gain different perspectives on various issues or concerns pertaining to the success of African American graduate students.

Minority-Based Financial Aid: A Resource for Student Success

The academic success of some African American students often is supported by the opportunity to receive minority-based financial aid. Because they were African American, two of the participants were eligible for minority-based financial aid, which paid for their college tuition and other college-related fees and contributed to their success in graduate school. Following are stories that illustrate the benefits of receiving financial aid.

Patrick, whose discipline was computer science, explained:

One of the fellowships I had was just for minorities . . . so obviously the fact that I was a minority was a good thing, in order for me to compete for this fellowship. . . .So in that sense, that [minority-based fellowships] was something that helped me succeed, by obtaining a fellowship.

James, whose fields were math and education, also asserted that being African American enabled him to compete for a minority-based fellowship, the "Minority Competitive Doctoral Fellowship." This fellowship was offered to outstanding ethnic minority students who maintained a high G.P.A. (grade point average), and who wanted to become faculty members of a college or university. The fellowship paid for six credit hours of tuition and allowed for additional funding for nonacademic (i.e., living) expenses. "The only thing I had to do was just go to school," he said. James further commented that he was fortunate to receive this type

of fellowship because he did not have the concerns about financial expenses that worried some of his colleagues who did not have sufficient financial aid.

Some people might argue that fellowships are not as beneficial to student success as graduate or teaching assistantships. Fellowships do not encourage students to engage in department activities or interact with other students or professors inside or outside of their departments, unlike teaching or graduate assistantships. However, these participants were strong proponents of minority-based fellowships because they said that they were able to spend more time studying and participating in lab activities, which was crucial to their success in math and science.

Although Brandon did not report receiving minority-based fellowships, he did provide a commentary about how colleges and universities could dramatically impact minority graduate student success through the use of minority-based financial aid or other types of funding:

> Making sure that there is ample funding available to retain African American students and [other] students of color . . . for us [African Americans], that's an issue. I don't know in the coming years how much of an issue it's going to be compared to majority students; but in the past it's been an issue, and it's been an issue that has been unequal. The majority students in the past have had an easier time financially getting through [graduating], if for no other reason than they got more fellowships, or even if they didn't get a fellowship, they have better access to family funds or personal funds . . . easier for them [Whites] to take out student loans, whatever the issue. But institutionally, just creating an

environment that's more assertive in its efforts both on the level of colleges and then departments to say "hey, we're going to put resources [financial assistance] here," this is important to us [African American students] to not be passive; to not be passive in terms of helping to shape the face of our department . . . as students [to increase the African American graduate student presence].

Although Brandon did not receive minority-based financial aid himself, he nonetheless felt that it was a valuable resource in recruiting and retaining African American graduate students. For some of the participants, receiving minority-based financial aid contributed to their academic successes. The fellowships eased the financial burdens associated with the high cost of graduate education and permitted participants to focus on their studies.

Turning Potential Barriers into Motivators for Success

Some scholars have argued that when racial barriers and stereotyping are present, it is often difficult for African Americans to overcome those racial barriers and stereotypes and move forward to achieve their desired goals. However, some of the participants in this study would "beg to differ." Even when racial barriers were present, the participants were able to overcome them and accomplish their objectives. Because these participants have conceptions of themselves as "strong African Americans," they believed they could succeed no matter the circumstances. Most participants, in fact, used potential or present racial barriers in ways that motivated them to succeed. Following are stories of some of the participants that

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illustrate how they overcame potential racial barriers and turned them into motivators to achieve their goals.

When Delores's high school math teacher heard of her interest in going to college, she told Delores that she "would never make it in college." Delores said that her teacher implied that, since Delores "was not good at algebra" and "was not serious enough about school," she would not succeed in college. Delores was surprised by her teacher's comment, but she thought to herself, "I don't want anybody 'White' to say that I couldn't do it [make it through college]." Not only did Delores take her teacher's comment to be personally offensive; she also thought that it could be racially motivated. Consequently, she decided to improve her performance in math to the level required for admission into college. Developing such motivation ultimately contributed to her success in graduate school.

Lucy reported several encounters that caused her to turn potential racial barriers into motivators that helped her achieve her goals. For instance, Lucy's third-grade teacher stereotyped and discriminated against Lucy because of where she lived. Lucy recalled being questioned about this by her White teacher. The teacher wanted to know whether Lucy lived in _____ [a community where several wealthy Blacks lived]. When Lucy replied, "No, I live in _____ [an urban Black community]," Lucy maintained that the teacher's entire behavior toward her changed. This caused Lucy to feel that she lived in the "wrong community."

Reflecting on that incident, Lucy jokingly said, "I was from the wrong side of the tracks." Lucy then stated that the teacher was unaware that Lucy's parents deliberately chose to reside in that community because they wanted to own more

land and still live in a nice house. "She made assumptions [stereotypes] that if I

didn't live in _____ [the wealthy community], we couldn't live there," Lucy

suggested. "She didn't know that we could have lived there [wealthy community],

but it was a choice that my parents made." Although the community where she lived

"was considered one step away from the 'hood,' [lower income community

consisting primarily of African American families] with no paved streets," it was

where her parents wanted to reside.

Ironically, several of the children who lived in the wealthy Black community

"ended up on drugs, or ended up doing some really outrageous kinds of things,"

Lucy revealed. Despite these children's involvement in drug use and other

unacceptable behaviors, Lucy reported that some of the teachers seemed to have

more respect for and better relationships with them than with the students who lived

in urban communities.

Lucy, however, did not allow her teachers' biases and prejudices to

negatively affect her educational progress. She was determined to show these

teachers that she would succeed, despite where she lived. She recalled thinking to

herself:

> So you think I'm not worthy and I'm not a good student if I don't live in the
>
> right community—I'll show you. . . . You may knock me down, but you can't
>
> keep me down. You may make judgments about me when I walk in the door
>
> because you see a Black female, but then I have an opportunity to prove your
>
> [negative] assumptions wrong.

Lucy's determination to overcome the stereotypes she confronted motivated her to become a pacesetter. She recalled, "I was the first Black cheerleader at my high school; not only that, I was also the first Black head cheerleader [of her high school]."

Another racial incident that motivated Lucy involved her undergraduate college professor. She reported that, despite legislation that required public state colleges and universities receiving state funds to increase their minority student enrollments, one of her undergraduate college professors still resisted minority recruitment efforts. Lucy said that he did everything in his power to ensure that minorities did not succeed. He said to her directly, "We may have to let you in, but we don't have to let you out."

Lucy also overheard this professor say to another faculty member, "You have to let minorities in? Oh okay, make it easy for them? I'm not going to do that. We can let them in, they can come to our classes, but they've got to fend for themselves and we're not going to be supportive, we're not going to try to help." Lucy, however, was determined not to let this professor hinder her educational goals. Similar to Delores's experience with her algebra teacher, she decided to channel her professor's negative energy into a motivation to succeed.

Lucy encountered other racist incidents when she was a school administrator during an early stage of her career. She said that, on the first day of school, she became aware that there were two Black administrators—Lucy herself and another woman. The head administrator (Lucy's supervisor) was a White male. He offended

her, to her face, with racial insults. He told Lucy that he recruited her because he wanted the other Black female administrator "to have a playmate, and I fit the bill."

Lucy said that the head administrator made no attempt to hide his prejudices, which he exhibited through racist behaviors on a daily basis. For example, one day he suggested to Lucy and the other Black female administrator, "You got to run on down to the cafeteria because they have watermelon today." Lucy reported that this type of racist and condescending behavior from the head administrator went on for several months until a group of school staff members complained to the proper authorities about it. As a result, he was removed from the school. Fortunately, these experiences did not hinder Lucy's zeal for success. In fact, they motivated her to achieve.

Lucy reported yet another experience involving racism, this time with a White male coworker. After proving her administrative competence and skills, Lucy was promoted to the position of head school administrator at another school. She said that she did not even apply for this position. She was approached by school district officials and asked whether she was interested in the position and, if offered it, whether she would accept.

Lucy thought about the position for a few days, then accepted the offer. Shortly thereafter, the White male coworker asked Lucy if he could visit with her and take a tour of the school. Lucy gladly complied with his request. During the school tour, however, the man said to Lucy, "You know, you only got this position because you're Black." Lucy said that his comment surprised her. However, she quickly resorted to her numerous previous encounters with racism and boldly stated:

"Well, after hundreds and hundreds of years of us [Blacks] being overlooked for jobs that we were qualified for, it's about time." Lucy maintained that "Those things stand out in my mind. That was in 1992; however, it stands out in my mind as if it were yesterday." Lucy concluded by saying, "All of those experiences, along with many others, have shaped who I am as a Black woman."

Wilma also battled potential racial barriers throughout her life. She, too, refused to let these barriers stand in the way of achieving her goals. She reported two experiences that she encountered within the community where she attended high school. She laughed quietly as she spoke:

Ask me if I experienced racism, I'd say, "Yes, you better believe it!". . .Beginning when I was in high school, one of the things that sort of hurt me the most was that I was the first African American from my hometown to make the honor society. . . .Now, you ask me, "Why did it hurt?". . .I'll tell you; it hurt me because of the way it happened.

Wilma recalled that, prior to her acceptance in the honor society, every student (all White) in her sophomore class had been accepted as an honor society member except a Hispanic male (who is now a judge in Wilma's home town) and herself. Her parents went to the school to inquire why Wilma was not chosen as an honor society member. The administrator of the school said, "Well, she's not in enough leadership activities and groups—because there are seven leadership things you have to do."

After receiving this explanation, Wilma maintains that she participated in every organization that existed and ran for several offices. As a result of her

persistence, she said that she finally received acceptance into the honor society her junior year. She added, however, that she eventually discovered the administrator's true reason for excluding her and the Hispanic student from the honor society. It was that the administrators "had not figured out how we [she and the Hispanic student] would be able to stay at hotels during the conference." She said that this was back in 1972 and 1973, when many hotels still did not welcome minorities.

Wilma reported another incident in which she overcame a potential racial barrier and turned it around to achieve her goals. In her junior year in high school, her band director talked to her about becoming the drum major. When the community learned of Wilma's interests and intentions to become the drum major, they were totally against it. She said that this instance, too, occurred when it was not acceptable for a Black to serve as drum major.

