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THE EFFECTS OF AN ETHNIC-BASED MENTORING MODEL ON COLLEGE ADJUSTMENT, GRADE POINT AVERAGE, AND RETENTION AMONG FIRST YEAR AFRICAN AMERICAN COLLEGE STUDENTS ATTENDING A PREDOMINATELY WHITE INSTITUTION

By

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ABSTRACT

THE EFFECTS OF AN ETHNIC-BASED MENTORING MODEL ON COLLEGE ADJUSTMENT, GRADE POINT AVERAGE, AND RETENTION AMONG FIRST YEAR AFRICAN AMERICAN COLLEGE STUDENTS ATTENDING A PREDOMINATELY WHITE INSTITUTION

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Emanuel Nathan Thomas, III

Since the late 1980s Predominately White Institutions have witnessed an increase in African American enrollment to address the education gap between African Americans and Whites in higher education. While African American enrollment has increased at Predominately White Institutions, they have struggled with graduating African American college students at 50% or higher in a six year period. African American students specifically at Predominately White Institutions have continued to struggle academically and socially. Many African American students attending Predominately White Institutions may feel isolated because they are the only African American in their classes or organizations. In order to be successful, it is often the responsibility of the African American student to navigate relationships with administrators, faculty, staff, and their peers. Therefore if the racial climate is not perceived as positive at the Predominately White Institution, African American students may feel alienated. This has been associated with low academic and social adjustment and retention. To help first year African American students adjust academically and socially at Predominately White Institutions, an ethnic-based mentoring model

was implemented in an African American Student Mentoring Program at a large Predominately White land grant institution in the Midwest. The goal of this study was to train African American junior and senior college students on an ethnic-based mentoring model. The ethnic-based mentoring model included six proximal outcomes (Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, and Leadership Development) and three distal outcomes (College Adjustment, Grade Point Average, and Retention). Mentors were trained on these variables biweekly to support their mentee's College Adjustment, GPA, and Retention. The objective of this study was to empirically evaluate the effectiveness of an ethnic-based mentoring model that used a randomized pre-post test design. Statistical analyses included multivariate analysis of covariance to examine mean differences between the experimental and the control group, and an exploratory mediation analyses to determine if the proximal outcomes mediated the relationship between Racial Identity and College Adjustment. The results from this study were promising and demonstrated that mentoring significantly promoted mentees Racial Identity and Academic Support. Further analyses also found that Sense of Belonging and Leadership Development significantly mediated the relationship between Racial Identity and College Adjustment.

Dedicated to Barbara and Emanuel Thomas, my biological parents,

who passed early in my life;

Phyliss Underwood and Catherine Thomas, my aunts,

who passed while I was writing this manuscript;

and Amy Bradley-Thomas, my mother, and Tamara Baker Thomas, my wife,

who provided me inspiration, guidance, and strength to complete this JOURNEY.

GOD BLESS YOU ALL

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER ONE

Introduction and Background

Since the early 1980s much attention has focused on mentoring programs to support African American students attending Predominately White Institutions (PWI) (Allen, 1992; Haris, 1999). The goals of these programs are often aimed at helping African American students thrive academically, socially, mentally, and to graduate. Among the success of some programs, there continues to be the challenge with promoting successful college adjustment, Grade Point Average (GPA), and retention of African American students in higher education (Sellers, Chavous, & Cooke, 1998).

The U.S. Department of Education (2004) reported that approximately 16.5 million undergraduate students attended all (Predominately Black, White, Latino, Mexican) four-year degree granting institutions in 2000. Twelve percent of this population was Black. Out of the 12%, 2% of all Black college students attended Historically Black Colleges and Universities (HBCUs) (U.S. Department of Education, 2004). Unfortunately, no information was found on the approximate percentage of Blacks attending PWIs.

In a six-year period (1994 to 2000), the national graduation average for Black students was 40% compared to 57% for White students (Wilds, 2000). Out of the 40%, one-fifth of the degrees were awarded to Black students attending HBCUs (U.S. Department of Education, 2004). The national graduation rate for Black males was 31% and 42% for Black females (Cross & Slater, 2001).

In 2001, Blacks attending HBCUs earned the highest proportion of associate's, bachelor's (87%), master's, and doctor's degrees compared to other racial and ethnic groups (U.S. Department of Education, 2004). The inability for some PWIs to graduate Black students at 50% or higher in a six year period is of great concern. PWIs with high Black graduation rates (e.g., 60% to 70%) continue to graduate Blacks 10% to 35% lower than their White counterparts (Cross & Slater, 2001). This is of some concern considering that Black students at many PWIs represent less than 10% of the total student population (Wilds, 2000). One prominent explanation for the low graduation rate of Black college students attending PWIs is the lack of effective ethnic-based mentoring to help retain and persist Black students to graduation (Lee, 1999).

Statement of the Problem

To address the lack of scientific rigor in college based African American mentoring programs, this study will experimentally evaluate an ethnic-based mentoring model in an African American student mentoring program at Michigan State University. The model on which the program was based includes six factors (Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, and Leadership Development).

A systematic review of the literature was conducted to summarize research focusing on ethnic-based mentoring programs for African American college students. The goals of this review were to: 1) examine the important theoretical and empirical factors related to African American undergraduate

2

graduation rates and ethnic-based mentoring programs that focus on increasing graduation rates, 2) identify the factors within ethnic-based mentoring programs that are utilized to help retain and graduate African American college students at PWIs, and 3) assess the extent to which these programs have been empirically validated. To report the influence of the six factors on student adjustment, GPA, and retention, six areas were identified as benchmarks to determine if mentoring programs were evaluated effectively: 1) sample size, 2) pre-post test design, 3) a control group, 4) measures identifying factors that influence student adjustment, retention, and graduation, 5) GPA as an outcome, and 6) retention after two semesters as an outcome.

Context of Problem

Adjustment of African American College Students at Predominantly White Institutions

Several explanations have been proposed concerning the inability of PWIs to retain and graduate African American students. One explanation is that some African American students attending PWIs are unable to effectively adjust to the academic and social climate of the university (Armstrong-West & de la Tega, 1988). Additionally, while attending PWIs, some African American students will confront racism for the first time. Many of these students will also face academic and social isolation, which can lead to identity issues (e.g., internalized oppression), academic problems, financial difficulties, and poor mental health

3

(Cokley, 2000; Moritsugu & Sue, 1983; Terenzini, Patricia, Bohr, Pascarella, Amaury, 1997).

Research shows that prolonged (3 to 6 months or longer) stress caused by poor adjustment for students of color (Moritsugu & Sue, 1983), can lead to depressed mood (e.g., tearfulness, feelings of hopelessness), anxiety (e.g., nervousness, worry, jitteriness), maladaptive reactions (e.g., physical complaints, social withdrawal, work, or academic inhibition), and psychosocial stressors (e.g., being the only African American in a class) (American Psychiatric Association, 1994). To cope with these challenges, many African American students assimilate to the values of the majority (i.e., White Americans) to protect themselves from potentially troublesome circumstances (Erikson, 1968; Moritsugu & Sue, 1983).

Tinto (1975) argued that all college students, regardless of ethnicity or race, experience the challenges of academic and social adjustment. Yet, African American students attending PWIs may experience more difficulty academically and socially compared to their White counterparts (Fleming, 1984). These difficulties are often complicated by African American students being submersed in an Eurocentric culture (e.g., values and behaviors practiced by people from European decent who consider themselves White or Caucasian), where they have limited access to resources (e.g., role models, access to individuals who experienced similar adjustment issues) to help them cope with the stressors of their new academic environment (Harvey, 1984; Roach, 1999; Schwitzer, Oris, Ancis, & Thomas, 1999). This is perceived as a racist and/or racially divided and

hostile environment among many African American students attending PWIs (Gregory, 2000).

Racism in Higher Education

Racism has been and continues to be a serious issue for African American students attending PWIs (LeSure, 1994). Those who experience racial discrimination are more likely to drop out of school due to social isolation (LeSure, 1994; Roach, 1999). These discriminating practices can also have a negative impact on the student's academic performance and emotional well-being (Gregory, 2000). It has been shown that negative and discriminatory behaviors and reactions from faculty members result in African American students demonstrating poor learning practices, decreased self-esteem, and poor academic and social adjustment (Lesure, 1994; Roach, 1999).

In the 1990 Boyer report, two-thirds of the presidents at research institutions cited racism as problems at their university (Gregory, 2000). In a study of eight ivy- league institutions, 73% of the total number of respondents and 81% of the African American respondents perceived racism as a problem on their campus. Similarly, at the University of Maryland, Baltimore County, 20% of all students of color reported racial and verbal abuse on campus. One-third reported that their interpersonal relations had been "seriously affected," and the majority perceived themselves to be potential targets of discrimination (Gregory, 2000).

PWI environments, where the climate and social contexts are unfriendly, contribute to poor adjustment and a higher dropout rate among African American

students. To address this issue many universities have created various initiatives (e.g., development of campus culture centers and mentoring programs) to help retain African American students at PWIs (Gregory, 2000).

To improve the climate for minority students attending PWIs, higher education consulting firms have recognized universities that promote successful retention and graduation rates among minority students. In 2003, nine colleges were recognized for the Noel Levitz (Higher Education Consulting Firm) retention excellence award. The college of New Jersey Ewing was one college that received this award for their "Minority Mentoring Program". From their first to second year, the program increased mentee retention from 40% to 91%. As a result, 77% of the mentees in the program graduated in 4.4 years (Hanover, 2003).

Mentoring

Derived from Greek mythology (taken from *The Odyssey*), the term "Mentor" and the concept of "mentoring" became significant when Mentor, a friend and companion of King Odysseus, was entrusted the task of raising the King's son, Telemachus (Laden, 1999). Mentor served as Telemachus' father figure, teacher, role model, counselor, adviser, challenger, and encourager. Telemachus was labeled as Mentor's mentee, novice, and protégée, (Laden, 1999). Since that time, the term mentor has evolved, and now is typically defined as "the development of a leader through an individual, deliberate, and intentional process that is supportive, nurturing, insightful, and protective" (Hannon, 1999).

Mentoring (Boyd, 1988; Otto, 1994; Laden, 1999) allows the mentor to guide a mentee through obstacles or barriers and to provide ongoing support based on their knowledge and experience. Allen and colleagues (1997) found that mentoring could provide benefits to the mentees. They found that mentored first year business graduate students who received psychosocial support, reported a higher sense of self-esteem than students who were not mentored.

Mentoring has typically been associated with the apprentice model (i.e., an individual who is learning a skill) of graduate education, management, teachers, plumbers, and doctors (Jacobi, 1991). Over the last 20 years however, mentoring has been utilized as a retention and enrichment strategy for undergraduate institutions (Jacobi, 1991). There is a consensus from higher education, the business sector, and students that mentoring is a critical component of effective undergraduate education (Jacobi, 1991).

Emerging studies show the association between academic success (i.e., GPA and retention), graduation, mentoring, and devising a more operationalized definition of mentoring (Terrell, Hassell, & Duggar, 1995). The importance of operationalizing mentoring is clearly a concern of Terrell and colleagues (1995), who felt there is a lack of information that discusses the characteristics, goals, and organizational structures of a successful mentoring program in general, and ethnic-based mentoring models in particular.

Implementing an ethnic-based mentoring model can help college academic departments and Student Affairs programs teach mentors techniques their mentees can use to be, or remain, academically and socially successful

while in school. Some of these techniques would include mentors teaching mentees effective coping strategies (e.g., communication and self-advocacy skills) to help them deal with racism, academic challenges (e.g., completing writing and math assignments), stress (e.g., relationship with roommate), finances (e.g., paying for tuition and school supplies), and alienation (e.g., being away from home and feelings of not fitting in).

This positive support (from a mentor) may serve as an intervention for many first year student mentees of color in general and African American mentees in particular, who may not have otherwise received support if they had not been involved in a mentoring program.

Defining an Ethnic-Based Mentoring Model

for African American College Students

Over the past 100 years, African American students have challenged universities to create programs and centers that promote cultural awareness, sensitivity, and competence among university administrators to help retain African American college students at PWIs (Stennis-Williams, Terrell, & Haynes, 1988). Therefore, African American fraternities and sororities were created (early 1900s) and functioned as an ethnic-based mentoring mechanism, in which older students supported younger students by promoting brotherhood/sisterhood, academic achievement, and retention (Wesley, 1961).

Despite these efforts, there remains no clear definition of ethnic-based mentoring, and the effectiveness of mentoring provided by and for African

American students, staff, and faculty. Lester and Johnson (1981) defined

mentoring in higher education "as one to one learning relationship between an

older person and a younger person, which is based on modeling behavior and

extended dialogue between individuals" (p.119). Phelps, Tranakos-Howe,

Dagley, & Lyn (2001) defined ethnicity as a shared culture, language, religion, or

geography, which creates a sense of kinship, loyalty, beliefs, values, and

attitudes among the members of the ethnic group. An ethnic-based mentoring

model would encompass similar characteristics from Lester and Johnson's

(1981) and Phelps and colleagues definitions, but would be racially and ethnically

specific (Whitler, Calantone, & Young, 1988; Phiney, 1990).

CHAPTER TWO

Review of the Literature

Defining ethnic-based mentoring and examining the efficacy of programs that focus on the principles of mentoring African American students at PWIs is the basis of this literature review. Chapter one provided important theoretical and empirical background describing African American graduation rates and defining an ethnic-based mentoring model. The following sections will focus more specifically on the factors and literature that discusses ethnic-based mentoring programs with regards to retaining African American college students at PWIs.

Rationale for Choice of Program Factors

Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, and Leadership Development have been cited as effective mechanisms to assist African American students in PWIs. For example, Parham and Helms (1985) suggested that increased racial identity leads to positive academic and social development. D'Augelli and Hershberger (1993) noted that social support helped African American students address feelings of isolation, depression, and loneliness. Similarly, Pyant and Yanico (1991) indicated that providing African American students with psychological support helps students develop effective coping skills and the ability to control their stress. Thile and Matt (1995) felt that providing African American students with academic support

helps the student develop the skills to establish and obtain short and long term educational goals that lead to academic success. Postmes & Branscombe (2002) noted that Sense of belonging was important because it benefited African American students by allowing them to interact with other African Americans in an integrated environment. Lastly, Chavous (2000), Mitchell, and Dell (1992) suggested that as African American students become involved in college organizations and develop their leadership skills, it helps them become more connected with the campus environment.