Although initially challenging, the obstacles Wilma faced did not deter her from accomplishing her goals. After graduating from high school, Wilma stayed focused on her goals. She was determined to find a way of accomplishing her educational goals, regardless of the obstacles she encountered along the way. Thus Wilma asserted:

> You have to be clear about how you're going to approach it [racism]. What's your worldview, and when certain things [racial barriers] occur. . .because of who you are, your race, how you're going to deal with it. I think that becomes important. And I think it becomes very important knowing that there are going to be hurdles because you are African American. You have to

have something within you that helps you to [remain] determined and motivated to achieve in spite of things deterring you from your goals. So you have to somehow figure all those things out [how to effectively overcome obstacles to achieve success].

Based on the analysis of the data, the participants were able to overcome obstacles and barriers presented as a result of their race and move forward to achieve their goals. These participants held positive self-perceptions as "strong African Americans" who could succeed regardless of the difficulty of circumstances. Moreover, since the data indicate the competitive nature of most of these participants, I would argue that their competitiveness motivated them to strive even harder to reach their goals. Exemplifying tenacity in reaching their goals, they were motivated to overcome potential obstacles.

"Just Dealing" with Racial Barriers

Overcoming racial barriers that hinder goal achievement requires great tenacity or determination from ethnic minorities. Some participants, however, were not able to turn barriers into motivators for their success. One reason some participants were not able to overcome racial barriers was their young age, when the power or knowledge with which to overcome racial barriers had not developed. Following are stories that illustrate instances in which the participants could not change their situations when racial barriers were present. Consequently, they just had to deal with those barriers as they strived for success.

For example, Kimberly related how she frequently was excluded from certain swimming functions because of her race. She was on various swim teams throughout high school, and one of the best swimmers, but often she was not invited to the celebratory occasions, even though all the other participants, who were White, were invited. She attributed her exclusion by those in the swimming community to racial discrimination and intimidation:

I found that I could be very intimidating as an African American female swimmer because first of all, they didn't live around us [Blacks]. . . .They never saw us. And then for me to have the nerve to be a Division I swimmer standing next to them [Whites] in a major meet—in the lane that is faster than theirs—just intimidated them.

Kimberly further reported that other swimmers often came up to her on the day following a particular reception or party to ask if she had attended, knowing, since they attended the event themselves, that she was not there. She felt that she often was not invited to various celebrations, receptions, or parties because she was Black. She also maintained that, although some African Americans might not have been able to handle discriminatory acts such as this, her many encounters with racial discrimination taught her how to deal with this kind of behavior.

Lucy, who has been able to overcome many racial barriers, explained how overcoming racial barriers were sometimes impossible. For example, she grew up in a very small town in a southern state. "The town was known historically and nationally for having a large red sign at both entrances of the county displaying a picture of a Ku Klux Klansman on a horse in full regalia—white hood and white

robe." She stated that the signs in her town read: "KKK Welcomes You To

_____." "I grew up knowing [about the racial discrimination/bigotry in the

town] and I don't even know if I ever saw the sign or if they took it down before I

was even born, but historically we [our town] were known for that [racial

discrimination/bigotry]," Lucy maintained. She reflected on these experiences and

said, "I should not be able to easily remember this [racism] in my childhood; these

are the types of experiences that should not be in my distant memory."

Although the "Welcome Sign" of the KKK might have been removed prior to

Lucy's birth, the overt racial discrimination that lay behind it existed well into her

youth. Passed from generation to generation, the town's strong and overt racism had

been ingrained in the minds of many who lived there. Because of her age and

inexperience in fighting against racial injustice, Lucy could do nothing but live under

those circumstances, at least until she was old enough to move out of the town.

Sally has struggled throughout her life with the fact that, no matter how

hard she tried to "blend in" and be accepted in different environments or groups,

she still stood out because of her race. She found it difficult to just "blend in" like

everyone else. She said that at times, particularly during her early school years,

"blending in" was crucial to her social development. It was not until her

undergraduate years, however, that she came to the conclusion that, as an ethnic

minority in America, she would never "blend in." She argued, "Regardless of what

you do, you will stand out. So if you're going to stand out, you might as well

make sure that what you're doing is good and positive…[especially]…when we're

the only one in the classroom."

Another perception associated with race that Sally became cognizant of was the belief that "African Americans often have to work twice as hard and do twice as much to succeed," regardless of their level of education, credentials, or community status (suburban residence). She said:

I'm very much aware of who I am as an African American woman. I am a certified athletic trainer and educator. . .so I have an understanding of the intersection of gender, race, and ethnicity. . . .I recognize that I am privileged in many ways and also discriminated against simultaneously. . . .I'm sitting here as a Black women with a doctorate who is working at an institution of higher education. . .and I know with that comes a responsibility that I can't take lightly. . . .I also know that I'm living in a predominantly White community and regardless that I have Ph.D. behind my name. . .that they're [non-Blacks] just as likely to call me the 'N' word, regardless. . .and those kinds of things are real salient. . . .It [race] is important.

Sally's race and her racial identity are very important parts of who she is and her concern for the well-being of the African American race. She nonetheless realizes that, even though she must work harder than most to succeed, others will likely view her negatively because of her race. Thus, since she cannot do anything about the way people often view African Americans, she can only do her best to ensure that she presents herself in the most positive manner.

There were other instances when the participants could not do anything about racial discrimination or stereotyping, but rather just had to deal with those situations as best they could. For example, both Delores and Odessa had difficulty in overcoming negative or unfair perceptions others had of them. Although the

participants did not have any control over people's beliefs and values, they still tried to dispel, by their actions and words, stereotypes and misperceptions of African Americans.

During some classes, for example, Delores found herself trying to help her professors and classmates understand that, as an African American, she could not speak on behalf of all the African Americans in the world. Although there were times when her professors discussed minority issues in class, Delores was troubled that they rarely elaborated on many issues and their complexities. Therefore, she often attempted to explain the issues from her point of view to broaden the thinking and understanding of her classmates. However, by offering her opinions, she faced another challenge because she then became viewed as an "expert on minorities." In fact, Delores said that when she discussed some of her experiences as an ethnic minority, the professors and the students often became quite engaged and wanted her to tell them "everything she knew about minorities." She explained to them, however, that she could only report on her specific experiences and that they must realize that some of her experiences differed from those of other African Americans. The task grew increasingly difficult. She finally gave up and just hoped that someone actually understood her intentions. She realized, however, that she could not always change people's minds and just had to move on with trying to meet her goals.

Delores's concerns about the misperceptions that non-African Americans have of African Americans were mirrored in Odessa's struggle with Whites unfair portrayals of African Americans, or how they "put all African Americans in a box,"

as she described it. She said that as a "Black female" her race and her racial identity are very important to her. Because she is a "Black woman" who has overcome many obstacles, at times, Whites' views of her role as a Black woman have been very discouraging. She asserted:

When they [Whites] see an African American woman. . .coming in the doctoral program, the faculty members want people of color, particularly Black people to come into this [Ph.D.] program, but they want a White perspective. . . .They see me as a strong Black woman who can easily adopt the White perspective. . .and I don't agree with that. . .I can't have a White perspective, I'm a Black woman. . . .So I think the face [Black presence] is sometimes nice to them [White faculty], but if we [Blacks] don't have their perspective, then that could cause a problem. . . .I think that my race is the first thing that people see when they see me. . . .Some people have said in my department that they don't see color....I want them to see color, because a Black woman is what I am. . .and it's very, very, very important. . . .I don't like it when people have the assumption that goes along with being Black [needing to be strong]. . .but I think that it's very important to know, however, that has gotten me into a lot of trouble because, although race is important, some people say that they don't see color. They just see gray, and, as a result, I have challenged them on making such a statement.

Odessa stated that her race and racial identity played a significant role in how she felt about who she is as a person and in how she has been viewed by others. Others' expectations of her as a "strong Black woman" provided experiences that interfered

with her learning. She felt that she could not change others' perceptions of her, but just had to accept and deal with them.

The majority of participants related experiences in which they were able to overcome racial barriers. This was not always possible, however, even for participants who overcame racial barriers in a variety of situations. In most of these instances, the participants confronted stereotypical views or racist behaviors that they were unable to change. The participants dealt with them as best they could and moved forward with accomplishing their desired goals.

When Race Was Not a Salient Issue

Nine of the ten participants reported that race played a significant role in their experiences and academic successes in graduate school. There were, however, a few instances when race was not a salient issue in the participants' experiences and achievements. Following, I present stories that illustrate how issues unrelated to race played larger roles in their particular experiences and academic successes.

David, for example, reported that, although he is proud to be an African American, he believes that "race is over-generalized" and that people tend to overemphasize it. For David, social class has been a more salient issue than race. David reported that his lower income background, when compared to the middle-class background of most college students, made social class the important issue in his experiences. Thus, he suggested that a person's race is not a primary concern to him. He would rather "look for ways to help people like himself, who are at the bottom of the [economic] ladder."

David maintained that, prior to receiving his doctorate, some of his peers and coworkers often thought of him as lower class. Now, with his Ph.D. in hand, some of the same individuals say to him, "Oh, you're a member of the elite class now." David argued, though, that he is a "human being" whose community is more important to him "than a doctorate degree." He implied that the degree is important but nurturing human life is more so.

He said that he realizes that there are racists everywhere. He realizes, as well, that there are good and evil persons in all races. However, he expressed a concern that African Americans and other ethnic minorities often polarize around race and discuss race to the point that they have allowed themselves to become oppressed by it. David maintained that another type of oppression exists that is not salient to the general public, regardless of race, which he called "oppression by class or social economic status."

David suggested that ethnic minorities, especially African Americans, have become "complacent in their own oppression because once they achieve, or arrive at a higher socioeconomic status, then they tend to indirectly oppress the less fortunate." For example, he maintained that most Blacks who achieve higher levels of income move away from their old neighborhoods and shop at higher-priced stores, behaviors that reflect wealthy lifestyles and success. Once this happens, David continued, "their identity becomes one of elitists"—they no longer support the Black urban community.

He recalled another experience of oppression because of class or socioeconomic status. He said:

The first time I went to school with both White and Black students who were privileged [middle-class to wealthy], I just didn't think I fit in. . . .My family was very poor and so it was just very hard. . . .I just felt left out because I didn't have clothes like they have. . . .That was difficult.

David maintained that, although he is proud of his Black culture and identity, in his opinion, race is overrated because his parents taught him to treat everyone equally, regardless or their race or ethnicity. He said that, instead of focusing on race, people, particularly African Americans, need to address socioeconomic oppression and its impact on people's lives, especially those of children. He implied that he could identify with socioeconomic oppression more than he could with racial oppression because of his early school experiences. He restated that going to school with children who came from wealthy backgrounds was very difficult for him.