Key Factors Examined In the Review

Racial Identity

Racial Identity was defined as a person's beliefs and attitudes about their own race and that of others (Mitchell & Dell, 1992). Parahm and Helms (1981) defined Racial Identity as a way for African Americans to explore and embrace group differences and eliminate barriers while maintaining their own individuality.

Social Support

Social Support was defined as a supportive relationship where an individual or network of individuals provides resources or services to another individual by giving them direction or reducing stressful situations (Jacobi, 1991; McGrath, Gutierrez, & Valadez 2000; Caplan, 1974).

Psychological Support

Psychological Support is a person helping another develop the attitude, coping skills, and resources necessary to develop a positive sense of self, control

over stress, and the ability to maintain hope in order to be psychologically healthy (Pyant & Yanico, 1991; Franklin, 1996).

Academic Support

Academic Support are the efforts of an individual to help a student achieve short and long term educational goals (e.g., test, homework, internships) in an academic environment (Jacobi, 1991). Academic Support for students is enhanced through skill development, goal setting, understanding how to access resources (e.g., tutors), and networking with others to find effective ways to overcome challenging academic tasks (Thile & Matt, 1995).

Sense of Belonging

Hagerty, Lynch-Sauer, Patusky, Bouswsema, and Collier (1992) defined Sense of Belonging as "the experience of personal involvement in a system or environment where an individual feels an integral part of that system or environment" (p. 173).

Leadership Development

Leadership Development is the process where a college student learns to care for their organization, integrates their ambitions with the needs of the organization, develops interpersonal relationship skills to handle conflicts, empowers others, and learns skills for task completion, planning, financial management, and evaluation (Battin, 1997; Striffolino & Saunders, 1996).

College Adjustment

Dahmus, Bernardin, and Bernadin's (1992) research showed College Adjustment being comprised of four components: Academic Adjustment, Social

Adjustment, Psychological and Physical Adjustment (Personal-Emotional Adjustment), and institutional attachment. Academic Adjustment is a student's ability to meet the educational requirements of the college. Social Adjustment is a student's ability to negotiate the social demands of the college. Psychological and Physical Adjustment are related to a student's ability to manage the positive and negative stressors (i.e., roommates, tests) while attending the college. Institutional attachment is the degree of positive feelings a student has about the college they are attending.

GPA

Grade Point Average (GPA) is the culmination of class grades in an educational setting. Undergraduate students in higher education obtain a GPA beginning their freshmen (first year of college) year until they graduate.

Retention

Retention (or persistence) in higher education is a student's ability to take and complete classes from one semester to the next. Retention of undergraduate students begins freshmen year and ends at graduation.

Literature Search Procedures

The literature review on ethnic-based mentoring programs included manuscripts from 1959 to 2003. The search process was conducted using the Educational Resource Information Center (ERIC) and Psych Info databases. The earlier part of this timeframe (1959 to 1983) was identified because of the historical context and events (e.g., Jim Crow laws) of the education system in the

United States. The later part of the timeframe (1984 to 2003) focused on the years when ethnic-based mentoring programs were being designed and implemented to help students of color (e.g., African American students, Latino students) adjust to the academic and social environments of a PWI (Terrell, Hassell, & Dugar, 1992).

Specific terms such as "mentoring" and "African Americans" were entered in the databases as subject and text words (DuBois, Holloway, Valentine, & Cooper, 2002). Combined searches (e.g., African American and mentoring, African American and ethnic-based mentoring, etc.) were also conducted in both databases to maximize the number of references found focusing on ethnic-based mentoring.

The search on the term "mentoring" produced 1217 references in Psych info and 3348 in ERIC. The combined search of "mentoring", "African Americans", and "Blacks" produced 19 references from Psych Info and 78 from ERIC. Another combined search was conducted on "mentoring", "retention", and "African American college students". This resulted in 2 references from Psych Info and 19 from ERIC. The last combined search included "mentoring", "ethnic", and "African American college students", which produced 5 references from Psych info and 2 from ERIC. Other studies (three) focusing on mentoring programs and African American college students were found in the reference section of manuscripts identified by Psych Info and ERIC.

Criteria for Including Studies

To be included in this literature review, studies had to meet several criteria. First, the studies had to include African Americans or students of color (African American, Asian, Latino, and Mexican American). Second, participants in the study had to be college students. Third, the studies had to involve some form of mentoring that supports the adjustment of students of color at PWI's. Fourth, the studies had to include at least three factors (Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, and Leadership Development) of an ethnic-based mentoring (Dollarhide, 1997;Gregory, 2000; Harris, 1999; Jacobi, 1991).

Studies of Ethnic–based Mentoring Programs

The search outcome identified 28 studies that were relevant to mentoring African American college students and students of color. Eighteen studies however, did not meet the inclusion criteria (i.e., did not include at least three of the six factors). Therefore, 10 met the inclusion criteria. Out of the ten studies, four studies only targeted African American students, one targeted Latino students, and five were mixed ethnic groups (most groups included African American, Asian American, Latino, or Mexican American students) that addressed the utility of ethnic-based mentoring programs among students of color attending PWIs.

Coding Studies

Studies focusing on ethnic-based mentoring programs were coded across five areas to assess their scientific credibility: 1) program goals, 2) factors (e.g.,

15

Academic Support, Social Support) identified in each program, 3) methodology

(e.g., sample size, pre-post test, control group, measure(s) assessing program

effectiveness), 4) outcomes (i.e., GPA and retention), and 5) strengths and

limitations of the mentoring programs. Table 2.1 provides a summary of program

factors, methodologies, and outcomes of each study.

Summary of Studies

Study 1: Promising Prospect For Minority Retention: Students Becoming Peer

Mentors (Good, Haplin, & Haplin, 2000)

Program: Minority Engineering Program

The goal of the Minority Engineering Program was to improve retention

rates among African American engineering students at a large predominately

White land grant university in the southeast (Good et. al., 2000). The objective of

the program was to use peer mentors to provide one to one mentoring to support

first year mentees in engineering. The results showed that first year mentees felt

that upper-class students provided networking and helped ease their transition

into the university (Good et.al., 2000). The sample included 19 (4 female and 15

male) mentors.

The mentors (upper-class African American engineering undergraduates)

were selected into the program based on interest and interviews with the

coordinator. Mentors attended a 2-hour training, which addressed

responsibilities as a mentor and procedures of the mentoring program. The

program director also met with mentors weekly to discuss their mentee's progress, development, and their roles as mentors.

Racial identity, social support, psychological support, academic support, and leadership development were mentioned as factors supporting the mentees adjustment at the university. To establish social support between mentees and mentors, mentors were matched with African American freshmen who were pre-engineering majors. Mentors met with their mentees weekly to provide ongoing social support. During their meetings mentors discussed the importance of their racial identity. Mentors felt that their mentees would have an easier transition to the engineering program if they shared their past experiences as an African American engineering student. Through social activities (e.g., meals, movies) mentors developed close relationships with their mentees by discussing issues related to racial identity, being an African American engineering student, and the mentee's first year experience. The social activities allowed mentees to share their feelings about stereotypes, ethnic isolation, and perceptions of racism. Through these interactions, mentors provided psychological support by discussing coping strategies to help their mentees deal with stress. Similarly, to help reduce the mentees academic stress, the mentors provided academic support by meeting with their mentees weekly for problem solving workshops related to their engineering courses. When needed, the mentors tutored their mentees in math and science.

To measure academic success, grade point averages (GPA) were collected from mentors and mentees prior and during their program involvement.

The program director evaluated the effectiveness of the mentoring program based on feedback provided by the mentors in their journals. Journals were content analyzed and coded into two areas: academic growth (e.g., study skills, improved understanding of engineering concepts), and interpersonal development (e.g., development of responsibilities and leadership skills, ease of social interaction and communication, and personal self-satisfaction).

From the fall to spring semesters, the mentors demonstrated a 70% increase in GPA. Mentors showed a 27% increase in their ability to solve and understand engineering concepts. Eighty-nine percent of the mentors enhanced their social skills, identity, and decreased feelings of isolation. From the beginning to the end of the school year, the program was able to retain 80% of its mentors. Information was not, however, provided on the mentors and mentees who dropped out of the program nor the significance of the reported outcomes.

A major strength of the study was the program's ability to collect pre-post-test data using GPA. Another strength was the use of mentor journals. The journal entries provided insight on how mentor's provided social, psychological, and academic support to their mentees. In many of the journals mentors expressed that the mentor mentee relationship provided an environment to understand each other's experiences, which helped them adjust to a PWI.

The limitations of this study were the lack of information reported from mentees, small sample size, lack of control group, and no information reported on the amount of time it took to graduate. The small sample size (N = 19) limited the program's ability to report significant conclusions and make generalizations to

18

the larger population. By not having a control group, it could not be determined if retention and improved grades of the students were a direct result of the mentoring or a result of other confounding variables (e.g., mentees receiving tutoring or support from their dorm resident assistant). The lack of information on mentee enrollment does not provide tangible evidence on how long the students were retained or if the students in the program graduated. Without feedback from the mentee, several questions remain regarding the effectiveness of the mentor.

Study 2: Centricity and the Mentoring Experience in Academia:

An Africentric Mentoring Paradigm (Harris, 1999)

Program: The Harris Mentor Model

The goal of Harris' model was to infuse Karenga's seven principles of Nguzo Saba (Umoja – unity, Kujichaguila – self-determination, Ujima – collective work and responsibility, Ujamma – cooperative economics, Nia – purpose, Kuumba – creativity, and Imani – faith) into Black Greek organizations. Harris felt Karenga's principles encouraged and empowered African American participants through self-knowledge (Harris, 1999). In this model, mentors and mentees were trained in building self-confidence and independence, ways to strengthen the mentor mentee relationship, unity/collective work and responsibility, and skill development. This model was created because of a lack of mentoring programs that provided African American students with positive self-ethnic images (i.e. African American role models) and empowerment.

The Harris model was administered to 108 African American undergraduate students at five higher education institutions in the southeast (no additional information was provided about the sample). Her model was based on the mentoring experiences of African American college students. These experiences created a revolving relationship between mentors and mentees (mentee could also serve as the mentor). Unfortunately, Harris did not outline how mentors were recruited, trained, or performed their responsibilities.

Harris' (1999) model coincided with the six factors of an ethnic-based mentor model. Based on her model and Karenga's seven principals (denoted in parentheses), racial identity (Nia - purpose) corresponded with self-confidence and independence, where a mentor/mentee experiences a healthy concept of themselves and a connection to others; social support, psychological support, and academic support (Imani - faith) corresponded with the mentor mentee relationship, where the mentor/mentee assists and works with others; sense of belonging (Umoja/Ujima) corresponded with unity/collective work and responsibility, where the mentor/mentee realizes their connectedness to others in the African American community; and leadership development (Kuumba – creativity) corresponded with skill development, where the mentor/mentee becomes an agent for change and participates in activities that transform themselves and the environment.

Harris used qualitative methodology (i.e., interviews and focus groups) to assess the effectiveness of the model. Results from the interviews and focus groups suggested that her model helped African American mentors and mentees

enhance their ability to work with other African American students and become more involved with campus organizations. Harris also felt that the program was able to empower both the student mentors and mentees, which in turn improved their social adjustment and academic success.

The strength of the study was Harris' theoretical development of an Africentric mentoring model. Harris suggested that an Africentric mentoring model could support the college student developmental process by allowing students to be both the mentor and mentee. She also suggested that the model had the ability to promote student success and empower African American mentors and mentees. This is based on her analysis about the model's ability to have African American mentors and mentees work together and become comfortable with the academic environment.

There were several limitations with this study. First, there was the lack of information about the responsibilities and interactions of mentors and mentees. This left us uniformed on how mentors and mentees were recruited, trained, interacted, and the type of activities they attended. Second, there was no empirical evaluation conducted. Therefore, it is unclear if the Harris model increased GPA or any other variables she identified in her study. Third and most important, without a randomly assigned control group, it cannot be determined whether the model empowered student's self-knowledge. For example, many of the students might have been the easiest to select, most promising students, or had the highest sense of self-knowledge prior to entering the program. Ultimately, without random assignment, you cannot attribute causation to any

effects due to selection, maturation, and historical confounds. Lastly, Harris failed to report how long her program retained mentors or mentees and if they graduated.

Study 3: Socializing and Mentoring College Students of Color: The Puente Project as an Exemplarily Celebratory Socialization Model (Laden, 1999)

Program: Puente Project

The Puente Project was a nationally award winning program for retaining Latino students at two year colleges and helping them persist to four colleges. The program emphasized the cultural attributes of Latino students and their social adjustment at a Predominately White Community College through a multidimensional and integrative approach that combined curriculum development, counseling, and mentoring. The goals of this one-year program were to retain Latino students in college, help them succeed academically, and support their transfer to a four-year institution to earn their bachelor and advanced degrees (Laden, 1999).

The Puente Project recruited professionals from the community to serve as mentors. Mentors were trained on exercises administered during the mentee's English class. During class, mentors supported students with English and discussed stressful situations Latino students may encounter in predominately White classes. This was considered the initial stages of mentoring in the Puente Project.

In the Puente Project, racial identity, social support, psychological support, academic success, and sense of belonging were variables studied. The program's counselors coordinated the social support activities between the mentors and mentees. Mentor and mentee meetings took place in and outside the English classroom setting (e.g., restaurants, campus buffet). At these meetings, the mentors and mentees discussed their feelings about entering the mentoring relationship. Mentors discussed topics that taught mentees about the educational system, their strengths and weaknesses, and never giving up on obtaining their goals (Laden, 1999).

During class meetings, racial identity was discussed with mentees through their reading and writing exercises. Mentees wrote about their experiences at a PWI and how those experiences influenced their identity as Latino students. Psychological support was provided through English teachers who served as counselors and mentors who worked in the academic and counseling professions. Counselors in the English class provided mentees with coping skills to help the students deal with stress and health issues concerning the cultural and social development of the Latino students. Counselors felt that not addressing cultural and social issues (i.e., Latino's successfully obtaining career goals in America without loosing their cultural identity) could compromise the college adjustment of Latino students.

Academic support was provided through the English class, where mentees worked on their reading and writing skills. Assignments included narratives written in English that focused on the mentee's Latino identity and their

ability to navigate through the academic system. Some of the topics discussed in class were: neighborhoods they grew up in, important knowledge learned from relatives, their racial identity, and understanding their Latino history (Laden, 1999). Mentees had to participate in the English class for one year.

As of 1998, Laden (1999) estimated that 9,000 students benefited from the Puente Project in 38 colleges and 21 high schools in California. Qualitative methods were used to collect and analyze the outcomes of the Puente Project. Interviews, observations, and archival data (i.e., institutional reports, newsletters, brochure, and news paper articles) were gathered to create themes about the Puente Project. During a two-year period the program had a 97% retention rate, and 48% of the students transferred to four-year institutions.

The strength of the Puente Project was its curriculum. The culturally appropriate curriculum focused on racial identity, academic counseling, and on culturally sensitive mentoring techniques through individuals on campus and in the community. The monitoring of mentee enrollment was another strength of the program. This information showed that less than 3% of the mentees in the program dropped out or did not graduate after two years.

There were several limitations with this program. First, the sample size of the Puente Project program year was not reported. Therefore, it is unclear how mentees in the program were tracked or accounted for as program participants. Second, empirical data was not provided on the student's GPAs (i.e., academic support) or any other factors (e.g., racial identity). Third, without a control group it was unclear how and if the 97% retention among the mentees was a direct

result of their participation in the program. Fourth, of the 48% of Puente Project mentees who attended four-year colleges, their graduation rate was never reported. Lastly, limited information was provided regarding the qualitative analysis used to evaluate the effectiveness of the program.

Study 4: Retaining African American Men Through Mentoring Initiatives (Lavant, Anderson, Tiggs, & Joseph, 1997).

Program: The Faculty Mentor Program

The goal of the Faculty Mentor Program was to increase the retention and graduation rate of African American students. The program was designed to support first generation African American college students born and raised in predominately urban African American communities attending the University of Louisville. This population of African American students was targeted because of their large dropout rate from the university.

University faculty were assigned as mentors to all incoming African American freshmen (N =129) admitted to degree granting units (e.g., Engineering, Psychology). Even though the program was not based on gender specifically, a primary focus of the program was to mentor the small number of African American men (n = 29). All participants (African American males) participated in the mentoring program for at least one year.

The Faculty Mentoring Program emphasized similar variables as the Puente Project, which were racial identity, social support, psychological support, academic support, sense of belonging, and leadership development. To support

mentees socially, mentors were assigned to the mentees based on the student's major (e.g., math majors were assigned to a math professor). First contact with mentees was during freshmen registration. Mentors were instructed to have bi-monthly or monthly contact with their assigned mentees by phone, letter, electronic mail, or face-to-face.

Mentors shared coping strategies (coping strategies were not identified or explained) with their mentees. They believed these strategies would support their racial identity and transition from inner-city communities to the new academic and social environment of a PWI. Mentors informed mentees that they would have to learn how to coexist as minorities in predominately White classrooms. Psychological support was provided to help the mentees adjust and cope with the stressor of being the only or one in few minority students in class. Psychological support was also provided through face-to-face interactions between the mentor and the mentee, where the mentors would help their assigned mentee navigate the social and academic stressors of being an African American male at a PWI. Mentors also supported their mentees by helping them develop a sense of belonging and by creating a welcoming environment through planned social activities (e.g., ice cream socials, pizza fest, Halloween parties, a barbeque, and free tickets to jazz week). These activities provided a structured, yet relaxed forum for mentors and mentees to interact and develop their relationships.

Mentors provided academic support to mentees by serving as their academic advisors. Mentors encouraged mentees to attend academic activities

(e.g., attending a program to hear the State Senator from Kentucky speak, who was an African American male) that supported their educational growth and character building.

To measure the program's outcomes (measured 1992 to 1997), mentors documented their experiences with their mentee and tracked their mentees' academic (monitoring GPA) and social progression (mentor journals) through college. Results of the program showed that 66% of mentees were retained (14 of the 29 were still in school, 5 graduated in 4.5 years, with 3 attending graduate school). The overall GPA of the mentees was 2.5 (range = 1.6 to 3.4). Two students left the program because of financial complications, one withdrew while on academic probation, three were dismissed (reasons not disclosed), and four students left the university and enrolled at other universities. The retention of Black men (66%) who participated in the program was higher than the national average of Black men (31%) attending college (Wilds, 2000).

A strength of the program was its ability to support African American men. This was demonstrated through the programs focus on racial identity, social support, psychological support, and sense of belonging. These factors were instituted as a preventive measure to support African American male student adjustment. Wilds (2000) believed these factors were critical, particularly for African American men attending PWIs who came from predominately African American communities. Another strength of the program was the experimental design. This included the collection of pre-post test data, reporting of two-year

retention rates, and reporting graduation rates. This was documented through mentor journals, mentee GPA, and mentee enrollment.

The limitations of the experimental design were small sample size and the lack of a control group. The authors felt that the program did not receive the needed financial and human support and commitment from school administrators, which limited the amount of students who could be served in the program. With the small sample size, the program lacked a strong longitudinal evaluation that evaluated students' progression over time. The lack of a structured longitudinal evaluation, which includes detailed measures (i.e., racial identity scale) and control group, made it difficult to determine the influence mentors had on their mentees' racial identity, sense of belonging, academic success, and college adjustment. Without a control group or measures to demonstrate change over time, it was unknown how much these factors contributed to the mentees' retention and graduation compared to individual perseverance or other university programs.

Study 5: The Role of Student Mentors in a Pre-college Engineering Program (Marable, 1999)

Program: Precollege Initiative for Minorities in Engineering (PRIME)

The goal of PRIME was to attract more African American college-bound high school graduates to pursue engineering degrees at Tennessee Technological University. Prior to implementation of the mentoring program, Tennessee Technological University had a student population of 8,200, where

3% of the student body were African American. The university was located in Cookville, Tennessee, which had an African American population of 2% (Marable, 1999).

The program was developed to help mentees reduce the stress of transitioning from high school to college, build confidence and self-esteem, and support their academic development. The program consisted of seven African American mentees. Some of the mentees came from single parent homes and were first generation college students. The program lasted six weeks during the summer and mentees received a $1,200 scholarship.

With the PRIME program social support, psychological support, academic support, and sense of belonging were variables discussed in the study. Undergraduate engineering students provided social support by serving as mentors for the incoming African American mentees. The mentor-mentee relationship was established using a peer counseling approach, which allowed mentors to engage in social, ethnic, and cultural activities as they related to and supported the mentees. Through weekly contact and exposure to other student groups, the mentor-mentee relationships were aimed at creating a sense of belonging for mentees at the university. For example, Marable (1999) reported that one mentee felt a strong sense of belonging because his mentor called him weekly, invited him to social activities on and off campus, cooked for him, and helped him with his classes.

The use of a peer counselor model provided mentees with psychological and academic support from a trained mentor. One way mentors psychologically

supported their mentees was by disclosing personal stressful information that African American students experience (e.g., personal relationships) at a PWI. Mentors provided academic support to the mentees by helping them with their basic engineering courses, developing effective study skills, and problem solving techniques for difficult classes (Marable, 1999).

The effectiveness of the program was measured through mentee interviews (conversations with evaluators), however Marable did not explain the methodology (i.e., where, when, and how information was collected) for gathering qualitative information through these personal conversations. Some questions asked of mentees were: 1) What has your experience been like with individual faculty members?, 2) What type of social support has your mentor provided to you?, and 3) How much time does your mentor spend with you? (Marable, 1999).

Results of the conversations showed that mentees felt they increased their academic and social adjustment throughout the school year. Mentees also shared that student mentors provided excellent guidance by sharing their personal experiences as first year African American engineering students. Lastly, mentees expressed that mentors spent a lot of time with them, which helped them feel connected to a group at the university and reduced their feelings of being alienated at a PWI.

The strength of the program derived from the peer counseling approach, which emphasized the development of close relationships among upper class students (mentors) in order to ease the stress of first year student's (mentees) transitioning into the university. The infusion of this approach provided a

framework for mentors to socially, psychologically, and academically support their mentees. Marable (1999) felt that the mentors' ability to provide ongoing support possibly helped the mentee sense of belonging and transition into college.

A limitation of this evaluation design was its lack of attention to studying which components of the peer counseling approach had a significant influence on the mentees' social adjustment, academic success, sense of belonging, and college adjustment. These limitations were due to a small sample size, lack of a pre-post test design, no control group, not monitoring GPA, and not tracking mentee enrollment for two-year retention and the time it took for mentees to graduate. Not addressing these important methodological factors, made it difficult to assess if the effectiveness of the peer counseling approach influenced mentee transitioning, if mentees received support from another mentoring model, or if mentees reached successful transitioning by themselves.

Study 6: What Does It Take To Have A Positive Impact On Minority

Students' College Retention (Newman & Newman 1999)

Program: Young Scholars Program (YSP)

The Young Scholars Program (YSP) is a long-term (6th grade to college) ethnic-based program that includes mentoring. The goal of the YSP was to increase the number of African American and other underrepresented groups (Asian American, Latino, Native American) attending college and graduate school. Implemented in different urban city public schools in Ohio (i.e., Akron,

31

Cleveland, Cincinnati), YSP nominated high achieving 6th grade students who were low income and where neither parent had a college degree. While in the program students must maintain a 3.0 or better GPA. During the 1994 autumn school year, 87 YSP students enrolled at The Ohio State University.

The summer after high school graduation, YSP students attended The Ohio State University for a three-week summer transition program. The program consisted of students attending classes that focused on academic course work, college preparatory courses (e.g., mathematics), career exploration, and cultural and social activities. Throughout the program and prior to attending college, YSP students received mentoring from community members (the authors did not explain the mentoring process in the study). In addition, YSP had a full time program coordinator, who worked closely with the public schools and monitored the student's progress. The use of a full time program coordinator helped pair mentees up with mentors to support the mentees educational needs.

Upon entering college, each student was assigned a mentor (i.e., YSP staff - number of staff not reported) for continued social and academic support. The mentor monitored their mentee's progress, provided guidance (e.g., academic and social resources) and familiarized students with campus resources (e.g., cultural organizations). Throughout the school year, mentors contacted their mentees to support and monitor their academic progress. Similar to the Harris model, the authors in this study failed to report the methods used to evaluate how mentors supported YSP mentees.

The mentees' GPA (average 3.00) was monitored to measure their academic success. Through journal entries, students reported their college experiences from their freshmen to junior years. Mentees mostly wrote about their academic experiences in the classroom and their ability to achieve satisfactory grades (i.e., one student was averaging a C in all his classes and was frustrated). Journal entries also documented the mentees' experience of frustration, isolation, confusion, and their resilience to overcome stressful situations (i.e., one student discussed how they did horribly on a midterm exam and used their Tae Kwon Do class to reduce their stress, focus, and relax).

After two years (Autumn 1994 to Spring 1996), Newman and Newman (1999) reported that 72% of the students in the program were retained. They found that these results were higher than the comparison group (retention 62%), who had similar demographic backgrounds (students who did not want to be in the program), and the entire freshmen class (N = 5,968; retention rate of 70%). Unfortunately, there was no mention of any statistical method used to empirically test if these outcomes were scientifically valid.

The program demonstrated several strengths. When students first entered the YSP program, mentors worked with mentees to improve their racial identity. This was a strong factor in the program because many of the students came from economically disadvantage (i.e., poor) backgrounds. Mentors supported their mentees by exposing them to educational opportunities (i.e., field trips to businesses) and encouraging them to attend The Ohio State University (OSU).

The ability for YSP to identify and fund underrepresented mentees through college appears to be another strong factor. Through YSP funding, mentees received college tuition and YSP staff who served as mentors to monitor and support the mentees' academic and social progress. By mentees serving in the program from middle school to college, a social support system was created among the mentees attending the OSU. The authors noted that these early relationships appeared to help YSP mentees support each other to overcome frustrating moments (e.g., performing poorly in class) while attending the OSU. To promote the mentees' academic success and retention, the program monitored the mentees GPA and enrollment.

Despite these strengths, there were several limitations to this study. First, the program did not include an evaluation component to determine how the program influenced student retention from middle school to college graduation. It was also unclear if the sample (N = 87) that attended the OSU were the same students from middle school or if some of the students started the program while in high school. Second, without a methodology that explains the type and frequency of mentoring YSP staff provided mentees in college, the only conclusion that can be drawn about the program was that it paid for the mentees tuition. Third, it was not assessed if the YSP mentees who attended The Ohio State University were in other support (i.e., Tae Kwon Do class) or mentoring programs, which could have influenced the mentees college adjustment. Fourth, the comparison group was comprised of students who did not want to be in the program. Therefore it cannot be determined whether YSP influenced mentee

retention. Lastly, the authors did not share the amount of time it took for mentees in the program to graduate. This would appear to be an important factor that would influence program funding and mentees graduating in four years.

Study 7: The Adventor Program: advisement and mentoring for students

of color in higher education (Shultz, Colton, & Colton, 2001)

Program: The Adventor Program

Similar to the Minority Engineering Program, the Adventor ("Adv" + "entor"; taken from Advisor and mentor = Adventor) was created to retain incoming students of color who attended Kutztown University's College of Education. The primary objective of this one-year program was to advise (e.g., support students academically) and mentor (e.g., support students socially) students of color.