Patrick and Brandon are very proud to be African American, and they acknowledged the positive and significant role race has played in their life and graduate school experiences. They also asserted, however, that issues unrelated to race sometimes were more salient in their graduate school experiences in the math and science disciplines. Race was not an issue because of the objective nature of math and science. As Patrick stated, "either you know how to solve math or science problems, or you don't." Patrick and Brandon contended that race is more related to subjective issues, but academic achievement in math and science is associated with objective skills that are the criteria for problem solving and measuring success. Patrick said:

In terms of just doing the work yourself [math and science], I mean I don't know if it [race] matters. I mean I think that, hey, you have to know how to do mathematics. I don't know whether the fact that you're Black or White has any relevance or whatever your racial background is, I'm not sure that, you know, that's relevant, you just need to know how to do mathematics; you need to know how to write computer programs, and you need to work hard and be good at this. So in terms of academics, I don't think that the racial part is a defining factor.

Patrick also claimed that he has "never experienced racism or unequal treatment" in the sciences' programs:

Math and science are not subjective—either you know the material or you don't. If you know how to solve the math problems and get the correct answers, for instance, professors don't have the liberty to grade you incorrectly. . . .All you have to do is check your work, and if they are grading you incorrectly, it will be noticeable.

Like Patrick, Brandon stated that issues of race or racism were not present in his department. He said that the department's professors, students, and staff always treated him fairly. As a result, he had no concerns about being stereotyped or viewed differently than other students in his department:

It's difficult [to experience racial problems] in science, though, because color supposedly is not something that people deal with. . . .Science is supposed to speak for itself. . . .It doesn't matter what color you are. . . .What really matters is how engaged you are in the research that you do.

James, too, reported that he did not experience racism within his particular department or field of study. He said:

The issue of my being a Black student in the Department of Chemistry never came up. . . .I mean, I was perfectly aware that I was Black, the three of us [other ethnic minority students], we were minorities in the department. . . .And I don't feel like that, as a minority, there should be special consideration, or treatment; and maybe that's why I never thought about it [racism or issues connected with race]. . . .I never felt like I needed any special support; but then, the issue never came up.

James further stated that he never "played the race card [using race to achieve]." According to him, his self-determination and hard work were the most salient issues contributing to his success.

Based on the data analysis, some of the participants did not experience race as the most salient issue in their experiences. For one, socioeconomic status was the most important. For the others, the nature of the math and science disciplines and self-determination and hard work often were more important than race. Interestingly, the three participants who were either in math and science disciplines or took coursework concentrated in them claimed to have no experience of racism within their departments or discipline area.

Conclusion

Several scholars have argued that race plays a significant role in the experiences of African American graduate students because it raises many barriers to success, such as racist behaviors or actions (Anderson, 1994; Haymes, 1995; Lusane,

1997; Turner & Myers, 2000; West, 1994; White, 1984; Willie et al., 1991).

Contrary to this contention, nine of the ten participants in this study revealed that race played a positive role in their doctoral student successes.

Race played a positive role in the participants' graduate experiences in six key ways. The positive perceptions and the importance of their race to the participants positioned them to overcome success-hindering racial barriers they might confront. The participants' family members, through their actions and encouragements, shaped the participants' views of their race and provided examples of ways to resist discrimination. Pride in their race motivated the participants to succeed in their fields of study so that they could serve as both positive role models for other African American students and as good representatives for their race by dispelling stereotypes. Ethnic minority college professors, administrators, or student-peers provided them with support to succeed in college. Minority-based fellowships helped to pay tuition and other college-related fees and allowed those participants receiving them to concentrate on their studies. And, finally, the participants used racial barriers as motivations to perform well in their fields and achieve their academic goals.

Although race played a significant and positive role in most of the participants' experiences, a few experienced incidents in which race did not contribute to their successes in graduate school. When confronted with racial barriers about which they could do nothing, these participants simply dealt with them as best they could and moved on. Moreover, race was not always the most salient issue in certain of the participants' experiences. Issues unrelated to race, such as the

objective nature of math and science disciplines or self-determination and hard work,

were more important in those particular experiences.

Chapter 6

How Participants' Experiences in Their
Departments/Disciplines Impacted Success

Introduction

Previous statements from participants have indicated that they were supported in

attaining their academic goals by professors, both African American and of other

ethnic minorities, who were in the participants' departments or disciplines. African

American student-peers, when they were present in participants' departments or

disciplines, also provided support for the participants' successes. Based on the

interview data, the participants encountered other experiences, often within their

disciplines or departments that impacted their graduate school successes.

The positive experiences varied in nature. Some participants gained a sense

of acceptance and inclusion in their departments by being actively recruited or being

asked to participate in various departmental activities and events. Permission from

advisors or department heads to enroll in dual departments, which helped

participants meet their educational and career goals, was another positive experience.

Some of the participants attributed their positive experiences in part, to the strategies

they used to ensure success in their doctoral studies.

It is important to note that non-African American student-peers and college

advisors positively impacted the participants' doctoral successes. Many of the

participants' positive experiences involved support and guidance from White

student-peers and advisors who were in their departments or disciplines. In this

chapter, I address how these student-peers and advisors gave the participants

academic, emotional, and/or social support that contributed to their successes in graduate school.

Not all of the participants' experiences were positive. Negative experiences included difficulty in completing their programs within the allotted time and taking on course overloads to speed up degree completion. Difficulty in narrowing their research projects, the lack of political knowledge to maneuver through doctoral study, and insufficient financial aid to meet college and living expenses were perceived as negative experiences. Other negative experiences involved obstacles associated with comprehensive examinations and meeting committee members' research expectations. However, these negative experiences generally were outweighed by positive experiences.

Following, I present participants' stories that illustrate how their positive experiences contributed to their successes in their doctoral programs. I also discuss how the participants' negative experiences affected their successes.

Feelings of Acceptance Lead to Success

Some scholars have argued that doctoral students who feel accepted or included within their departments are more highly motivated to persist in completing their degrees when compared to the motivation of students who do not experience these feelings (Girves & Wemmerus, 1998; Smith & Davidson, 1992; Tinto, 1993). Many participants reported feelings of acceptance. These arose from various sources that included department personnel actively recruiting them for their programs or allowing them to enroll in dual programs to meet their educational and career goals.

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James, for example, said that his applications for acceptance into doctoral programs did not include an application to MSU. However, an organization that sponsored the national doctoral fellowship for which James had applied sent his credentials to several colleges and universities, including MSU. As a result, MSU accepted him, without a direct application, into the university's Department of Chemistry doctoral program. James said that MSU's unsolicited acceptance impressed him. His sense of acceptance by the Department of Chemistry's staff members motivated him to pursue his doctoral study at the university.

James's career goal was to teach chemistry at a college or university. He said that, as a result of the university's efforts to recruit him into their doctoral program, he was inspired to pursue a dual degree in chemistry and education. Doing so, he felt, would allow him to meet his career goal by enhancing his knowledge and skills. He received approval to create a dual doctoral program in chemistry and education from advisors in both departments.

James also gained a sense of acceptance and inclusion within the Department of Education. In fact, he said that he felt more included in the education classes because of the way in which many of his education professors taught. He asserted that, unlike his chemistry courses, where students were taught to self-direct their learning and become independent thinkers and researchers, the education courses encouraged students to work cooperatively and collaboratively in order to solve problems. "That experience itself [working collaboratively with students] invited me to this whole world of cooperative learning," James said. As a result of his education professors promoting student teamwork, James felt a sense of inclusion in these

classes because he was able to interact with other students to solve problems and draw conclusions about particular subjects or issues.

Brandon gained a sense of acceptance and inclusion from his microbiology department when he was allowed to transfer from a non-degreed genetics program into the degree-granting microbiology program. Transferring from the genetics program to the microbiology program also enabled Brandon to meet his educational and career goals. He said that, initially, he was recruited into the genetics program. He did not realize that the program was non-degree granting until he arrived on campus. Several of the faculty members in the genetics program held joint appointments in the Department of Microbiology. They suggested that it was in Brandon's best interests to obtain a degree that would be nationally recognized. On the basis of this advice, Brandon requested a transfer to the microbiology department. The advice from these faculty members and his acceptance into the Department of Microbiology enabled him to feel accepted in his department, which positively impacted his success in graduate school and the achievement of his career goals.

Staff members in Patrick's department created a learning environment that promoted his feelings of acceptance and success. This learning environment encouraged students within the same discipline to work in teams. This impacted Patrick's student success because working alone often "slowed the research down [because of] not having someone to work with who is in the same area of research," Patrick asserted.

He said that having two or more people in the same field working on the same research project, with each person engaged in separate parts of the research, accelerated project completion. Moreover, it elevated the quality of the students' research because, when the research was completed, all of the students could come together to discuss the pros and cons of the research and how it could be improved. Furthermore, Patrick stated, "If the guy sitting next to me understood my research problem. . .that was very important in my opinion." Patrick's department also provided a room for weekly meetings that allowed research group members to discuss the progress made by each person during the week.

Wilma felt accepted in her department because she was encouraged to provide suggestions to improve her program's doctoral process. She said that faculty members allowed her to give her opinion regarding how the program could be utilized to support students' successes in graduate school. She proposed two ways to improve the program. First, she suggested that students might have less difficulty completing the dissertation if the dissertation process were reorganized. She said:

> I do think that the faculty doesn't make the dissertation easy. . .I think that there are things that they [faculty members] could tell you about how to do it [successfully complete the dissertation]. . . .But they sort of just start you off kind of like, "Well, how do you think you should approach it [the dissertation]?". . .They give you some things but, to me, they sort of let you wander in the wilderness for a period of time; and I think they think that's a good aspect to the process.

She said that, although advisors are extremely helpful, they should be more explicit in informing students of the doctoral process.

Second, Wilma told faculty members within her department that "they did not have a network or placement service to help their graduates network in ways that could help them get jobs." She said that, although faculty members were not interested in developing these services, she still felt compelled to give them her opinion concerning the matter. Her opinion was that the department was missing out on a great opportunity to help advance their graduate students' careers. She said:

> People [faculty] here are real clear that that's not what they're about. . .and I think that's a fallacy because, at the Ph.D. level, folks do pretty well on their own, but with a little bit of organizational help, their graduates could go a lot further. . .and so I don't think it's a good thing for them to say, "Oh, we don't do that."