The program had a sample of 19 mentees. Over half of the mentees were African American (60% African Americans, 40% Mexican Americans). Although the study had 19 mentees, 6 were omitted from the study because they participated in other mentoring programs prior to the Adventor program. Shultz and colleagues (2001) also reported that 67 first year students were chosen to participate in a control group.

Program training included mentors (faculty/staff) receiving an orientation on personal biases, attitudes, and cultural sensitivity. This training was critical, because the mentor-mentee pairings were not based on race. For example, if an African American mentee had a White mentor, the White mentor had to understand the issues African American students encounter at a PWI.

Providing social support, psychological support, academic support, and sense of belonging were mentioned as key factors of the Adventor program to maximize college adjustment, GPA, and retention. Similar to the Faculty Mentor Program, mentees were contacted prior to attending classes by their mentors. Mentors welcomed the incoming students to help them feel connected to the university and college of education. At the start of the program, mentors were matched with mentees based on their majors and availability. Mentors maintained relationships with their mentees weekly through phone calls, e-mails, letters, and social outings (e.g., lunch). Mentors also contacted their mentees weekly to provide social support and help their mentees adjust to their new environment.

As a way to help mentees feel a sense of belonging, mentors met with mentees on and off campus. Through these social events (e.g., soda meetings), the mentors were able to interact and build relationships with their mentees of color. To help maintain the mentor-mentee relationship, mentors attended programs and activities (e.g. basketball games) with their mentees. Since the mentors were also advisors, they supported the mentees' academic development and success, and addressed their social and emotional issues in order to ensure the mentee's psychological well-being. The mentors also monitored the mentees' grades and served as a one-on-one tutor for academic support.

To measure program outcomes, mentors met for mid semester meetings to evaluate the mentoring experience and address any difficulties. Through mentor and faculty communication, academic reports were kept to report

mentees' academic progress. Internal program evaluations were conducted, which involved an end of the year survey for mentors and mentees. The contents of the survey were not explained in the study. To measure retention, an evaluation of the students' academic achievement (i.e., GPA) and matriculation were collected from the registrar's office.

After one school year, Shultz and colleagues (2001) reported that more than half (77%) of the mentees who participated in the program were retained compared to 67% of students in the control group. The surveys also reported that 88% of the mentees and 91% of the mentors enjoyed the mentoring experience.

There were several strengths of the program. First, the design of the program included a mixed method of advising and mentoring. The authors suggest that this combination appeared to effectively support the mentor-mentee relationship in class, meeting outside class, and during social events. It also provided mentors with a means to monitor mentee GPA at the beginning and end of the school year. Second, was the training for mentors. This training allowed mentors to develop new skills and understand the family, financial, academic, and social issues students of color encountered while at the university. These skills also helped mentors understand how to offer mentees support socially, psychologically, academically, and create a sense of belonging for mentees. Lastly, mentors felt highly encouraged from the programs success to retain students over a one-year period. This was important because faculty and staff

felt more willing to be mentors and provide financial support for a successful program (Shultz et. al., 2001).

Limitations of the evaluation design included the small sample size, a nonequivalent control group, and tracking of two-year retention and years to graduate. The authors noted that the program struggled with finding faculty to serve as mentors, and as a result only a small number of students could be mentored. With the small sample size (results in low power), it becomes difficult to report statistically significant results, and to generalize such findings to the target population.

Further, the researchers incorrectly reported the use of a control group (consisted of 67 students). The 67 first year student's who were admitted to the university, were not randomly selected to participate in the Adventor program. By not creating a control group that is randomly selected from the target population of first year students to be mentored, invalidates the study's scientific credibility. Therefore if the control group came from the same target population, the retention of 67% might have been the same or greater for the control group.

Similar to the other evaluations in this review, another limitation was the lack of reporting two-year retention and the number of years it took for mentees to graduate. Based on the program's structure (advising and mentoring), it is not clear why retention and graduation were not included in the study. With an advising model, one would believe that retention and graduation would be primary factors associated with student academic and social progressing.

Study 8: Using a Student Organization to Increase Participation and Success

of Minorities in Agricultural Disciplines (Talbert, Larke, & Jones, 1999)

Program: Minorities in Agriculture, Natural Resources, and Related Sciences

(MANRRS)

The goal of MANRRS was to foster partnerships between minority (African

American, Latino, Asian) agriculture and natural resource college students and

professionals from the academic, government, and business arenas (Talbert et.

al., 1999). Established in 1986, MANRRS chapters are in several land-grant

colleges and universities across the United States.

The program combined the grooming and networking mentoring models to

support the advancement of minority students. The grooming mentoring model

had three components: 1) one-on-one relationships, 2) hierarchical structure,

where the mentor is over the mentee, and 3) benefits that only transfer from the

mentor to the mentee (i.e., mentors knowledge and expertise can help mentees

be successful) (Talbert, Larke, & Jones, 1999). The network mentoring model

also had three components: 1) collaboration among several individuals to

exchange psychosocial and vocational benefits, 2) assistance by a skilled

facilitator, and 3) exchange of responsibilities between the mentors and mentees

(i.e., mentees are placed in situations in which student guidance about current

trends educate the mentor) (Talbert et. al., 1999).

To help support mentees several variables were mentioned within the

mentoring program. Mentors provided social support to mentees by establishing

friendships. These friendships provided mentees the opportunity to discuss their

personal and professional goals. Mentors also provided academic support through academic counseling (i.e., helping students talk to professors when they need help) and tutoring.

Mentors implemented the grooming and networking mentoring models to create a sense of belonging within the MANRRS program. By inviting mentees to MANRRS activities mentors tried to help mentees feel part of a group. Through the networking mentoring model, leadership development was addressed through mentor mentee role reversal. This allowed the mentees to assume the leadership role by providing information (e.g., how to best work with first year African American students) and guidance to their mentors.

To measure the impact MANRRS had on mentees, information was obtained through a qualitative approach. Documents (i.e., brochures, mission statements, and MANARRS publications, meeting minutes) were gathered and analyzed for statements, experiences, and activities related to mentoring (Talbert, Larke, & Jones, 1999).

Evaluation of the program showed that 70% of the mentees graduated in 6 years. Mentees also reported that the program provided career, networking, and leadership development opportunities (Talbert, Larke, & Jones, 1999).

The strengths of the MANRRS program were the application of the theoretical concepts from the grooming and networking mentor models. Both models provided the opportunity for mentees to receive individual support while also benefiting from networking with individuals who worked at private industries, government agencies, and other universities. Another strength was the

evaluations ability to track mentee enrollment and to report the length of time mentees took to graduate. With 70% of mentees graduating in six years, the authors used program meeting notes to suggest the program's effectiveness. They felt that social support and networking opportunities were possible factors that helped mentees feel confident about their majors, academic success, and future employment opportunities.

One limitation of the MANRRS study was the failure to mention the number of students who participated in the program. Other limitations included no report on the methods to conduct pre-post test assessments, the lack of a control group, and no reports on two-year retention. Without knowing the number of mentees in the program it is difficult to determine the effectiveness of the program. Likewise, since the study reported two-year retention, the number of mentees retained and matriculated to graduate should have been reported. Based on the current information in the study, we can only conclude that less than 30% of mentees were retained or graduated in a four or five year period.

Another limitation of this study was the lack of a pre-post test design. This design needed to examine the grooming and networking mentoring models influence on mentee adjustment and GPA. Moreover, without a control group we cannot be certain that the grooming and networking mentoring models influenced mentee adjustment, retention, and graduation, compared to them being on their own. Lastly, the methodologies of the grooming and networking models were not operationalized in order to measure the influence of the mentors mentoring. Therefore, we don't know how the grooming and networking models helped

mentors influence the mentees' ability to network, develop leadership skills, and adjust academically and socially.

Study 9: S-Plan: Support Survival and Success for African American and Latino

Students

New to Penn State (Thomas, 1999)

Program: S-Plan

The goal of S-Plan was to retain African American and Latino Student new to Penn State University. In 1999, 60 mentors (upper class undergraduates) participated in the program. During this year, upper class students mentored over 300 African American and Latino students (Thomas, 1999).

Student mentors were recruited during the spring and trained (training included mentor responsibilities, ethics, peer counseling techniques, and paperwork) a week prior to the start of fall semester. Mentors were assigned 4 to 6 freshmen mentees. Mentors were registered for a weekly class, where they received ongoing training to support themselves and their mentees. Mentors attended a weekend training retreat, which addressed problem solving, identity development, conflict resolution, stereotypes, trust building, relationships, teamwork, and mentoring.

First year students were randomly selected from the registrar list to participate in the program. Once students agreed to receive mentoring, the student mentor contacted their mentee and invited them to the program's student welcome. At the student welcome mentees met their mentor and were introduced

to other African American and Latino student mentors, mentees, faculty, and staff.

In S-Plan racial identity, social support, academic support, psychological support, academic support, sense of belonging, and leadership development were variables discussed to support mentees. During weekly meetings mentors were taught and discussed cultural issues that addressed their racial identity so they could appropriately support their African American and Latino mentees. From their weekly meetings mentors provided social support, psychological support, and sense of belonging by meeting their mentees weekly for programs, dinners, or social outings (i.e., bowling). Through monthly programs, mentors addressed issues that were specific to the African American and Latino mentees' sense of belonging and college adjustment at a PWI. For example, an educational program called the "Mis Education of Generation X" helped mentees develop skills to deal with stereotypes and racism, and the impact campus stereotypes had on students' mental health and psychological well-being. Mentors' leadership skills were taught through the organizational design of the program. Within the program, student mentors had different positions (i.e., Coordinator, Facilitator, and Mentor). Although an advisor supervised the positions, the hierarchy allowed mentors to learn how to supervise other mentors and manage various aspects of a large mentoring program.

To measure the mentor and mentee outcomes, Student Affair program evaluations were administered. The evaluations assessed program goals, preparedness, and whether program objectives were met. In addition to Student

Affair program evaluations, student logs were collected to assess and account for the mentors' progress with their mentees. To monitor academic success, mentors and mentees self-reported their GPA's.

The results of the program demonstrated that 80% of the mentors graduated between 1997 and 2001. The author did not report mentee retention or graduation in this program. With the implementation of an ethnic-based student leadership mentor model, student mentors in the program increased from 7 to 60 in two years. The program collaborated with over 25 campus organizations and increased program participation by 400% (Thomas, 1999).

The strength of the program was its ethnic-based student leadership mentor model. The goal of this model was to help mentors develop personally (e.g., embracing their cultural values and adjusting to the norms of a PWI); while also learning effective practices to support their mentees. Teaching leadership skills to mentors helped them collaborate with other mentors in class, which helped provide an opportunity for African American and Latino mentors and mentees to have a sense of belonging at a PWI.

Unfortunately, this program was not empirically evaluated. Without a randomized experimental and control group, which includes a pre-post test design, it was difficult to determine the influence of S-Plan on mentor and mentee adjustment, retention, and graduation.

Study 10: The Ethnic Mentor Undergraduate Program: A Brief Description of

Preliminary Findings (Thile & Matt, 1995)

Program: Ethnic Mentor Undergraduate (EMU)

The goal of this program was to serve freshmen and transfer students new to San Diego University by promoting ethnic pride, student support, and academic success. Thirty-two students participated in the program (10 – African American, 19- Latino, and 3 - Filipino students). Seventeen were freshmen and 15 were community college transfer students. The sample included 27 women and 5 men. The mean age of the mentees was 22 (range = 19 to 30 years). Mean high school GPA was 2.95, which was comparable to the university's freshmen class average of 3.00. Other demographic measures were Student Assessment Test (SAT) scores, parent's education, family income, and whether students were employed and the amount of time they worked (Thile & Matt, 1995).

Letters of interest were sent to new students inviting them to participate in the EMU program. The program was designed to accommodate 40 students. Upper class and graduate students were recruited to be mentors. Mentors were responsible for mentoring 3 to 6 mentees. Once students were selected to participate in the one-year program, they were assigned a student mentor. Freshmen mentees were matched with senior level students and transfer students were matched with graduate students. An effort was made to match students based on ethnicity and major.

In this program racial identity, social support, psychological support, academic support, and sense of belonging were important factors. Mentors, who exposed mentees to ethnic and cultural workshops, provided mentees an opportunity to explore their racial identity. In the EMU program, racial identity was a key element mentors employed to support their mentees' social adjustment. This was especially true for mentors who provided ongoing social support to their mentees. Mentors contacted (e.g., by phone or in person) their mentees 1 to 4 times a week. Through the mentor's social support, mentees were exposed to other students from similar ethnic backgrounds. These interactions provided a forum for mentees to develop relationships and to help them feel a sense of belonging at the university.

By having mentees attend potlucks and one-on-one meetings with their mentors, a sense of trust was built. This trust provided mentors the opportunity to support mentees who were experiencing stressful adjustment issues and to develop effective coping skills (to adapt personally and academically), which could possibly help the mentees' psychological well-being. Similarly, mentors also served as coaches to help mentees access resources (e.g., tutors) and talk to faculty to increase their academic performance. The mentees' academic support included classes and workshops that focused on classroom skills, study skills, library use, computer application, report writing, academic advisement, and career counseling (Thile & Matt, 1995).

Five different measures were utilized in this study. First, the biographical inventory was used to collect demographic data (i.e., family income). The other

four measures were: Generalized Content Scale (GCS), Index of Self-Esteem (ISE), Self Efficacy Scale for Academic Mile Stones (AMS), and Self-Efficacy Scale for Educational Requirements for university majors (ERS). Unfortunately, the authors did not provide the purpose for using the particular measures or the reliability of the measures (Thile & Matt, 1995).

Significant results showed that participants in the program had an 82 % retention rate after 1 year. This was 57% higher than African Americans who were not in the program (retention 25%). Students in the program had a fall semester GPA of 2.56 compared to the university's freshmen population (GPA =2.20). The spring semester GPA was similar for both groups (EMU = 2.30, other freshmen = 2.21). Students in the program also reported a higher level of self-esteem. Students did not report a higher level of academic self-efficacy (Thile & Matt, 1995).