Because Wilma's department encouraged her and other students to contribute to the improvement of their department by voicing their concerns and suggesting solutions to them, she felt connected to her department. This contributed to her success in graduate school.

Using Strategies to Succeed

Many beginning and seasoned doctoral students use certain strategies that help them to succeed. Some of these strategies are learned by the students themselves during the course of their studies. Others are recommended to the students by persons within their departments or disciplines. According to some of

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the participants in this study, using strategies to succeed contributed to their positive experiences and impacted their successes. Following are stories from some of the participants that illustrate what these strategies are and how using the strategies assisted them in succeeding in their programs.

Patrick, for instance, stated that one strategy that contributed to his success was working on his dissertation from the very beginning of his doctoral studies. Rather than putting off work on his dissertation until his coursework was finished, as he suggested other students often do, he took his advisor's advice and made sure that every paper he wrote, whether it was for a particular class or for publication, could be incorporated into his dissertation. He said, "While I'm publishing these papers, I'm also writing chapters of my dissertation; and so, now, when it comes time for me to work on my dissertation, I've done all my research." Patrick maintained that this strategy helped him to obtain his doctoral degree in four years and that others who did not use it might require a longer time to do so.

Sally suggested that, with the advice from her professors, she, too, used strategies that enabled her to succeed in graduate school. One strategy was to have others in her department read and critique her written assignments. According to Sally, allowing others to read her papers was very difficult initially. When she did so, however, she found that the feedback she received positively impacted her graduate school success because it helped her to become a more accomplished writer.

White Student-Peer Support

Most of the participants reported that they obtained support in graduate

school from African American student-peers more often than they did from White

student-peers. However, two of the participants recounted receiving social and

academic support from some of their White classmates that contributed to their

successes.

For example, at the beginning of her first year in graduate school, Delores

"became really ill and had to miss class for approximately two weeks." She stated

that she did not know whether her illness was due to stress or complications caused

by a physical condition. She did know that the situation produced some positive

experiences. Some of the student-peers who phoned and came by her apartment to

see how she was progressing and whether she needed any assistance were White

classmates. "I didn't even know them that well at that point, yet they were

concerned about me," she asserted. This type of social and emotional support from

her student-peers motivated her to get well quickly and return to classes, and such

support ultimately contributed to Delores's success in her doctoral program.

Sally gained academic support from at least two of her White student-peers in

statistics courses. She said:

> There were a couple of White women that we had the same research classes
>
> together. In general research, we had a couple of stats classes together. And
>
> so we wind up having the same professors and got to know each other very
>
> well and read each other's papers, studying for exams together. One woman
>
> was my partner. For stats, when you're doing different homework

assignments, you were able to have partners. So that was a nice little group that met just by chance. I mean we didn't talk to each other and say, "Which instructor are you taking next semester?" It just so happened that we took one [class] and wound up sitting near each other, you know, making a connection. And then the next semester we wound up being in the same class again. So it was like, "Hey, we worked together before. . . .This is great. . . .Let's do it again." And then it was kind of, "Are you taking the next level one?" "Yeah, I am." "Who are you taking it with?" You know, we had something like three classes together. And that was very, very, very nice.

These participants suggested that, while African American student-peers were helpful in meeting their social and academic needs, some of their White student-peers also provided social and academic support. Moreover, when they needed support, it was not important whether it was offered by African Americans, other ethnic minorities, or White student-peers. They appreciated the support that they received from all of their student-peers during certain times of need.

Support from White Advisors

Most of the study participants reported that African American and other ethnic minority faculty members provided them with support during their educational endeavors. Some participants also reported that their White advisors contributed to their doctoral successes by providing academic assistance and opportunities to obtain financial aid. Following are stories from participants that illustrate how their advisors' support impacted their successes.

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James, for instance, reported that the support he received from his advisor was significant. His advisor not only assisted James in selecting his discipline, but also in preparing his dissertation. James said that, initially, he wanted to graduate with a Ph.D. in education, with a concentration in chemistry. However, there was no such program at MSU. Therefore, after taking several courses and the comprehensive examination in chemistry, he consulted with his chemistry advisor. Together, they decided that James should enroll in the College of Education, thus creating a dual program of study in chemistry and education.

James said that this dual program was created specifically for him and supported his career goal to teach chemistry at the university level. The program also would enable him to become a college administrator of a major research university. Unfortunately, there were difficulties because the respective colleges were not able to accommodate the necessary procedural requirements for just one person. Therefore, James and his advisor decided that he should select education as his primary doctoral field of study. He said that his advisor felt that choosing the education program would provide more job opportunities in the academy.

James also reported that he and his advisor met on a weekly basis to ensure that he prepared properly for his dissertation. He said that, often, faculty members did not allow time in their schedules to meet weekly with doctoral students regarding their dissertation work. However, his advisor allotted time and provided relevant guidance and feedback that enabled James to develop and improve his dissertation. His advisor's assistance helped him focus on his dissertation and complete it in a timely manner. This support made the dissertation process less stressful for James.

James expressed his great appreciation of the time that his advisor spent with him, especially since his advisor traveled extensively on professional business. Looking back on this experience, he proudly proclaimed that he was "blessed to have had a good advisor who respected him" professionally. He said that, because he enjoyed his dissertation topic and because of the time his advisor spent with him discussing his dissertation and research, his graduate experiences were extremely positive.

With the dual program, James had two advisors: his main advisor from the chemistry program and his advisor from the education department. James stated that his education advisor, who was also White, was as supportive of his work as was his chemistry advisor. He often scheduled weekly group meetings with James and other student advisees who were in various stages of their dissertations. These meetings allowed group members to share portions of their dissertations and receive the feedback necessary to improve them.

Brandon stated that his advisor's assistance and guidance with regard to publishing papers and articles and presenting at conferences enhanced Brandon's research and publication skills. Brandon said:

> In the sciences, the opportunities that you have are heavily influenced and shaped by your major advisors. . . .A lot of times graduate students don't know coming into this whole thing [graduate program] how important [it is] presenting at conferences, getting publications, presenting papers, posters, abstracts, all of that. . .and it's up to their major advisor to direct all of that. . .that's very important. . .it falls right at the feet of the major advisor. . . .Some

advisors make it a point to ensure that you have those key things [academic and emotional support systems], and that you get them in the right timeframe. Other advisors don't take an active role in making sure that happens, and that's to the detriment of the graduate student.

Brandon believed that the encouragement to publish articles and present at professional conferences provided by students' advisors was an essential component for success in the field of science. He felt that his success was due, in part, to his advisor's encouragement to publish and present at conferences.

Patrick stated that his advisor played a key role in his success by making him aware of the politics that frequently impact the dissertation process. Patrick's advisor informed him that, although students present their written proposals in an organized and professional manner, dissertation committee members sometimes made decisions about whether certain changes need to be made to the proposal prior to the students' arrivals at committee meetings. Therefore, his advisor recommended that Patrick come to his proposal defense well prepared to defend his proposal and other issues that might be brought up by committee members during the defense.

Several participants indicated that their advisors were instrumental in their doctoral successes because their advisors assisted them in obtaining financial aid. James's advisor, for example, helped him obtain funding to pay his tuition and living expenses. The financial aid meant that James did not have to seek a job outside of his department and, therefore, he had additional time to study for his classes and to prepare and write his dissertation.

Brandon's advisor also helped him to receive financial aid to cover his research and personal expenses. Brandon did take out some student loans, but he maintained that the majority of his financial assistance came from funding provided by his department. Brandon said that his advisor and his department chair did everything possible to ensure that their students' financial needs were met. They did not want students to take outside jobs because they felt doing so would hamper the students' abilities to focus on their work. Brandon said that they wanted to make sure that their students were successful in completing their degrees, and, if students did not succeed, they could not attribute their failures to lack of financial assistance and the stress of holding an outside job. He stated:

> It's kind of difficult to do research and to have an outside job just because of the nature of the work [graduate research]. . .once you start setting up experiments at the research bench, a lot of times you run into timed experiments that require your attention at odd hours. . . .If you're working with animals, they need attention, and you have to be there to provide that. . .so a scheduled outside job is kind of difficult to make work.

Brandon also suggested that his research was his work.

When asked if he thought that he had an easier time in school than someone who had to hold down an outside job to meet their financial needs, Brandon replied:

> I think it focuses you more. . . .The last 40 or 50 years has been what we call a reductionist approach. . .you pick things apart and you try to reduce questions to the smallest, the most approachable portion of a larger research question that you can handle. . .therefore, in order to do that, it requires a lot of focus, a lot

of single-mindedness. . .not having to think about a non-research related work environment facility.

Some participants reported that their advisors impacted their doctoral successes because of the support they provided in preparing for a major doctoral degree hurdle: qualifying examinations. Brandon, for instance, stated that his positive experiences with his advisor included the amount of support he was given by his advisor while he prepared for his qualifying examination.

He further maintained that his positive relationship with his advisor enabled him to complete his program. He stated that supportive student-advisor relationships were helpful because they generally facilitated students' progress through the different stages of their programs. He maintained that, in his experience, students tend not to think about the timeline of their program completion until they reach their fifth year. He said that, because students prepare for their preliminary exams during the first two to three years of their doctoral study, "they really don't start to get that itch [excitement of degree completion] until after the fourth year. . .but when you're in year five or six, and you're not sure when this is going to end. . .that advisor becomes your link to the end of the road, so to speak." In other words, Brandon's positive relationship with his advisor gave him the academic and emotional support he needed to stay motivated during the long doctoral process. According to Brandon, without this kind of assistance, some science majors might lose the persistence required to achieve the Ph.D.

Delores, too, sang her advisor's praises because he helped her prepare for her comprehensive examinations. Delores relied on her advisor for this assistance

because, as the only student in her particular program, she did not have anyone with whom to study. Her advisor believed that group study was essential for passing the comprehensive examinations. Knowing that Delores would not have this, he met with her weekly to go over questions similar to those that would be on the tests and evaluated her prepared responses to those questions. According to Delores, her advisor's assistance helped her to pass the comprehensive examinations and contributed to her overall success in graduate school.

Patrick also suggested that his advisor's guidance helped him pass his qualifying examinations. He reported that the experiences of passing his exams were major highlights because of the "accumulation of the whole thing [doctoral experience]. . . .When you pass your qualifying exam and present your defense, you know that this is your contribution." Although he missed spending one Christmas with his family and friends because he felt that he needed to study for an upcoming qualifying exam, it was worth it. "Once you get the exam results, you know that you are on your way," he proclaimed.

James, with his dual program, faced the added pressure of dual examinations. He reported that his chemistry and education advisors were instrumental in helping him to successfully pass the required qualifying and comprehensive examinations. He said they helped him to understand and adapt to both exams and gain the knowledge necessary to pass them. This assistance was particularly important to James because his first attempts to pass qualifying exams were unsuccessful. While he was in the Department of Chemistry, he studied and prepared by himself, rather

than collaborating with other students and professors. As a result, he failed his first two chemistry examinations.

James's third, and successful, attempt came after he received semiweekly guidance from his chemistry advisor.

Some of the positive graduate school experiences reported by participants resulted from their supportive relationships with their White advisors. These advisors provided academic, emotional, and financial support in a variety of ways. Their support strongly impacted the participants' successes in doctoral study.

Negative Experiences Encountered

The majority of the participants reported encountering positive experiences in their doctoral programs, but some encountered negative experiences. Some participants contended that their motivation to succeed outweighed these experiences, which enabled them to persist to graduation. Some participants indicated experiences that negatively impacted their success in graduate school. Following are stories that illustrate the participants' encounters with negative experiences.

Wilma described the difficulties in preparing for her comprehensive examinations as a negative experience. She indicated that, since no one had given her any advice, she did not realize how long it would take to prepare adequately for these exams. Wilma spent an entire semester cramming for her comprehensive exam, while at the same time, taking courses. Originally expecting to finish her program in four years, she found that studying for her comprehensive exam and

taking courses at the same time extended her time in the program a full year. Wilma said that, in her opinion, students should complete all of their coursework before they start studying for the comprehensive examinations. Freedom from the need to focus on coursework, she argued, would allow students to concentrate on their exams and, consequently, perform better on them.

Odessa described her overall doctoral experiences as "interesting" and sometimes "negative" because no one in her program pointed out to her the emotional costs of going through the doctoral process. She did not know what to expect or how to deal with the emotional issues. Odessa maintained that her aunt, who has a doctorate degree, informed her about what to expect academically, such as certain classes to take and some of the processes of the dissertation, but she offered no guidance on how to emotionally prepare for graduate study. Furthermore, no one explained to Odessa how to maneuver through the "politics" often associated with pursuing a doctorate degree.

David recalled that the most negative experience he encountered in graduate school involved the lack of financial aid. This was problematic. David's program had not offered him a graduate assistantship, so, when he first arrived at MSU, he did not have that or any other source of funding. He not only had difficulty paying his room and board and tuition, but he also could not buy a computer to write papers for class assignments.

David maintained that, when he first started his program in 1994, there were far fewer computers on campus than there are today. Because he did not own a computer and rarely had access to a campus computer, he had to rely on borrowing

those owned by friends, which often were not available. In his second year of study, David received financial aid to buy a computer, but his first year without one added to his first-year pressures because he found it difficult to complete assignments.

Delores, too, said that the main negative challenge confronting her during her doctoral study was the lack of available financial aid. She said that she did receive a federal scholarship, but still had to work at a part-time job to meet all of her financial needs. When asked whether her school experience would have been different if she had not had to work, she maintained that it would have been much easier. She said, "I think that, if I didn't have to work, things would have been a lot less stressful."

She further commented that not having to work while attending school would have allowed her to spend more time and energy on her studies. She said that, while some of her student-peers met in groups to study for exams and work on research projects, she could not participate in these group sessions because they often were held during the hours she worked. Therefore, she missed many opportunities to gain knowledge and collaborative support from some of her classmates, which Delores believed made it harder to succeed in graduate school.

Patrick described one of the difficulties he faced during doctoral study this way: "The biggest challenge was actually defining a good [research] problem because that was between 60% and 70% of the work." Patrick found that, as a research assistant for his advisor, defining his research problem through his advisor's research was the most challenging experience for him because he had difficulty breaking down the problem so that it was manageable and solvable.

He maintained that spending most of his daily work hours researching a particular area in his advisor's field of study intensified this difficulty. He said that, although he finally developed a workable research problem that was interesting and could be used in his dissertation, the hours spent on his advisor's research negatively impacted his success in graduate school. Patrick felt that those hours could have been spent on publishing or other academic activities, which could have yielded better graduate school results in a shorter time.

Kimberly decided that, after several years of being absent from her program, she wanted to complete her doctoral work. She asserted that her greatest graduate school challenge arose when she had to defend to her committee members her position that it was not necessary to retake her comprehensive examinations or do additional coursework. She said:

> That was a hard defense because by nature, one should have retaken those courses just because of the timing. . . .There should have also been more information [research] out there in my program. . . .Between taking a course five years ago, and taking a course now, one would expect new discoveries in that particular field; but, because I started in the health promotion field, it was in its infancy and there's not a lot of new work out there.

> According to Kimberly the research in her area had made few advances in preventative health concerns, such as exercising and eating habits, since she had withdrawn from her program. In a defense before her committee members, she had to demonstrate that her research was up-to-date and convince them that she should be permitted to continue her doctoral work from the point at which she left the program.

She said, "I had to sit in front of my committee and basically defend it [her research] as though it was like a dissertation. . . .It was very easy for me to defend it because that's my job. . .to do it here [her workplace]." Although viewed by Kimberly as a negative experience, this challenge did not have a negative impact on her doctoral success. Kimberly's experience illustrates that the motivation to succeed and persevere can outweigh encounters with negative experiences.

Sally recalled a negative experience that confronted her. She recounted an occurrence in which one of her committee members disagreed with the methodology for her dissertation research. According to Sally, the committee member argued that the size of her pilot study was insufficient and that she needed to sample more people. Although Sally informed the committee member that the development of her survey instrument and her chosen methodology were based on the literature, this professor contended that the small number of articles Sally used did not provide a sufficient literature base to support her methodology or why the group of questions used in the survey should "come together as a construct and be analyzed."

This particular committee member also wanted Sally to survey 300 people for the pilot study. However, according to Sally, there were only about 200 people in her targeted population in the entire country, which made surveying 300 an impossibility. Sally informed her advisor of the committee member's demands. Sally said that her advisor told her not to worry about sample size, but that she should find a way to validate the survey. Sally sought help from a friend who taught a statistics course. As a result of her friend's help, Sally was able to validate her survey by composing a statistical analysis that met the committee member's

requirements. Sally concluded that this particular situation was definitely her most negative experience while in graduate school. She believed that it negatively impacted her success because she had to spend an enormous amount of time and energy validating a survey that was difficult to validate.

Most of these participants viewed their experiences as negative because their degree completion was prolonged. For other participants, the stress associated with a lack of finances and preparing for comprehensive examinations were negative experiences.

Conclusion

Based on the interview data, the study participants encountered a variety of experiences that impacted their graduate school successes. Often, these experiences occurred within the participants' departments or disciplines.

The participants reported numerous positive experiences. Some involved academic and emotional support or guidance provided by White student-peers and advisors. Some participants gained a sense of acceptance and inclusion in their departments by being actively recruited, being asked to participate in various departmental activities and events, or being encouraged to voice their opinions regarding departmental practices. Permission from advisors or department heads to enroll in dual programs that helped participants meet their educational and career goals was another positive experience. Some of the participants attributed their positive experiences to particular strategies they used that allowed them to focus on their studies or improve their writing abilities.

Some of the participants' experiences were negative. Negative experiences included those that prolonged degree completion or a lack of financial resources to pay tuition and living expenses, which elevated stress levels. Other negative experiences involved issues that related to preparing for and passing comprehensive examinations. Despite their encounters with negative experiences, most participants reported having experiences that positively impacted their successes in graduate school.

Chapter 7

Discussion and Recommendations

Introduction

Few studies have been conducted on the graduate school experiences of African Americans. This study is significant because it helps fill the present void and provides information that will raise college and university faculty members' and administrators' understanding of the factors that contribute to the successes of African American doctoral students. This understanding could promote the implementation of programs and practices that positively impact the graduation rate of these students. A higher graduation rate, in turn, will mean a greater representation of African Americans at the upper levels of the American workforce. This is particularly important in the scientific fields, given the stereotypical view that African Americans lack the ability to succeed in math and science. Greater visibility in these fields center on African Americans' successes in math and science at the Ph.D. level.

This study is also important because of its qualitative nature. It provides descriptive and detailed reporting on the experiences of African American doctoral students in their own voices, which have been neglected in prior research. Furthermore, past research has neither explored discipline-based differences in African American doctoral student experiences nor thoroughly addressed how the role of race impacts these experiences. This study adds to existing literature by including personal stories of African American doctoral students that pertain specifically to various experiences within their disciplines (math and science or

education) and by investigating the impact of race on doctoral students' experiences prior to and while attending Michigan State University.

The primary question guiding this research, what are the experiences of African American doctoral students in graduate school, was answered through information obtained in one-on-one interviews with study participants. Some of the findings supported the literature on graduate education. Other findings identified certain experiences of African American doctoral students that were missing from the literature.

This chapter discusses the study's findings and implications and is organized in the following way. First, a summary of the key findings is presented. These findings are discussed in more detail later in the chapter. Second, key themes and implications are presented. In this section, the present study's findings are compared to those of past research to highlight this study's contribution to the literature on graduate student education. The discussion will show how the present findings concur with or refute past research findings or provide information that is missing from the literature. Third, unexpected findings that emerged from the data are discussed. Fourth, recommendations are offered for future research. Fifth, and finally, recommendations are offered for departmental faculty, administrators, universities as a whole, teachers, and graduate students themselves that could contribute to the positive experiences of African American doctoral students.

Summary of Key Findings

Impact of experiences prior to graduate school.

The participants indicated that many experiences preceding the students' doctoral work influenced their successes in graduate school. Their experiences with family members, junior high and high school teachers, undergraduate college professors, or coworkers impacted the participants' perceptions of the importance of academics, choices of discipline and career, and participation in math and science courses and activities. Spirituality also was a significant contributor to success for some of the participants.

Impact of discipline/department and the institution on doctoral students.

The participants' experiences within their discipline/department or the university affected their successes in graduate school. For some participants, a sense of acceptance and inclusion in their departments was important to their success. This often was achieved when participants were actively recruited by the university or departmental personnel or asked to participate in various departmental activities and events. Other departmental or institutional experiences that impacted their successes included permission from advisors or department heads to enroll in dual departments, academic success strategies the participants learned from other students or persons within their departments, or academic strategies they devised and employed.

Impact of students' awareness of racial and/or ethnic identity.