The strengths of the EMU study design were the mentoring methodology and the pre-post test measures to collect GPA, academic self-efficacy, and self-esteem. The sample size (N = 32) for assessing the programs effectiveness was large enough to report significant t-test and z-scores on academic performance and persistence, generalized contentment and self-esteem, academic self-efficacy, and change between fall and spring semester. This allowed the authors to suggest that students who participated in the program were more likely to return to the university for a second year and achieve better grades (Thile & Matt, 1995).

The limitations of the study were the lack of a control group, small sample size, reporting two-year retention, and the length it took students to graduate in the program. Not having a control group did not allow the program to make causal inferences about the effects of the program. Therefore, we cannot be certain if other factors contributed to the mentees academic success and retention. Likewise, without having a research design that includes a randomized experimental and control group, we are uncertain if those in the program truly differ from those who could not participate in the program. Thile and Matt (1995) felt that " small sample sizes limit the ability to detect program effects that may be practically significant but small in magnitude and the statistical power of the current study was insufficient to detect all but the largest program effects"(pg. 124). By not tracking student retention from first year to graduation it is unclear if the efficacy scale truly predicts a mentees ability to matriculate and graduate.

Analysis of Ethnic-based Mentoring Studies

Table 2.1 shows that all the studies focused on three or more of the factors (i.e., racial identity, psychological support, social support, academic support, and sense of belonging) related to retaining students of color. Two studies (Harris, 1999; Thomas, 1999) discussed all six factors, with the remaining eight studies (Good et. al., 2000; Laden, 1999; Lavant et. al., 1997; Marble, 1999; Newman & Newman, 1999; Shultz et. al., 2001; Talbert et. al., 1999; Thile & Matt, 1995) including at least four factors. Social support and academic support were the only two characteristics discussed in all ten studies. Eight of

the studies included psychological support and sense of belonging. Racial identity (e.g., ethnic or cultural identity development) was identified in six studies, and leadership development was identified in four programs.

Eight studies reported sample size (range = 7 to 108). All ten studies reported the duration of the mentoring programs (range = 6 weeks - 1 year). Five studies included a pre-post test design. Of these five studies, only Shultz et.al., (2001) reported having a control group.

All the studies included some type of a methodology used to explain the program's outcomes. Five studies used GPA to measure academic growth, with GPA collected at the beginning and end of the programs' duration. All the studies collected qualitative data through either mentor or mentee journal writings, mentor reports, mentee interviews, or program documentation (e.g., program brochures). Five of the mentoring programs collected enrollment data from the registrar's office, which provided more detailed information on retention and graduation (two reported graduation and retention, two programs reported graduation rates, and one program reported retention). Thomas' (1999) program collected data through Student Affair evaluations. These were evaluations Student Affair Units (e.g., Resident life, Office of Health Education, Greek Life) used to monitor the effectiveness of student affair related programs. Thile and Matt (1995) had the only study that administered four different measures (GCS scale, ISE scale, AMS scale, ERS scale) that examined the effectiveness of the EMU mentoring program.

The lowest retention rate reported among the ten programs was 66% and the highest was 97% (rates based on 2, 4 or 6 year follow-up period). The lowest reported retention rate (66%) was 26% higher than the national average (40%) for African American college students. Five mentoring programs reported an increase in student academic success (via GPA, and mentor and mentee reports). The reports provided by the mentors and mentees also suggested that program participants had an increase in social development, support, and adjustment. Lastly, Thile and Matts (1995) study reported an increase in mentors' self-esteem using the Index of Self-Esteem scale.

The Need to Empirically Examine Mentoring Programs

As noted earlier, none of these ten studies utilized a rigorous evaluation design. Less than half of the studies reported on the sample size or either did not have or report on the pre-post test design of the program. Studies that did not collect baseline data (e.g., GPA, racial identity) failed to accurately determine factors that influenced retention and graduation rates.

While all the studies reported goals to retain students, none used a control group to compare group differences or to assess if increased retention rates occurred as a result of involvement in the program or from some other social, environmental, or psychological factors. The majority of these studies also did not mention how they measured the effectiveness of the mentors' mentoring abilities (i.e., Good et. al., 2000; Thile & Matt, 1995). For example, the EMU program mentioned the inclusion of a racial identity component, however, there

50

was no mention of a measure assessing the racial identity of its mentees. Similarly, Harris (1999) did not report on the methodology used to measure how effective the mentors mentored their mentees.

Thile and Matt (1995) were the only investigators who administered measures that empirically examined how effectively the mentors mentored their mentees. One limitation however, was that the reliability of these measures was not reported. The other studies (Shultz et. al., 2001; Thomas, 1999) measured program effectiveness through qualitative data or by means of non-statistically tested internal evaluations developed by the program administrators or the university. Lastly, the goal of all the mentoring programs was to retain and graduate students of color. However, only two studies (Laden, 1999; Lavant et. al., 1997) reported mentee two-year retention rates and the time it took for them to graduate.

In order for mentoring programs to be determined to be effective, rigorous evaluations are needed and programmers must develop empirically grounded programs that can be tested over time.

Table 2.1

Summary of Ethnic-based Mentoring Studies

Ethnic-based studies	Program Factors						Methodological Factors							Outcomes
	Racial Identity	Social Support	Psychological Support	Academic Support	Sense of Belonging	Leadership Development	N	Pre-post test	Control group	GPA	Measures utilized	2 year retention measured	Years to graduate measured	
Study 1 Good, Haplin, & Haplin (2000)	No	Yes	Yes	Yes	No	Yes	19	Yes	No	Yes	Student journals	No	No	1) GPA increased 70% for Mentors 2) 27% of mentors increased their ability to support their mentees 3) 89% of mentors enhanced their social and psychological skills 4) 80% of mentors retained after one year
Study 2 Harris (1999)	Yes	Yes	Yes	Yes	Yes	Yes	108	No	No	No	Student feedback	No	No	1) Author felt African American students collaborated more with other African Americans 2) Author felt model empowered mentors and mentees to support each other socially, psychologically, and academically

52

Table 2.1 (Cont'd).

Summary of Ethnic-based Mentoring Studies

Ethnic-based studies	Program Factors						Methodological Factors							Outcomes
	Racial Identity	Social Support	Psychological Support	Academic Support	Sense of Belonging	Leadership Development	N	Pre-post test	Control group	GPA	Measures utilized	2 year retention measured	Years to graduate measured	
Study 3 Laden (1999)	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	Interviews & Archival data	Yes	Yes	1) Author reported 97% retention & graduation rate after two years (students attended community college) 2) Author reported 48% of students transferred to 4 year institutions
Study 4 LeVant, Anderson, Tiggs, & Joseph (1997)	Yes	Yes	Yes	Yes	Yes	No	29	Yes	No	Yes	Mentor logs	Yes	Yes	1) Average GPA 2.5 2) Enrollment showed 66% of the males were retained after five years and 17% graduated within four years 2) Mentors felt mentees became more involved in campus life by increasing their social involvement

53

Table 2.1 (Cont'd).

Summary of Ethnic-based Mentoring Studies

Ethnic-based studies	Program Factors						Methodological Factors							Outcomes
	Racial Identity	Social Support	Psychological Support	Academic Support	Sense of Belonging	Leadership Development	N	Pre-post test	Control group	GPA	Measures utilized	2 year retention measured	Years to graduate measured	
Study 5 Marable (1999)	No	Yes	Yes	Yes	Yes	No	7	No	No	No	Mentee interviews	No	No	1) Mentees felt they increased their academic performance 2) Mentees felt social support from mentors increased first year adjustment 3) Mentees felt mentors provided outstanding social, psychological, and academic support
Study 6 Newman & Newman (1999)	Yes	Yes	No	Yes	No	No	87	Yes	No	Yes	Student journals	Yes	No	1) Avrg GPA 3.00 2) Enrolment showed 72% of mentees in the program retained after 2 years (university =70%) 2) Students felt they increased their academic performance 3) Students felt an increase in social support and personal identity

Table 2.1 (Cont'd).

Summary of Ethnic-based Mentoring Studies

Ethnic-based studies	Program Factors							Methodological Factors									Outcomes
	Racial Identity	Social Support	Psychological Support	Academic Support	Sense of Belonging	Leadership Development		N	Pre-post test	Control group	GPA	Measures utilized	2 year retention measured	Years to graduate measured			
Study 9 Thomas (1999)	Yes	Yes	Yes	Yes	Yes	Yes		78	No	No	No	Program evaluation & Mentor logs	No	Yes			1) Author shared from 1997 to 2001, 80% of mentors graduated 2) Author shared that mentors increased mentee & student program participation in one year by 400%
Study 10 Thile & Matt (1995)	Yes	Yes	Yes	Yes	Yes	No		32	Yes	No	Yes	Personal data Measures GCS ISE AMS ERS	No	No			1) EMU GPA 2.43, 1st year class 2.20 2) Enrolment showed an 82% retention rate for mentees after 1 year, university = 73% & 25% for African Americans not in the program 2) Mentees had an increase in self-esteem(ISE) and results for academic self-efficacy (AMS) was not significant

Table 2.1 (Cont'd).

Summary of Ethnic-based Mentoring Studies

Ethnic-based studies	Program Factors						Methodological Factors							Outcomes
	Racial Identity	Social Support	Psychological Support	Academic Support	Sense of Belonging	Leadership Development	N	Pre-post test	Control group	GPA	Measures utilized	2 year retention measured	Years to graduate measured	
Study 7 Shultz, Colton, & Colton (2001)	No	Yes	Yes	Yes	Yes	No	13	Yes	Yes N=67	Yes	Mentor & Mentee Feedback	No	No	1) Adventor Avrg GPA 2.13, control group 2.0 2) Enrollment showed 77% of the mentees and 67% of the control were retained after 1 year 2) 88% of the mentees and 91% of the mentors shared that they had a good mentoring experience
Study 8 Talbert, Larke, & Jones (1999)	No	Yes	No	Yes	Yes	Yes	No	No	No	No	Archival data & Meeting notes	No	Yes	1) Authors shared that 70% of mentees graduated within 6 years 2) Authors felt that program provided career, leadership development, and networking for mentees

56

Purpose of the Current Study

The low five year retention rate (40%) of African American college students attending PWIs is and continues to be of great concern. To address this issue, a review of the literature was conducted to 1) examine the important theoretical and empirical factors related to African American retention and ethnic-based mentoring programs, 2) identify the factors within ethnic-based mentoring programs that help retain African American college students at PWIs, and 3) assess the scientific credibility of the claims that the programs were effective.

Ten studies were identified describing mentoring programs that focused specifically on students of color attending PWIs. Social support and academic support were factors discussed in each mentoring program and racial identity, psychological support, and sense of belonging were factors identified in at least half of the programs.

Even though the ethnic-based mentoring programs provided in this review contained similar factors, the question remains, do they effectively influence African American college adjustment, retention, and graduation? Without a scientifically credible way of evaluating the outcomes of these mentoring programs, it is difficult to assess the influence ethnic-based mentoring programs have on college adjustment, GPA, retention, and graduation rates among African American students attending PWIs. The lack of rigorous empirical investigation may be due to the lack of staff, financial resources, absence of a defined mentoring model (e.g., grooming and networking mentoring models) in college mentoring programs, small numbers of African American college students, and

57

the inability to control for confounding factors and to evaluate program effectiveness over time (Jacobi, 1991).

The purpose of this study was to evaluate the influence of an ethnic-based mentoring model and the factors (i.e., Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, Leadership Development) that influenced African American student college adjustment, GPA, and retention in an African American based student mentoring program at a PWI. From September 1, 2003 to May 1, 2004 (first and second semester of the 2003-04 academic school year) the mentor program evaluation involved the recruitment and training of 30 African American student mentors. Eighty African American freshmen students participated in the study. Fifty received mentoring (experimental group) and thirty did not (control group). Participants answered a 253 item survey that was administered fall (pre-test) and spring (post-test) semesters. The primary goal of the study was: 1) to train African American junior and senior mentors how to mentor African American mentees using an ethnic-based mentoring model, 2) for mentors to provide mentoring to African American mentees (African American Freshman) once a week for an hour, 3) to determine if participating in an ethnic-based mentoring program significantly affected the Experimental Group compared to the Control Group on proximal and distal outcomes, and 4) to determine if Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, and Leadership Development mediated the relationship between mentoring (Experimental Group) and College Adjustment, GPA, and Retention.

CHAPTER THREE

Analysis and Research Questions

This study is an empirical evaluation of an ethnic-based mentoring model for African American students at a PWI. "The African American Student Mentoring Program", a yearlong mentoring program, used African American student mentors to support African American college freshmen new to Michigan State University. African American freshmen who participated in the study were randomly selected into an experimental or control group. The goal of this study was to evaluate the effectiveness of an ethnic-based mentoring model and the factors that influence mentee College Adjustment, GPA, and Retention in an African American student mentoring program at a PWI.

The premise of an ethnic-based mentoring model was designed from a racial identity theory for African American college students. Chavous (2000) research on racial identity suggested that students who increase their racial identity (i.e., beliefs about race and self) have a greater connectedness to African American culture and report better academic and social adjustment outcomes at PWIs.

Figure 3.1 shows Group (Experimental and Control) as the primary independent variable that could influence the relationship proximal (Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, and Leadership Development) and distal outcomes (College Adjustment, GPA, and Retention). Further observation of the model shows the

proximal outcomes possibly mediating the relationship between the distal

outcomes.

Figure 3.1 Ethnic-Based Mentoring Mediation Model
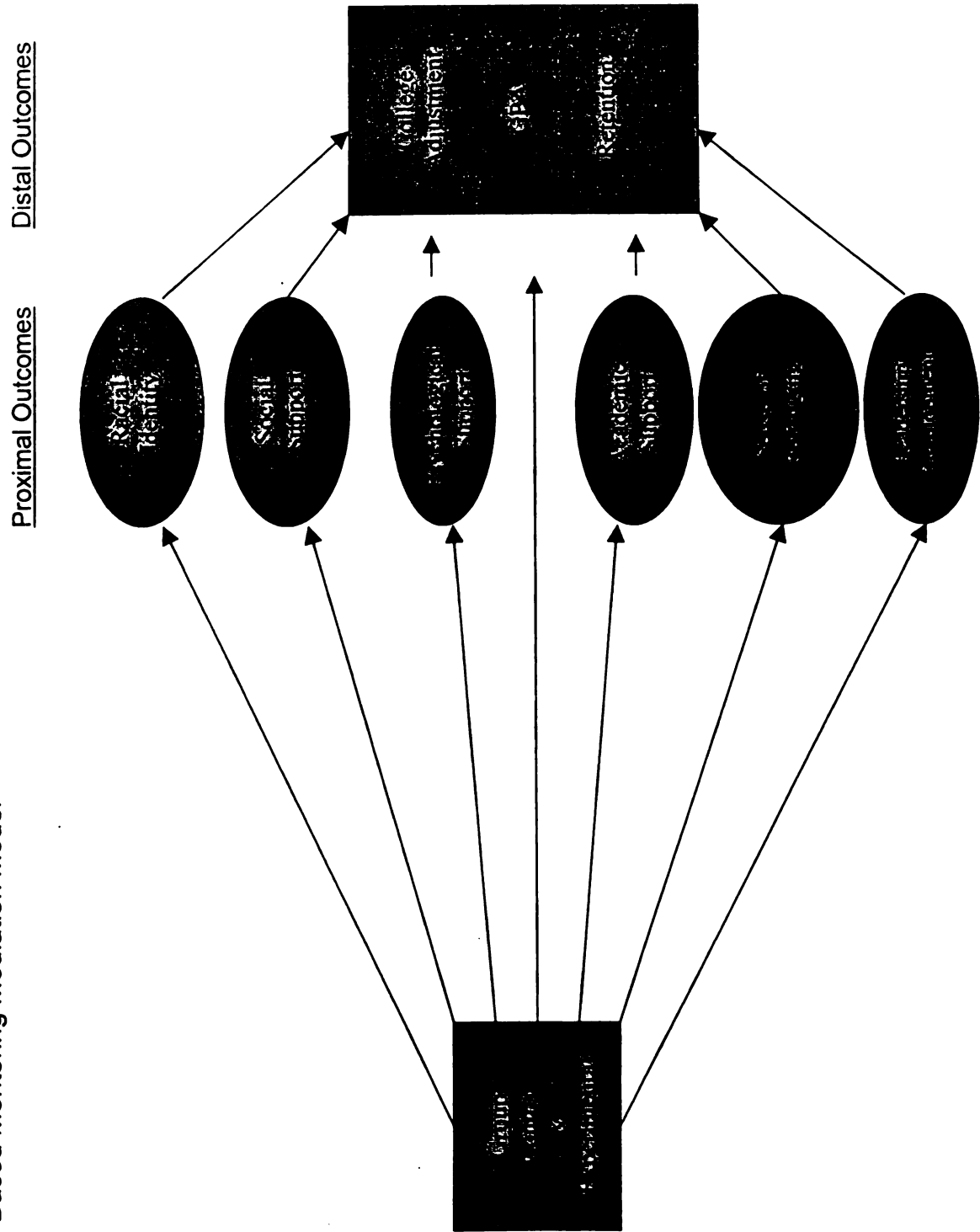
Research Questions

Based on review of the literature focusing on ethnic-based mentoring programs, the following research questions were asked:

1. Does the Experimental Group report significant higher scores at time two on proximal outcomes (Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, Leadership Development) and distal outcomes (College Adjustment, GPA, and Retention) compared to the Control Group?

2. Six research questions were tested to determine if Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, and Leadership Development mediated the relationship between the Experimental Group and College Adjustment.

   A. Does Racial Identity mediate the relationship between the Experimental Group and College Adjustment?

   B. Does Social Support mediate the relationship between the Experimental Group and College Adjustment?

   C. Does Psychological Support mediate the relationship between the Experimental Group and College Adjustment?

   D. Does Academic Support mediate the relationship between the Experimental Group and College Adjustment?

   E. Does Sense of Belonging mediate the relationship between the Experimental Group and College Adjustment?

F. Does Leadership Development mediate the relationship between the Experimental Group and College Adjustment?

3. Six research questions were tested to determine if Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, and Leadership Development mediated the relationship between the Experimental Group and GPA.

A. Does Racial Identity mediate the relationship between the Experimental Group and GPA?

B. Does Social Support mediate the relationship between the Experimental Group and GPA?

C. Does Psychological Support mediate the relationship between the Experimental Group and GPA?

D. Does Academic Support mediate the relationship between the Experimental Group and GPA?

E. Does Sense of Belonging mediate the relationship between the Experimental Group and GPA?

F. Does Leadership Development mediate the relationship between the Experimental Group and GPA?

4. Six research questions were tested to determine if Racial Identity, Social Support, Psychological Support, Social Support, Sense of Belonging, Academic Support, Leadership Development mediated the relationship between the Experimental Group and Retention.

A. Does Racial Identity mediate the relationship between the Experimental Group and Retention?

B. Does Social Support mediate the relationship between Experimental Group and Retention?

C. Does Psychological Support mediate the relationship between Experimental Group and Retention?

D. Does Academic Support mediate the relationship between the Experimental Group and Retention?

E. Does Sense of Belonging mediate the relationship between the Experimental Group and Retention?

F. Does Leadership Development mediate the relationship between the Experimental Group and Retention?

CHAPTER FOUR

Methods

The current study is part of a larger longitudinal evaluation that examined the effects of an African American student mentoring program on student adjustment, retention, and graduation among first year African American college students.

Process of Implementation

In October of 2001, a strategic plan was designed to research possible mentoring program(s) for African American students at Michigan State University (MSU). First, a meeting took place with the Vice President of Student Affairs. Second, research was collected on the Office of Support Services (OSS). Third, meetings took place with the Coordinator of Diversity in James Madison College (JMC) within MSU. Fourth, meetings were held with the founders of the Peer Advising Mentoring Model. Fifth, collaboration with the Student Coordinator in the Office of Racial Ethnic Student Affairs (ORESA) took place to implement a campus wide mentoring program for African American students.

In the fall semester of 2001, a meeting took place with the Vice President of Student Affairs to discuss mentoring programs at Norfolk State University and Penn State University. The meeting was used to identify mentoring programs at MSU that used an ethnic-based mentoring model for African American students. The Vice President of Student Affairs was not aware of any similar mentoring

programs on MSU's campus. However, to get an idea of different programs he suggested a meeting with the Director of OSS.

Meeting with the Office of Support Services. The purpose of OSS was to retain, graduate, and address the academic needs of students through the College Achievement Admission Program (CAAP), which provides academic support to first generation, low income, and students who may need academic support. OSS provides an array of services to support students, including mentoring, however, OSS nor any other campus program, utilizes an ethnic-based mentoring model. This information led to meetings with other campus staff and students.

Meeting with the James Madison Diversity Coordinator. The Diversity Coordinator was the Advisor for the W.E.B. DuBois Society, an organization to support African American student retention and graduation in MSU's James Madison College. MSU's retention data showed that African American students in James Madison College were retained and graduated at a higher rate than other MSU students. The Diversity Coordinator knew about these retention and graduation rates in James Madison, however, many African American students self-reported a low sense of belonging to the college. The Diversity Coordinator was presented information on an ethnic-based mentoring model and its success at Norfolk State University and Penn State University for increasing African American sense of belonging. After the meeting, the Diversity Coordinator agreed to find funding to implement the program for interested African American students in James Madison College.

Meeting with Peer Advising Mentoring Model Founders. In October of 2002, a meeting was held with a senior and graduate MSU student who were trying to implement a Peer Advising Mentoring Model they co-developed to support African American Students at MSU. Sharing the success of mentoring programs at Norfolk State and Penn State a collaboration was formed with the two students. The collaboration would incorporate the components of an ethnic-based mentoring model as a curriculum of the Peer Advising Mentoring Model organizational structure. However, prior to an agreed plan for collaboration, the James Madison Diversity Coordinator had to be consulted about working with a larger mentoring initiative.

Collaboration for Implementation. In February of 2003, a meeting was held with the Student Coordinator in the Office of Racial Ethnic Student Affairs (ORESA), and the Peer Advising Mentoring Model founders. The group was informed that the James Madison Diversity Coordinator agreed that James Madison would support a larger mentoring initiative. By collaborating with James Madison, interested DuBois students would be mentors and mentees in the program, and a focus would include creating a stronger sense of belonging among African American students in James Madison College. At the conclusion of the meeting the group agreed to work together and consolidate their resources.

Funding Proposal. The initial funding proposal was based on an annual budget of $25,000 for a five-year pilot program. From March to April 2003, the team (this researcher, the Student Coordinator in ORESA, and Peer Advising

Mentoring Model founders) developed a power point presentation, which was the basis for funding. The Student Coordinator in ORESA arranged a meeting with the Vice President of Student Affairs, student affairs directors, and faculty who could assist in funding the program.

On April 18th, 2003, the funding proposal was presented to the Vice President for Student Affairs, Director of OSS, Director of the Center for School Reform, and a student from the Black Student Alliance (BSA). The key areas discussed in the presentation were: 1) identifying the problem (retention of African American students in higher education and specifically Michigan State University), 2) student mentoring as a solution, 3) factors associated with successful mentoring programs, 4) benefits of a racial and ethnic identity focus, 5) results of similar mentoring programs, 6) Peer Advising Mentoring Program structure, 7) collaboration, and 8) challenges and benefits to implementing an African American student mentoring program at MSU. The potential funders felt the presentation was outstanding and agreed to review their budgets to provide financial support.

In June 2003, the MSU Provost agreed to contribute an annual budget of $12,000 for the next five years. The Dean of James Madison College agreed to contribute $3,000 for one year. Once the mentoring program received funding, the program was officially named the African American Student Mentoring Program (AASMP).

University Committee on Research Involving Human Subjects (UCRIHS)

Application. The UCRIHS approval form and consent were accepted October 6, 2003.

Organization Structure

AASMP Board

The primary goal of the Board was to insure the program was directed by students and supported by faculty and staff. The founders recommended students to the Board based on several factors. These factors included the student's campus experiences, ability to supervise other students, knowledge to collaborate with students, faculty, staff, and their availability to attend meetings and trainings. When a student met the recommended criteria they were invited to participate on the Board. Three students were recommended to the board and all were accepted. A total of five individuals served on the Board.

Responsibilities. The Board was responsible for planning, overseeing finances, recruitment, supervision of mentors, service delivery, evaluation, training, programming, and collaborating with various university departments and student organizations. Since the program was new, the Board assumed other responsibilities as needed (e.g., developing brochures to market the program).

From September 8 to December 5, 2003, and January 12 to April 30, 2004, the AASMP Board conducted several initiatives to develop student mentors and mentees. First, student mentors received training every other week in the Eppley building (Business building on campus with classrooms). Second, student mentors and mentees were administered time one surveys, which

incorporated a Mix and Mingle. Third, mentors participated in a weekend retreat. Fourth, student mentors provided weekly mentoring. Fifth, in December mentors and mentees participated in an end of the semester celebration. Lastly, in March time two surveys were administered. The semester concluded with the end of the year celebration.

Board member(s) facilitated mentor training (45 to 75 minutes) and supervision (45 to 75 minutes) meetings for approximately two hours. Each meeting began with the training topic (e.g., racial identity), the goals, and objectives to be discussed during that class time. The objective of the training was to educate mentors about ethnic-based mentoring and help them apply their knowledge to each other and their mentees.

For supervision the Board met in mentor groups (6 to 8 mentors). With five Board members (when directing mentor groups called Board facilitators), the mentors were divided into four groups with one Board member assigned as a "floater" (worked with different groups to provide support and facilitate supervisions in the absence of another Board member).

Supervision allowed mentors to discuss their mentoring experiences. For example, Board facilitators used mentors experiences to guide them through successful and troubling (e.g., resistant mentees or mentees with roommate issues) mentor mentee relationships. These types of supervisions helped Board facilitators reemphasize training topics mentors found difficult to implement (e.g., mentee involvement) with their mentees.

Participants

The participants in the study were from Michigan State University (MSU). Founded in 1855, MSU is a large (44,542 students, 2003 enrollment) public land grant institution (colleges or universities throughout the United States that were given land by the federal government for the purpose of educating citizens in the state) in the Midwest. Approximately 8% (3,604) of MSU's undergraduate population is African American, 5% (2,283) Asian, 2% (852) Latino, .06% (287) American Indian/Alaskan Native, and 75% (33,406) Caucasian (Michigan State University Registrar's Office, 2003). The remanding 9% consist of international and graduate students.

The sample consisted of 80 African American freshmen students. Of the 80 students, 50 were randomly selected into the experimental group and 30 into the control group. The experimental group consisted of 30 women and 20 men and the control group included 16 women and 14 men (Table 4.1).

Recruitment of Mentors and Mentee Participants

Table 4.1

Mentor and Mentee Participants

Participants	Desired Participants	Desired Men	Desired Women	Applied or Interested	Accepted	Agreed to Participate
Mentors	26	13	13	105	30	30
Mentees	52	26	26	102	102	80

Table 4.1 (cont'd).

Participants	Participants Men	Participants Women	Experimental Group		Control Group	
			Men	Women	Men	Women
Mentors	13	17	13	17	None	None
Mentees	34	46	20	30	14	16

Recruitment of Mentors

Mentors were African American juniors and seniors who were interested in mentoring African American freshmen students. Four approaches were used to recruit the African American student mentors: 1) Brochures, 2) Flyers, 3) Board outreach, and 4) student referrals. In the second week of July 2003, brochures and flyers were sent to campus faculty and staff to recruit students as mentors.

During the first two weeks of classes (August 24th -September 8th, 2003), students were recruited through the student welcome resource fair. At the welcome, AASMP had an information table, which students completed applications to be mentors. Students who applied to be mentors also referred other students who were interested in being mentors.