Without exception, the participants had a strong sense of pride in being African American. Their awareness of and pride in their race and/or ethnic identity primarily resulted from early influences within their families. Pride in their race motivated the participants to perform well academically, particularly in their fields of study, so that they could effectively serve as positive role models for other African Americans to follow. Additionally, a sense of pride in being African American inspired some of the participants to perform well in math and science specifically. This motivation enabled them to serve as good representatives for their race by disproving stereotypes suggesting that African Americans may have difficulty in succeeding in these disciplines.

Impact of race on experiences prior to and during graduate school.

Some scholars have argued that race plays a significant role in the experiences of African American graduate students because any attendant racist behaviors and prejudices create many barriers to success (Anderson, 1994; Haymes, 1995; Lusane, 1997; Turner & Myers, 2000; West, 1994; White, 1984; Willie et al., 1991). As illustrated in the participants' stories, race did play a significant role in their graduate school experiences, particularly in their academic achievements. The participants maintained, however, that race was a positive factor in their lives and experiences. They asserted that the positive experiences connected with their race, prior to and during graduate school, enabled them to overcome potential racial barriers that often adversely impact the academic successes of African Americans.

Factors that motivated the participants' persistence in completing their doctoral degrees.

Certain factors motivated the participants to persist in completing their doctoral degrees. These factors included family members instilling a sense of the importance of academics and pride in their race. Additionally, teachers, college professors, and administrators, especially ethnic minority professors and administrators, provided participants with academic and emotional support that encouraged and motivated them to complete their undergraduate and graduate degrees. Furthermore, African American student-peers enabled them to not feel alone and helped them meet academic, social, and/or information-gathering needs and gain different perspectives on issues or concerns pertaining to the successes of African American graduate students.

Key Themes and Implications

This section presents a more in-depth discussion of some of the interesting themes that emerged in the study's findings. The following themes are discussed: (1) Effects of being positive role models and good representatives of their race, (2) Overcoming racism, (3) Comparisons between math and science and education students regarding the existence of racism, (4) Financial aid availability: math and science students versus education students, (5) The need for ethnic minority professors and mentors, and (6) The need for African American student-peer support.

Effects of being positive role models and good representatives of their race.

Motivated by pride in their race, the math and science students in this study began their doctoral studies with a desire to succeed in their respective disciplines. They felt a sense of responsibility, which sometimes became a burden, to perform well in their programs in order to dispel stereotypes about African Americans' inabilities to achieve academically in math and science. Their motivations to succeed were enhanced further by their desire to become positive role models for other African American students. Their university experiences showed them that fewer African American students enrolled in math and science programs, particularly at the Ph.D. level, in comparison to students of other races or ethnicities. These participants felt a responsibility to demonstrate to new African American math and science students, with whom they worked closely, that African Americans can, and do, succeed in these disciplines. Consequently, they believed that they should be positive role models or mentors to new students.

These participants' experiences and perceptions support the existing literature in several ways. According to Banks (1996), for example, African Americans often feel that they must prove to themselves and to others on campus that they can succeed academically and, at the same time, make their colleges more desirable places for others of their race to attend. The feelings of the participants, as they strived to become positive role models, concur with Banks' analysis. The participants believed that their achievements in math and science would encourage other African American math and science students to perform well also.

The findings here also support Banks' (1996) analysis that, since few African Americans attend predominately White college campuses, those who do feel that they are "representing the Black race." Therefore, African American students often feel that they must present themselves in a positive light academically and socially. The math and science participants in this study believed that they needed to do well academically in order to be good representatives of the Black race.

The findings also coincide with Steele's (1990) argument that, for many years, African Americans have been stereotyped as lazy, nonproductive, stupid, inferior, or more complaining of their circumstances than any other ethnic group. These characterizations have spread throughout college campuses in particular. To disprove these myths and stereotypes, African American college students often "burn the midnight oil" studying (Steele, 1990, p. 138). The math and science students in this study diligently applied themselves to ensure their superior academic performances, not only for the sake of personal achievement, but also to dispel stereotypes relating to the abilities, motivations, and ambitions of African Americans.

Moreover, Banks (1996) contends that African American students often work harder than other students because of family expectations and views that have been passed down for generations. Many family members tell the younger generations that they must perform twice as well academically as their White counterparts. This premise is supported by one participant's opinion, held throughout her educational pursuits, that "African Americans often have to work twice as hard and do twice as much to succeed," regardless of their level of education and socioeconomic status.

She further realized that, even though she had to work harder than most to succeed, others were likely to view her negatively because of her race. Despite this possibility, she continued to do her best to present herself in the most positive manner.

The math and science participants most consistently reported wanting to become positive role models for new African American students. One could reasonably conclude that these particular participants, who either worked closely with other African American students or felt that other African Americans could approach them easily for academic support and mentorship, felt compelled to work even harder to perform well academically. The degree to which enrollment in particular disciplines impels African American graduate students to serve as role models for other African American students and to perform well academically in order to do so has been neglected in the existing literature.

Overcoming racism.

All of the participants in math and science and several in education strived to perform well academically to dispel the stereotypes attached to African Americans. There were times when their efforts were extremely difficult and, often, to no avail. Motivated by personal fortitude and encouragement from family members, however, these participants did not allow potential racial barriers to stand in the way of their successes.

For example, four of the participants majoring in education experienced racism, stereotyping, or racist behaviors from elementary or secondary school teachers. However, because of strong support from family members and the

participants' strong pride in their race, they were able to overcome these potential barriers by demonstrating to those teachers that they could succeed academically if they worked harder on their academic deficiencies. These findings support the literature on graduate student education and socialization processes. Family members have a strong influence on their children's values and growth, including a sense of race pride and the important place of academics (Cross, 1995; Elkin & Handel, 1984; White, 1994). Their families instilled in the participants a sense of pride in their race and sense of the importance of academics. As a result, participants were able to overcome racial barriers and succeed academically.

Several of the participants also encountered racism and stereotyping during their involvement in high school sports activities. However, because of their strong pride in being African American and their competitive natures, they did not succumb to these potential barriers. Instead, they overcame them by working harder to build the skills necessary to meet the competitive requirements of their chosen sports. The experiences of these participants lead to the conclusion that they were able to achieve their goals because of their competitive natures and their pride in being African American. Thus, although they could not prevent acts of racism and discrimination, they, like the participants who encountered academic discrimination, used potential barriers as motivators for their successes.

Did racism exist? Comparisons between math and science and education doctoral students.

The participants in this study who were in math and science disciplines did not experience racism or racist behaviors in their academic pursuits during their college years. However, the majority of the participants in education did report encountering such experiences. While generalizations cannot be made from so few people, one wonders why the math and science students were shielded from racism and stereotyping while the education students were subjected to them. Do math and science disciplines provide some safeguard against racism or stereotyping?

According to the participants in math and science, the answer is yes. They stated that these disciplines are built on objective principles and facts and do not promote subjectivity or emotional responses. These participants maintained that the only basis for their grades was their understanding of the objective principles with which to solve math and science problems. Students who could correctly solve the problems, they asserted, succeeded academically. Racism and discrimination, which are subjective responses, did not impact the participants' successes in inherently objective disciplines.

In education, on the other hand, math and sciences courses are only a limited part of the curricula. Academic success in many, perhaps most, education courses can be impacted by professors' subjective evaluations. The participants in education recounted incidents in which their grades hinged on subjective measures. This was particularly true in courses where professors were at liberty to determine whether a

paper was written well enough to meet their expectations. Therefore, emotional responses from professors played a role in determining a particular student's grade.

An exploration of the factors that shield African American students in some disciplines from racism and subject students in other disciplines to it is absent from the literature. Although the sample of math and science students in this study was small, the findings contribute to the literature by providing some information on discipline-related differences in encounters with racism. These findings suggest that comparisons between students in different disciplines with regard to experiences with racism may be a productive area for future research.

Financial aid availability: math and science students versus education students.

Some of the graduate student literature argues that students who receive financial aid and do not have to seek employment outside of their departments often have more positive graduate school experiences than students who must work at outside jobs (Tinto, 1991). Financial aid not only covers much of the high cost of graduate school and, sometimes, living expenses, it also reduces financial and time constraints that negatively impact on students' abilities to focus on their coursework or research. Financial aid, however, is not equally distributed among disciplines. Doctoral students in laboratory science fields generally receive research grants and/or other funding obtained by faculty members in their departments with which the students can further their studies (Bair & Haworth, 1999; Bowen & Rudenstine, 1992; Nerad & Cerney, 1991). In contrast, doctoral students in the field of education receive these types of funding infrequently (Bair & Haworth, 1999; Bowen & Rudenstine, 1992; Nerad & Cerney, 1991).

This study's findings support these arguments. All of the participants in math and science reported that their advisors or departmental heads consistently ensured that the participants had sufficient financial resources to conduct their research and pay their academic and living expenses. The availability of financial resources resulted in positive experiences for these participants. On the other hand, several of the students in education reported that financial resources from the university were hard to obtain, which negatively impacted their graduate school experiences. Because of their motivation to complete their programs and receive their degrees, these students financed their tuition and living expenses by working at jobs outside of their departments. They contended that receiving funding from their departments or the university would have allowed them to participate in various support groups, which often met during their work hours. This support, they believed, would have assisted them in their academic success and, subsequently, yielded more positive academic experiences.

The need for ethnic minority professors and mentors.

African American doctoral students often benefit academically and emotionally when they have faculty of color to serve as advisors, mentors, or role models (Willie et al., 1991). Faculty of color at colleges and universities seem more able to encourage persistence among minority students than White faculty members, particularly at research universities. The apparent greater effectiveness of faculty of color is due, in part, to shared research interests with minority students, which often results in these faculty members sharing resources that are relevant to the students'

research (Harvey, 1994; Nicholas & Oliver, 1994: Sloan, 1994; Turner & Myers, 2000).

Sloan's (1994) study is especially helpful in supporting this premise. His data comprised interviews with six mentored African American doctoral students (three male and three female), most of whom were enrolled in the education field. Sloan reported that African American doctoral students show a stronger desire to be mentored by African American faculty. They are more responsive to African American faculty as mentors than they are to White faculty because African American faculty members typically are more sensitive to racial issues and may have experienced the same types of concerns that students have. Other researchers indicate that the lack of African American mentors in departments causes many African American doctoral students to seek mentors and other role models outside of their departments (Gold & Dore, 2001; Neilson, 1997; Phillips & Pugh, 2000).