The goal was to have 26 mentors, 13 men and 13 women. A total of 105 sophomores, juniors, and seniors applied to be mentors; 30 were accepted (13 men and 17 women) (Table 4.1). Out of the 30, 5 were students from James Madison College. The inclusion criteria to become a student mentor was to have at least a 2.5 grade point average (GPA), commitment for at least one year, some mentoring experience, willing to attend bi-weekly training meetings, willing

to attend a mandatory retreat, and willing to mentor (four hours in a two week period) two freshmen students.

Recruitment of Mentees

According to the registrar's 2003 freshmen enrollment data, MSU admitted approximately 7,012 freshmen students. Approximately 568 (8.1%) were Black and 351 were not admitted to the College Achievement Admission Program (CAAP). CAAP freshmen were selected out of the sample because they received weekly to monthly academic and social support from OSS counselors.

During the second week of July 2003, all freshmen not already assigned to CAAP were sent a recruitment letter and brochure explaining the mentoring program. During the first week of August the DuBois Society sent additional brochures to all James Madison freshmen students (n = 9). Flyers were also posted in campus dorms, the student union, and academic departments to solicit freshmen student interest.

On August 24th, 26th, and September 7, 2003 (student welcome dates) the same information table at the student welcome resource faire to recruit mentors was used to recruit mentees. Board members helped freshmen complete interest forms and answered questions about the AASMP. Between the August and September student welcomes, all 351 freshmen were contacted via email, phone, or face to face to solicit their participation in the program.

Interested students who returned phone calls and interest forms were contacted and screened by the Board. This eliminated freshman already assigned to CAAP. Once students were screened, they were informed about the

study and selection procedures (whether they would be in the experimental or control group). The goal was to have at least a sample of 100 interested African American freshmen students by September 8, 2003. After all recruitment efforts, 249 students did not participate (students were unreachable, in CAAP, or declined to participate) in the study. This resulted in 102 freshmen (women = 56 and men = 46) interested in receiving mentoring. Of the 102 students, 22 declined (women = 10 and men = 12) to participate and 80 completed time one surveys.

Demographics

The total sample of student mentees (N = 80) included 34 men (43%) and 46 women (57%) participants. Forty percent of the experimental group included men (n=20) and 60% were women (n=30). Forty-seven percent of the control group included men (n=14) and 53% were women (n=16). Eighty-five percent (n=68) of the total sample were born in 1985. Sixty-five students (81%) were from the state of Michigan (MI), with 36% (n = 29) from Detroit, MI. More than half (n = 51) of the students came from high schools where at least one-fourth of the student population were Black. Twenty-three percent (n=18) of the total sample came from households with a total annual income of $80,000 or more, with 21 % (n=17) from households with an annual income of $45,000 - $79,999.

The predicted GPA (a calculated average set by MSU for entering freshmen students) of the participants was 2.42(SD = .43). The predicted GPA for the control group was 2.42(SD = .39) and the experimental group was 2.43(SD = .46).

Random Assignment

This study used a randomized pre and post-test design. Pre and post-test data was collected during the first and second semesters of the 2003-04 academic school year, and participants were compared on racial identity, social support, psychological support, sense of belonging, academic success, leadership development, college adjustment, GPA, and retention.

Participants involved in the intervention were surveyed during the second week of October (fall semester) and the third week of March (spring semester). The experimental group received mentoring based on the proposed ethnic-based .mentoring model and the control group received monthly contact by email or phone, but no mentoring. Contact with the control group included asking how participants were doing in general (i.e., "Hi I was just calling to see how things were going for you at MSU?").

Measures

The National Study on Black College Students was used to gather demographic data, and six measures [Racial Identity Attitude Scale (RIAS), General Well-Being (GWB), Senses of Belonging Inventory (SOBI), Leadership Development, Activity, and Planning Measure (LDAPM), College Student Social Support Scale (CSSSS), Student Adaptation to College Scale (SACS), Grade Point Average, student enrollment, and Mentor Satisfaction Scale] were used to assess participant behaviors. The key variables measured were Racial Identity, Social support, Psychological Support, Academic Support, Sense of Belonging,

and Leadership Development, College Adjustment, GPA, and Retention. Once data were collected from the 80 participants at time one and two, each measure was reexamined for scale reliability using the Statistical Program for Social Sciences (SPSS), Version 11.0 for Windows.

When items were removed to increase the coefficient alpha for each scale, items for time one and time two were compared by examining each inter-item correlation. If inter-item correlations were below .22 (standard error of r when N=80) for both time one and two, the item was removed.

Demographics

The National Study on Black College Students (NSBCS) (Appendix C, Demographics) inventory was used to gather information on African American college student's experiences (Allen and Strong, 1994). Fifty questions from this 54 item questionnaire were used during pre-test to capture demographic data (e.g., family income, where they are from). The questionnaire was developed to provide a dataset specifically about Black college students. The measure was designed as longitudinal study to examine the patterns of Black student adjustment, achievement, and aspirations in the context of eight PWIs and HBCUs.

Proximal Outcomes

Racial Identity was measured using Helms and Parham's (1996) *Racial Identity Attitude Scale (RIAS)* (Appendix C, Section 1). The Racial Identity internalization scale (the internalization of being Black and the accepting of White for African Americans in the United States) was only used for this study. A five

point likert scale (1 = "Strongly Disagree" to 5 = "Strongly Agree") to measure participant beliefs. The scale has been primarily used with African American college students. The Internalization (items = 12) subscale used for this study had coefficient reliabilities of α = .51, α = .69, and α = .80, respectively. The coefficient alpha for the Racial Identity scale at time one was α = .70 (items = 12) and α = .74 at time two (items = 12).

Social Support was measured using the *College Social Support Scale* (CSSS) (Appendix C, Section 6) (McGrath, Gtierrez, and Valadez, 2000). The availability of support subscale was 26-item scale used for this study. A five point likert scale (1 = "Never" to 5 = "Almost Always") measured the different types of social support available to participants. This measure has a coefficient alpha of .92. The coefficient alpha for time one was α = .92 and α = .90 for time two.

Psychological Support was measured using the *General Well-Being (GWB)* (Appendix C, Section 2) schedule (Dupuy,1977). The measure is an assessment of subjective feelings of psychological well-being and distress for use in community surveys. Even though this scale was created in the late 1970's, Mcdowell and Newell's book "Measuring Health: A Guide to Rating Scales and Questionnaires" (1996), recommended this measure because of its outstanding reliability (r =.85 for college students). The measure is an 18-item scale that has six subscales (i.e. Anxiety, Depression, Positive well-being, Self-control, Vitality, and General health). High scores on this scale represent high psychological well-being and low scores represent low psychological well-being. The entire General

Well-Being scale was administered to the participants. The coefficient alpha at time one was α = .82 and α = .83 at time two.

Academic Support was measured using six items. Five questions came from McGrath et. al. (2000) original social support scale (44 items). These questions were chosen because they reflected the academic support participants would receive in a college environment. The five items were: 1) Q9: My advisor helps me to plan my course schedule, 2) Q15: My professors meet with me outside of class when I have questions, 3) Q21: My roommate encourages me to go to classes (my friend encourages me to do well in classes), 4) Q24: My friends proofread my writing assignments, and 5) Q39: My friends lend me materials in class. The additional question, Q48: I have a mentor who challenges me to do the best academically", was added to help assess Academic Support from a mentor. A five point likert scale (1 = "Never" to 5 = "Almost Always") measured how different types of academic support were available to participants. The coefficient alpha for Academic Support at time one was α = .46 and α = .63 at time two.

Sense of Belonging was measured using the *Sense Of Belonging Inventory* (SOBI) (Appendix C, Section 3) (Hagerty and Patusky, 1995), which is defined as "the experience of personal involvement in a system or environment so that persons feel themselves to be an integral part of that system or environment". The measure contains 27-items that examines a participants experiences of feeling valued, needed, accepted, and their perception of fitting in a particular system or environment (Hagerty and Patusky, 1995). The 27 item

measure was used because it had been tested on a large sample of college students (coefficient alpha was not reported for the 27 item scale). A four point Likert scale (1 = "Not relevant" to 4 = "Very relevant") measured participants sense of belonging. The coefficient alpha for this instrument was a = .87 at time one and a = .87 at time two.

Leadership Development was measured by *The Leadership Development, Activity, and Planning Measure* (LDAPM) (Appendix C, Section 4) (Erwin & Marcus-Mendoza, 1988). The measure is a 3-item subscale of the Student Descriptive Questionnaire. The measure examines leadership potential, extracurricular activities, and educational plans. The coefficient alpha was not reported for this measure.

Twelve additional items were developed form the Communities That Cares (CTC) key leader survey to determine organization participation and leadership ability to promote community change (Greenberg & Osgood, 2000). The first question asked if the student considered him/herself as a leader (Yes or No). The next eleven items used a six point Likert scale (0 = "Not at all to 6 = Excellent") to rate each student's leadership ability. The eleven items were: 1) getting students to work on Campus issues or projects, 2) recruiting students to participate in campus activities, 3) recruiting students to join a campus group, 4) project planning, 5) running effective meetings, 6) developing new student leaders, 7) organizing a committee, 8) getting campus leaders to listen to you, 9) getting other groups or organizations to partner with your group in campus initiatives or improvement efforts, 10) knowing other leaders outside of your own

group, and 11) knowing strategies that would improve your campus. The 3

LDAPM items and 12 leadership items resulted in a coefficient alpha of $\alpha = .94$ at

time one and $\alpha = .91$ at time two.

Distal Outcomes

    College Adjustment was measured using the *Student Adaptation to*

College Questionnaire (SACQ) (Dahmus, Bernardin and Bernardin, 1992)

(Appendix C, Section 5). The Student Adaptation to College Questionnaire is a

67- item questionnaire that measures a student's ability to adjust to the campus

environment academically and socially. The SACQ is divided into four

subscales: Academic Adjustment, (items = 24), Social Adjustment (items = 20),

Personal-Emotional Adjustment (items = 15), and Attachment (items = 15). The

coefficient alpha for the entire scale was $\alpha = .95$. The coefficient alpha at time

one was $\alpha = .91$ and $\alpha = .94$ at time two.

    Four items were removed from the analyses due to low inter-item

correlations: Q18: I have several close social ties at Michigan State University

(MSU), Q27: I enjoy writing papers for courses, Q33: I am getting along very well

with my roommate(s) at MSU, Q35: I have put on (or lost) to much weight

recently. After removing these items, the scale had a coefficient alpha of $\alpha = .92$

for time one and $\alpha = .94$ for time two (items = 63).

    Grade Point Average (GPA) was based on a five point grading scale (0 =

F, 1 = D, 2 = C, 3 = B, 4 = A). This grading scale is used by higher education

institutions and reported the universities registrar's office.

    Retention was a based on student enrollment (No = 0, Yes = 1).

Survey Management

The AASMP survey filing system was managed in ORESA (Room 338 Student Service Building). Two file cabinets were provided that contained mentee and mentor confidential information and data. One file cabinet contained mentor applications, freshmen interest forms, participant releases to contact relatives, backup disk with participant database, and a list of participant names with student IDs. The second file cabinet contained the surveys for time 1, time 2, and backup disks that contained the survey data. Both file cabinet were locked when not in use and could only be accessed by the Board.

The participant database (Microsoft Excel Program) included each participant's last and first names, gender, address, major, whether they were contacted to take the survey, took the survey (time 1 and 2), and whether they were randomly selected into the experimental or control group. All the participants received a participant identification (ID). There were a total of 102 participants who initially agreed to be mentored.

Survey identifications (ID) were twelve-digit numbers (00-0000-00-0000) created for each mentee and mentor. The first digit identified the student as a mentee (1) or mentor (2). The second set of four digits represented the month and year (1003) the participant started the evaluation. The third set of two digits identified the student as female (01) or male (02). The last set of four digits represented the participant's subject number (i.e. 0001, 0002, 0102).

The surveys were colored coded and marked as time 1 (T1) and time 2

(T2). Time 1 surveys were coded yellow and time 2 surveys coded brown. For

clarity and future understanding the time periods preceded the variables (i.e.

t1a1, t1a2, t2a1, t2a2) in the SPSS database.

Pre-test Administration

The Board was trained as proctors on October 8th. They were taught how

to administer surveys, insure students were completing survey items, collect

surveys, and assign IDs to survey participants at the Mix and Mingle. The Board

also received training for contacting students who did not attend the Mix and

Mingle.

On October 9th, 2003 the AASMP Board conducted a Mix and Mingle for

the 102 students interested in having a mentor. Ten days before the Mix and

Mingle invitations were sent to each student's room. Invitations were followed

with an email to each student. The day before the event every student was

called and reminded about the Mix and Mingle. The program took place at a

Lecture Hall, which was a room that accommodated 150 students.

At 3:50 two greeters (Board members) were at the door with participant

attendance sheets. Each greeter had two sheets, one for men and another for

women. As students entered the room they were instructed to complete a name

tag, meet people with a similar dot on their name tag, and ask the meet and greet

questions (e.g., "What is your name and where are you from?") on the black

board.

At 4:20 students were seated and at 4:25 the Board introduced themselves, provided their contact information, discussed the agenda for the evening, and explained the process for administering the surveys. It was explained that there were three proctors (Board members). Each proctor had a list of student names. Students were handed a red pen and survey by the proctors. The proctor checked off the student's name once they received a survey. Once the students received their survey they were instructed not to start before they received instructions.

At 4:30 the board discussed the purpose of the African American Mentoring Program. Then they informed students that they would be contacted between one and three days after being randomly selected to have a mentor or put on the mentor wait list. Students were informed that their names would be sorted by gender then put in envelopes and randomly placed into the mentor group or the mentor wait list group. For every two students chosen to have a mentor one was placed on the wait list (68 possible mentees and 34 possible wait list). Next, the evaluation and consent form was explained and student questions were addressed. Then the process for completing the survey, turning in the survey, and eating were explained. More specifically, students were asked to sign and provide their MSU personal identification (PID) on the consent form (Appendix A), complete the contact and release of information form (Appendix B), answer the survey (Appendix C), and ask questions if they were unclear about any survey items.