The findings in this study support previous research. Most of the participants reported that they often sought out ethnic minority professors or administrators to assist them with academic and emotional needs. The findings here also show that ethnic minority professors or administrators outside of the participants' departments or programs provided the participants with guidance, advice, and knowledge that helped them to successfully complete their doctoral programs. An interesting finding was that, for one participant, the age of ethnic minority professors played a role in her ability to relate to them as role models. This participant stated that seeing African American faculty members in influential positions within her department

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who were close to her in age inspired her to become a faculty member and program coordinator, which she achieved.

In addition, several of the ethnic minority professors, particularly the African American professors, gave the participants very realistic information and advice regarding some of the obstacles that Blacks often face in graduate school. This type of awareness enabled them to better understand how to overcome certain racial barriers that might impede their successes.

The support provided by faculty of color, particularly African American faculty, enhanced the successes of this study's participants. They benefited academically and emotionally from faculty of color more often than they did from White faculty. Moreover, these students, like African American students in previous studies, often sought out ethnic minority professors to serve as role models and mentors, either in their own departments or, if this was not possible, in other departments.

The need for African American student-peer support.

Several of the participants in this study reported that they benefited academically and socially by surrounding themselves with African American student-peers. Many met and became friends with other African American students by joining and participating in campus organizations such as the Black Graduate Student Association (BGSA). Others met and socialized with African American students at conferences, sometimes forming long-lasting friendships. These relationships provided students with support and opportunities to share an array of networking resources, such as information about the availability of financial aid, and

to gain different perspectives on various issues or concerns pertaining to the success of African American graduate students.

These findings also correlate with the literature. Interactions among students promote students' social integration into their departments or the university, which, in turn, promotes academic success (Tinto, 1991, 1993). Becoming socially integrated into their departments or the wider university results from students' friendships and activities, such as attending social events, "hanging out" in the student lounge, or meeting informally with peers (Golde, 2000; Lovitts, 2001). Furthermore, social integration into the department or university community enhances students' intellectual development (Tinto, 1993). Social integration also enhances the development of important skills required for program completion because students at a particular stage in the doctoral process can learn from others who already have completed that stage (Tinto, 1993).

Although much of the literature contends that students can gain academically and socially from student-peers regardless of their race or ethnicity, other studies have shown that doctoral students from different ethnic backgrounds often experience more support in peer relationships with students of similar ethnicity (Hamilton, 1998). These types of relationships encourage positive graduate school experiences because students can discuss with one another common issues, such as those related to race. The opportunity for openness to share feelings with one another (Hamilton, 1998) tends to increase student success.

Unexpected Findings

While many of the findings from this study concurred with the literature, there were some surprises. For example, it was notable that none of the math and science students, all of whom were male, reported any experiences of racism prior to attending graduate school. These individuals always attended segregated schools, including HBCUs for their undergraduate studies, primarily comprised of an African American student body and faculty. In these environments, they were not treated differently because of their race. According to the participants who attended Black schools and HBCUs, these institutions generally taught students to have pride in their race and, consequently, they were able to overcome those racial barriers that they did encounter later and achieve academic success.

It also was surprising to find that race was not a determinant in the graduate school success of math and science students. As previously stated, the math and science students contended that their programs focused on teaching and assessing students' understanding of objective math and science principles. Therefore, race did not play a role in determining how well they performed in these disciplines. As one of the math and science participants stated, his department "did a pretty good job of making sure that race was not a concern."

Another interesting finding was that family members of the participants in math and science either attended HBCUs themselves or encouraged the participants to do so and also were in math and science disciplines. These family members were instrumental in the participants' academic and career development.

Recommendations for Future Research

In this section I offer eight recommendations for future research. First, absent from the existing literature and this study are the voices of African American women in math and science disciplines. Their perceptions and experiences need to be explored. Since there are fewer women in the sciences, particularly African American women (National Opinion Research Center, 1999), it is reasonable to speculate that their graduate experiences might differ from those of the male math and science participants in this study. Moreover, the sample from math and science disciplines in this study was small. Therefore, I recommend that future research investigate more fully the experiences of African American math and science students generally and those of African American women in the science disciplines specifically. Conducting more studies with larger and gender-balanced samples would generate additional knowledge about graduate school experiences that could contribute to the implementation of programs that would positively impact the success of all African Americans in these disciplines.

Second, the experiences of African American male graduate students also deserve further study. The education sample in this study comprised only one male participant. Furthermore, he stated that race was not a salient issue in his experiences. Cross (1995, p. 28) contends that "persons who hold low salience views do not deny being physically Black, but consider this 'physical' fact to play an insignificant role in their every day life." I recommend that larger samples of African American males be studied to gain information about their particular experiences in various disciplines. It also is important that future research explore

more thoroughly the circumstances in which race is or is not a salient issue in students' graduate school experiences.

Third, I recommend interviewing larger samples of African American doctoral recipients across more disciplines. Conducting interviews with individuals in a range of disciplines will provide opportunities to examine their experiences and the factors that influence those experiences in greater detail. Since families influence students' academic outlook, specific questions in such interviews pertaining to the students' family members' academic experiences might enable researchers to further explore the degree to which family members affect the students' doctoral experiences. Some possible questions to probe this particular influence might include: What kinds of discussions, if any, did family members have with students concerning family members' beliefs in the importance of academics? How did family members overcome potential racial barriers in academic settings? How were family members, particularly those who attained higher degrees, able to achieve academic successes?

Fourth, further studies of the graduate experiences of African American students should attempt to draw samples that include students whose undergraduate degrees were from Historically Black Colleges and Universities (HBCUs) as well as students whose undergraduate degrees were from predominantly White institutions. Historically Black Colleges and Universities are known for giving special effort to preparing students for graduate work and professional careers. Some graduate programs specifically recruit academically talented African American students from HBCUs to enter graduate programs. Thus, further research should explore the

different graduate experiences of students from HBCUs as compared to those whose undergraduate degrees were from predominantly White institutions.

Fifth, since all of this study's participants expressed, in various ways, their strong sense of pride in their race, further investigation would be useful regarding how racial pride plays a role in how African American students experience graduate education. Some participants, for example, indicated that experiences they encountered at an early age helped solidify their pride in their race, but other kinds of pride, such as pride in being involved in political movements, may also have played a role in their development and, ultimately in their perceptions of the graduate experience.

For example, one participant's family members' pride in their race enabled her to overcome racial barriers in order to achieve academic and career successes. Since this participant looked to her family members as role models when she confronted potential barriers, their role modeling almost certainly influenced the participant's political stances, which ultimately gave her confidence and thus impacted her academic and career successes. One might conclude that pride in race sometimes leads to various activities such as political involvement, which may affect the self-confidence with which someone might approach graduate school. Thus, further research might examine how pride in one's race plays out in a variety of ways in one's life experiences, including in the graduate experience.

Recommendations for Action

In this section, recommendations to enhance the positive experiences of African American graduate students are offered for faculty members and advisors, departmental and university-wide officials, teachers, and graduate students themselves. First, I recommend that faculty members, staff, and administrators at predominately White colleges and universities try to gain a better understanding of students' personal resiliency, which often enables them to persist in completing their degrees. For example, college officials might gain this understanding of students' resiliency by conducting personal interviews with them prior to their admittance into the institution. Students who show resiliency probably are more likely to overcome challenges and become successful.

Second, I recommend that faculty members and other university officials help students and their families feel welcome at their universities and within students' particular departments. This could be achieved, in part, by providing on-campus orientations for students and their families prior to the start of classes, which focus on acquainting students and family members with departmental faculty and staff. This could promote positive relationships between students and departmental members. In addition, departmental faculty members and advisors can invite African American students to participate in research projects with professors and other students with similar research interests. The participants in this study suggested that working with professors and/or student-peers on research projects helped them feel included in their particular departments or disciplines.

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Third, faculty members, advisors, and other university officials who want to further African American doctoral student achievement should assist these students with securing financial aid. This type of funding should be available through graduate and teaching assistantships, scholarships, and other financial sources that do not require repayment. African American graduate students might perform better academically when provided with financial aid because they would not have to take outside jobs that constrain study time and prevent them from participating in student support groups and interacting with professors. Furthermore, financial aid that does not need to be repaid might encourage more African Americans to pursue doctoral degrees.

Fourth, the participants in this study suggested that the positive role played by their race derived, in part, from the academic, emotional, and social support provided by ethnic minority, particularly African American, professors, administrators, and student-peers. Therefore, I recommend that colleges and universities make every effort to recruit faculty and students of color to create diversity within departments. The presence of more African American faculty will increase ethnic minority students' access to positive mentors and role models to whom they can relate and who can assist them in successfully maneuvering through the doctoral process, despite the existence of potential racial barriers. More students of color also will provide more sources of peer support to minority students. Overall, departments characterized by more diversity will enhance students' sense of inclusion in their departments.

Fifth, one might ask, "How can faculty of color provide academic and emotional support to minority students and still successfully meet tenure and other college-related requirements?" I propose that tenure requirements take account of the quantity and quality of advising and mentoring responsibilities that are expected of faculty of color. For instance, if faculty members of color are expected to serve as mentors to minority students and to work closely with them to support their academic success, some of their other faculty responsibilities should be decreased in order that they can successfully perform all of their duties. This type of practice will encourage faculty of color to become mentors and role models for minority students because it will reduce the stress associated with meeting tenure requirements and other responsibilities. Some of the suggestions I offer may require consideration of the overall expectations for a university's tenure review process.

Sixth, I recommend that faculty members, staff, and administrators at predominately White colleges and universities provide and promote African American graduate student organizations (i.e., BGSA) and spiritual organizations. It has been demonstrated, in this study and others, that organizations such as BGSA enable students to meet, interact with, learn from, and support one another. Additionally, since several of the participants reported that their spirituality motivated them to complete their degrees, department personnel should make students aware of the full range of spiritual organizations on and near campus. This will allow students to meet their spiritual needs by participating in such organizations, if they so desire.

Seventh, student success, of course, does not necessarily start with college professors or administrators making a difference. Achievement can be motivated by elementary and high school teachers who provide students with encouragement to succeed in their chosen fields of study, particularly in math and science. As one of the study participants stated: "When I was in high school, I had a couple of mentors [teachers] who told me 'You are going to grad school; you are going to be a scientist.'" This participant believed that his motivation to pursue advanced degrees in math and science was encouraged early in his schooling by his high school math and science teachers, who strongly suggested that he had the abilities to do so. In this regard, it is important that teachers be trained to recognize and encourage talents in African American students. Therefore, a further recommendation deriving from this study is that all public school teachers should be required or encouraged to attend ongoing training programs that concentrate on teaching a diverse student body.

Eighth, recommendations for African American doctoral student success also must include recommendations to students themselves. Students should not expect college faculty members and administrators to take sole responsibility for students' achievement. Students must take responsibility for their positive experiences and successes. They might accomplish this by using academic success strategies suggested in the literature or by professors or other students in their departments. They can initiate academic and mentoring assistance from faculty members within their departments. If they are not successful in obtaining assistance interdepartmentally, they should seek assistance from faculty members,

administrators, or student-peers in other departments or disciplines in order to receive the help they need to succeed.

Conclusion

Few studies have investigated the graduate school experiences of African Americans. This study helps fill the void in and adds to the literature by exploring the factors that contribute to the successes of African American doctoral students. Many of this study's findings support those of other studies, such as the perception held by African American students that they need to work twice as hard as Whites to achieve success and their desire to perform well in order to serve as role models and good representatives of their race. Other findings here refute some past findings, the most notable of which is that these participants viewed their race as positively impacting their graduate school experiences. Also important is that this study raises questions about possible discipline-related differences in students' encounters with racism, obtaining financial aid, and motivations to succeed academically.

Further research with larger samples is needed on all of the issues examined in this study. Nonetheless, there is accumulating evidence that African Americans' positive experiences and academic achievements in graduate school relate to partly a variety of factors that do not apply to their White counterparts. Studies such as this one will contribute to university faculty members' and administrators' understanding of the factors that contribute to the successes of African American doctoral students. Strategies and practices should be implemented to increase African American students' success in doctoral study and, by extension, their representation in the upper levels of the U.S. workforce.

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APPENDICES

APPENDIX A

INTERVIEW PROTOCOL

The purpose of this study is to examine African American doctoral recipients'
student experiences prior to doctoral study and during their doctoral study, to gain an
understanding of what factors contribute to their successes in completing their
degrees, to examine how the role of race played in their doctoral student experiences,
and to examine how they perceive or understand their racial and ethnic identity.
According to the literature, race and how African Americans view their racial and
ethnic identity play a significant role in the experiences of these individuals.
Furthermore, according to the literature concerning graduate education research,
there are other factors that may impact doctoral student experiences, regardless of
race or ethnicity. Therefore, in this study, I took into consideration these factors in
relation to the graduate student experiences of African Americans.

To assist in understanding some of the experiences of African American doctoral
students, I explore how some African American doctoral recipients perceive their
graduate experiences through one-on-one interviews. Prior to starting the interviews,
I thanked the participants for agreeing to discuss their doctoral student experiences
with me. Then, I explained to the participants the purpose of the study and that their
participation in the study will contribute to graduate education research by informing
graduate education researchers of some factors that contributed to their success while
pursuing their doctorates. Although the participants should have read the cover letter
explaining the study, I believe that it is appropriate to review the purpose of the
study with the participants to clarify any misunderstandings. I also reiterated that the

interviews will be held in confidence and that the interviews should take between two to three hours in length. Furthermore, I informed the participants that if additional or clarification of information is needed, requests for multiple interviews may be necessary.

I started the interviews by asking some broad questions concerning the participants' doctoral student experiences. Below, I constructed a table to that assisted me in developing my interview questions.

Major Research Questions	Probe Questions
1. Tell me about your gradate student experiences.	• What were the highlights?
	• What were the challenges or problems?
	• Did you receive mentoring from faculty in your department or from other faculty or staff members elsewhere? Tell me about it.
	• Did you receive any fellowships or other financial aid from the university or other resources? If so, what type? If you did not, why?
	• Were there any African American faculty members within your department? If there were, what types of relationships did you have with them?
	• Did you form any relationships with student peers? If so, please elaborate.

	• Did you attend any academic conferences, present papers at conferences, or publish any articles or other materials? Please explain or elaborate. • Did you ever lack enthusiasm for your work or research? Please explain.
2. What prior experiences before graduate school may have affected your graduate experiences?	• What role did family and friends play in your educational experience prior to graduate study and your life in general? • Did you have any mentors or role models (i.e., teachers, counselors, etc.) that assisted you in your educational development prior to graduate school?
3. Tell me about your overall institutional experiences (as they relate to your department and/or discipline) while in	• Why did you choose to attend MSU for your doctoral study? • Did your program or department welcome ethnic minority issues in the classroom or in the curriculum? Please explain. • Based on your student experiences, what is your perception of the institutions' role in helping African American doctoral students succeed in completing their degrees? • What was your academic discipline in graduate school?

graduate school?	• Why did you choose this discipline? • What influence did family, peers, mentors, etc. have in your choice of this discipline? • Were you satisfied with your choice of discipline? Why or why not? • Did you apply your discipline to your career? How or why not? • What is your current occupation? • What are your future career aspirations?

4. What is your understanding or awareness of your racial and ethnic identity?	• In your opinion, how important is race and ethnicity in your own personal development?
	
	• How much of a role does being African American play in your educational experience and your life in general?
	
	  o (a) Very strong role
	
	  o (b) Somewhat strong role
	
	  o (c) Not a role at all
	
	  o (d) Not sure
	
	• Please explain your answer.

5. How does race and awareness of racial/ethnic	• How has race impacted your experiences prior to your doctoral study? • How has race impacted or played a role in your experiences as a doctoral student?

identity impact or play a role in your experience prior to graduate school and as a graduate student?	• Did you ever perceive your race as being a contributing factor to problems or successes you may have experienced while in your doctoral study? Please explain.
6. What kept you motivated to persist in completing your degree?	• Did you consider leaving the university while pursuing your doctoral degree? Why or Why not? • Why did you decide to stay? • What individual strategies did you use, if any, to assist you in gaining positive student experiences and/or ensuring your degree completion? • What organizational strategies, if any, did you use to assist you in gaining positive student experiences or ensuring your degree completion?

APPENDIX B

INVITATION TO PARTICIPATE / COVER LETTER

(Date)

(My name and address)

[Participant's name and address]

Dear [Insert participant's name]:

Your name has been randomly selected from Michigan State University records to participate in a research study that explores the graduate experiences of African American doctoral students. The purpose of this study is to examine the experiences of African American doctoral students and to gain an understanding of what factors contributed to their success in completing their degrees. When comparing the total number of African American doctorates earned in the United States by 1979 (1058), with the total number of African doctorates earned by 1999 (1596), the number of African American doctoral recipients annually has only increased by 538 within the past 20 years.

By participating in this study, you will be able to contribute information that could assist educational researchers and academic institutions increase the pool of African American doctoral recipients. The information provided will be obtained by tape recorded interviews and used as part of my completion for my Ph.D. in Educational Administration at Michigan State University. The one-on-one interview session will take approximately two to three hours in length. In addition, multiple interviews may be requested in the event that additional information or clarity of information is needed. Your cooperation throughout this endeavor will be held in confidence.

Enclosed you will find a consent form that briefly summarizes the purpose of this study, statements concerning your rights as a voluntary participant, and an explanation of how your confidentiality will be maintained. If you agree to participate in this study, please sign and date the consent form and return it to me in the enclosed envelope by [insert date]. I will contact you in two weeks to follow up on receipt of this letter and discuss any questions you may have. Should you have questions at any time about this study or its intentions, please feel free to contact my advisor, Ann E. Austin, Ph.D., or me.

I can be reached by telephone at (517) 381-9267 or by e-mail address bingmanl@msu.edu or Ann E. Austin can be reached at (517) 355-6757 or by e-mail address aaustin@msu.edu. Thank you in advance and I look forward to speaking with you within the next two weeks.

Sincerely,

Lloyd G. Bingman, M.Ed.
Doctoral Candidate, Michigan State University
Department of Educational Administration
Higher, Adult and Lifelong Education Program

APPENDIX C—CONSENT FORM

Title: African American Doctoral Student Experiences: Factors That Impact Persistence and Graduation

Researcher: Lloyd G. Bingman, M.Ed.

Doctoral Advisor and Principal Investigator: Ann E. Austin, Ph.D.

The research project in which you are agreeing to participate is a dissertation study about the experiences of 1999, 2000, or 2001 Michigan State University doctoral graduates. You will be asked several questions in an interview session format concerning your doctoral student experiences. Furthermore, the one-on-one interviews will be tape-recorded and may last approximately 2 to 3 hours in length. In addition, multiple interviews may be requested in the event that additional information or clarity of information is needed.

All information obtained during the interview will be held in strict confidence and your identity will not be disclosed in any form during the preparations or at the completion of the study. Only the researcher will be aware of your identity. Moreover, any names or identifiers presented in this study will be deleted or changed for your protection. Your privacy will be protected to the maximum extent allowable by law. The data obtained from this study will be stored by and accessible to only the researcher.

This research project is being conducted for the purposes of a dissertation. The research findings may also be included in an article or book for publication. There is no compensation for participation in this study. Again, all names and identities will be held in strict confidence at all times.

Rights as a Research Subject: If you have any questions at anytime pertaining to the purpose or intensions of the study and your role as participant, please contact Lloyd G. Bingman at (517) 381-9267 or Dr. Ann E. Austin at (517) 355-6757. Participation in this study is completely voluntary. You may withdraw your consent and discontinue your participation at anytime by contacting Lloyd G. Bingman. If you have any questions about your rights as a research participant, or are dissatisfied at any time with any aspect of this study, you may contact—anonymously, if you wish—Ashir Kumar, MD. and Chair of the University Committee on Research Involving Human Subjects (UCRIHS) by phone at Michigan State University at (517) 355-2180, by fax: (517) 432-4503, e-mail: ucrihs@msu.edu, or regular mail: 202 Olds Hall, East Lansing, MI 48824.

Your signature below indicates your voluntary agreement to participate in this study. Moreover, a copy of this consent form with your signature and the researcher's signature will be provided to you.

Participant's Printed Name:_____ Date_____

Participant's Signature:_____ Date_____

Principal Investigator's Signature:_____ Date_____

To ensure accurate data, the researcher requests to audio tape the interviews. After transcription of audio tapes has taken place, the researcher will destroy the audio tapes. Your signature below indicates your voluntary agreement that the interviews be audio taped for the purpose of ensuring accurate data.

Participant's Signature:_____ Date_____

Please return this form in the enclosed stamped addressed envelope by [insert date] to:
Lloyd G. Bingman
4271 Indian Glen Drive
Okemos, MI 48864
UCRIHS APPROVAL FOR THIS PROJECT EXPIRES: **/**/**

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