At <u>4:40</u> students started the survey. Proctors walked around the room to answer questions and to ensure mentees were completing their surveys accurately. A section of seats were reserved for students who arrived late. Late students were instructed by the greeters how to complete and return the survey to the proctor when they finished.

Around <u>5:20</u> the majority of students completed the survey. When they finished, students returned the survey to their assigned proctor (proctor who gave them the survey). The proctor reviewed the survey for completeness and clarity. After the survey packet was reviewed, the proctor checked off the student's name on their sheet. The proctors wrote the student's identification number (ID) on page three (first page of survey) and page 14 (last page of the survey). Next, the proctor double-checked the students name to make sure the name on the consent and contact release forms matched the ID. The consent and contact release forms were separated after the survey was double-checked. All surveys were filed by IDs in a portable file container. For confidentiality purposes the container could only be accessed by the Board. Consents and releases were placed in a separate file folder. Once the majority of students completed their surveys they were allowed to eat.

The rest of the Mix and Mingle included the mentors arriving at <u>5:30</u> to meet the students, the sitcom "A Different World" (show of student life at a HBCU) was shown (episode on taking mid terms), and music was played so students could interact with each other. The mentors were instructed to find students who were in their majors, discuss how their classes were progressing,

and to see how students were adjusting socially. Twenty students and 30 mentors attended the Mix and Mingle. A total of 20 surveys were collected from freshmen and 30 from mentors.

Outreach to Students who did not Complete Pre-test Surveys

Administering surveys to students who did not attend the Mix and Mingle involved several steps. First, a list of students who did not attend the Mix and Mingle was created and sorted by address. Second, the Board members and mentors received a list of students to contact via phone, email, or home visits. Third, the Board members and mentors served as proctors who were instructed to inform the students about the mentoring program, evaluation, and to schedule a time to meet (place convenient for student) with students for 30 to 40 minutes. Fourth, the proctors followed the same procedures for students completing surveys at the Mix and Mingle. This included students using a red pen, completing consent form, contact information and release, and receiving a participant ID on their survey. Once students finished their survey it was checked for completeness, accuracy, placed in a brown envelope, and delivered to the ORESA office where it was filed in a locked cabinet. Students were informed that they would be contacted in one to three days on whether they had a mentor or would be on the mentor wait list after random assignment.

After two weeks approximately 46 students had completed surveys. However several students still had not been contacted. This was due to students not returning emails, keeping scheduled appointments, proctors not being able to leave voice messages because students had not activated their voice mail, or

students not interested in participating in the program. To address this issue, we made home visits to several campus dormitories to schedule appointments with students or have them complete the survey while in their rooms. The home visits resulted in another 14 completed surveys by the last week of October. This resulted in a total of 80 pre-test surveys.

Fifty students were randomly selected to the experimental group and 30 to the control. For the students selected into the mentor group, mentors called them within three days to introduce themselves and start mentoring. Students selected to the wait list, were contacted within three days, and were informed that they would receive ongoing contact (email student every three weeks to see how classes were progressing) throughout the school year and a mentor during the last month of the spring 2004 semester.

Post-test Administration

On March 1, 2004 the Board trained eight mentors who served as proctors for administering time 2 surveys (Appendix C). Survey scheduling started the week of March 1, survey administration started March 15, and the last survey was collected on May 21, 2004. All participants were emailed and called to take the AASMP survey after spring break. To help facilitate this process mentors also informed their mentees about the survey.

To reduce program survey bias, none of the proctors administered surveys to their mentees or a mentee they knew. This also included "participants" in the control group.

To increase the success of collecting surveys from all 80 participants, participants were sorted by dorm and divided into 8 groups of 10. One proctor was assigned to each group of 10 participants (total of 8 proctors for 80 participants). Once proctors were assigned to their groups, they had several responsibilities for administering the surveys: 1) scheduling a time to meet with the ten participants to administer the survey in a group, 2) if the participants were unable to attend the group the proctor administered the survey to the participant personally (i.e., location convenient for participant), 3) proctors reported to the Board every Monday, Wednesday, and Sunday about their progress with individual and group scheduling (if proctors had difficulty scheduling a meeting they would contact the participants mentor or resident assistant in the dorm), 4) completed surveys were returned to ORESA within three days and filed, 5) each participant received five dollars, 6) students who participated in a group also qualified to be in a raffle (1 gift certificate for every three participants, therefore 3 gift certificates for a group of 10), and 7) participants signed individual and group money/gift certificate accountability sheets. The deadline to return surveys was March 28, 2004.

Proctors received a pay incentive. If a proctor collected all 10 surveys by the deadline (March 28), they were paid $60. If a proctor collected less than ten surveys before the deadline, they only received $5 per survey.

During the week of March 15, 2004 proctors scheduled at least 6 of their 10 participants to take the survey individually or in a group. On March 22, proctors returned 45 surveys. By March 28, five proctors collected all ten surveys

from their groups, one proctor collected nine of the ten surveys from their group, and two proctors collected six of the ten surveys from their groups. This totaled 71 completed surveys. Two participants did not return to complete their spring semester and their interviews were completed over the phone. Eight of the last surveys were collected April 28, the week before finals. The last survey was completed May 21, through a phone interview.

Mentees who completed their surveys continued to receive mentoring from their mentors. When participants in the control group completed their survey, they were offered a mentor. The new mentor mentee pairings were based on the student's major or residential proximity of the mentor and new mentee. This allowed the mentor to have easy access to their new mentee.

Training of Mentors

Mentor Responsibilities. Student mentors were responsible for attending bi-weekly meetings and contacting mentees on a weekly basis to enhance their mental, social, and educational adjustment to MSU. Student mentors volunteered six hours of their time in a two-week period (2 hours for training, 4 hours for mentoring). Trainings (Table 4.2 and Table 4.3) included lectures and supervision, and mentoring included weekly outreach to mentees. A log was kept of all the mentors' activities with each assigned student mentor. The logs tracked their efforts in 15 minute increments, which reported the mentors' goals, activities, communication, and outcomes with their mentees. Board members contacted mentees once a month to confirm the mentors mentoring.

Fall Semester Training

Table 4.2

Fall Semester Training Outline

Dates	Training Units	Mentoring	Supervision
September 8, 2003	Unit 1	No	No
September 15, 2003	Unit 2 & 3	No	No
September 22, 2003	No training	No	No
September 29, 2003	Unit 4 & 5	No	No
October 6, 2003	Surveys Administered	No	No
October 17-19, 2003	Mentor Retreat	No	No
October 20, 2003	No Training	No	No
October 27, 2003	Unit 6	Yes	Yes
November 3, 2003	No Training	Yes	No
November 10, 2003	Unit 7	Yes	Yes
November 17, 2003	No Training	Yes	No
November, 24, 2003	Unit 8	Yes	Yes
December 1, 2003	Fall celebration	Yes	No
December 8, 2003	Finals	Yes	No

Mentors began their trainings and development in Week 4 of the semester. The first mentor training involved reviewing program expectations, ethics, the use of an ethnic-based mentoring model, training curriculum, completing informed consent forms, and conducting icebreakers to familiarize mentors and Board members with each other. All the mentors received a training

manual that included the program mission and goals, expectations, and the curriculum.

At the second training mentors received an introduction to racial identity (Unit 2) and sense of belonging (Unit 3) for African American Students. Mentors received more training in these areas at the retreat. Their training included education on African American student retention in higher education and the causes for African American dropout. This was followed by a more in-depth training that addressed the adjustment issues for African American students at PWIs and the basic theories behind mentoring in general and ethnic-based mentoring more specifically.

On the third date of training the mentors received detailed training about the basic theories behind psychological support (strong focus on mental health)(Unit 4), and social support (Unit 5) for college students and specifically African American college students. Using this knowledge mentors performed role plays for making first contact with students, dealing with resistance and reluctance, implementing skills for conflict resolution (rules for fighting fair) and the art of listening.

Mentors also learned about peer education and counseling approaches by utilizing the Rogerian theory (Unit 4). Mentors learned to apply the Rogerian theory to mentoring. This taught mentors how and when to support (socially, psychologically, and academically) and refer mentees. More important, it provided mentors with the skills to recognize student depression and dropout.

The AASMP then conducted a Mix and Mingle for the freshmen participants. The program was developed to welcome freshmen students to the mentoring program and to conduct the time 1 surveys to collect pre-test data.

The next week, the mentors attended their mandatory mentor development retreat. The mentors met for an hour to take the AASMP survey and to discuss when, where, and what they could and could not take on the retreat. The mentor surveys will be used for future data analysis.

Student Mentor Retreat. A three-day (Friday evening to Sunday morning) mentor retreat took place on October 17-19, 2003 at the Hampton Inn, in Southfield, Michigan (Suburb of Detroit). The mentors attended the retreat to develop team cohesiveness, racial identity, sense of belonging, psychological well-being, social support, leadership skills, and to increase their desire for academic success. At the conclusion of the retreat, student mentors wrote a one to two page evaluation to: 1) explain the adjustment risk for African American students entering a (PWI), (HBCU) and MSU, 2) articulate the importance of an ethnic-based mentor model and the issue behind internalized oppression, 3) explore intra/interpersonal development (i.e., how to manage your life during a crisis and how to support others by learning from your struggles), and 4) how to establish team bonding and a sense of family. Mentors also provided the strengths, weakness, and changes needed to improve the retreat in the evaluations.

To hold students accountable for implementing their skills with mentees, mentors also learned how to complete mentor logs at the retreat. As mentioned

earlier, logs were used to supervise how the mentors were applying their training to mentees. The mentoring logs were reviewed during the second half of training meetings.

The criteria for completing logs included the mentors' goals for the week, communication with their mentees, activities with their mentees, and the outcome of their experience with their mentees. The mentor's goal (what they want to accomplish with mentee) reflected the training characteristic(s) discussed (e.g., racial identity, sense of belonging) during the previous training(s). Mentors communication was considered, phone calls, e-mails, or seeing mentees face-to-face. The mentor's activities included seminars, programs, and meetings based on the training topics. At least once a month mentors were responsible for taking mentees to an academic or social program on or off campus (programs must fall under the training topics).

To examine mentoring dosage, mentors documented the amount of time spent implementing different ethnic-based mentoring factors. For example, for racial identity, a mentor would document 120 minutes after attending a two-hour cultural event with a mentee. In the outcome section student mentors reported their experience with their mentee: 1) how they felt the mentees week had been (wrote positive and negative situations), 2) their impressions of how their mentee did for the week, and 3) their mentoring goal for the following week.

The next training date involved training mentors how to provide academic support (Unit 6) to their mentees. The topics covered were learning styles, time management, note taking, reading skills, self-advocacy for students, study skills,

and test preparation. For many mentors the skills were a review. To make the

teaching of academic support more interesting, different topics were presented in

a game format. The game format was designed like the game Taboo. During the

game individuals received a card and on the card was a word (notebook)

teammates must guess. However, under the word was a list of four words (e.g.,

paper, spiral ring) the individual couldn't say. Each team had 30 seconds to

guess as many cards as possible. The mentors were divided by gender and

played up to twenty points.

After mentors finished the game, the Student Coordinator in ORESA

shared that AASMP purchased Russell Simons (Pioneer of Hip Hop/ Rap music)

Def Jam Poetry tickets. This allowed mentors and mentees to attend the event at

a discounted price. Russell Simmons Def Jam Poetry is a cultural education

event that emphasizes spoken word (style of poetry) with a Hip Hop (type of

music) urban flavor. The event took place November 14, 2003.

Next, students were divided into groups to discuss their logs. All of the

mentors had contacted their students by phone or email. At least half of the

mentors had met their mentees face to face and planned future meetings. For the

mentors who had not seen their mentees face to face they expressed that the

distance between dorms was creating a conflict. Some mentors mentees lived

across campus, which made it difficult for mentors and mentees to meet. Lastly,

some mentees worked and scheduling a time to meet was difficult.

To help mentors schedule meetings with their mentees, the Student

Coordinator in ORESA offered meal cards to mentors who stayed off campus.

This helped mentors who lived off campus eat with their mentees without having to spend their own money. For mentors who stayed across campus from their mentees, they utilized their fellow mentors who stayed close or in their mentees dorms. With the help of another mentor many mentees contacted their mentors more frequently. By mentors working together, they were able to overcome communication obstacles and meet their mentees face to face.

The following training mentors reviewed the social support survey (Unit 7) in the AASMP survey packet. The topics discussed were social support from immediate and extended family, friends at home and school, professors, counselors, and roommates.

Mentors shared that some professors were unapproachable and when they did approach them it appeared they were uncomfortable talking to African American students. Mentors shared that they could help mentees talk to professors and to stay positive with their interactions even if the professors do not appear supportive.

To help mentors provide more support to their mentees they wrote letters to their mentees. These letters included an invitation to the end of the semester celebration and pictures or special sayings to let mentees know somebody on campus recognizes their hard work at MSU. Some mentors also put together care packages for their mentees.

Also during this week, the Board contacted the mentor's mentees to see how their relationships were developing using a mentee progress form. Board members asked mentees how often their mentor contacted them, how they liked

their mentor mentee relationship, and if the mentee had any concerns. Board members shared that some mentors were doing an excellent job and others needed improvement. For example, one mentee was having financial problems and her mentor took her to a meeting about scholarships. Another mentor had met her mentee once but had to cancel following meetings. Even though the mentee felt the person was a good mentor, the mentee felt the mentor was too busy to spend time with her. When mentors were performing ineffectively the Board met with the mentor.

The next training date involved inviting a panel of past Michigan State student leaders to discuss leadership development (Unit 8) among African American students. The panelists were given the leadership survey in the AASMP survey packet. The primary discussion focused on how mentors could get freshmen involved in campus activities and organizations. The panelist discussed their experiences at MSU and successful tactics that promoted African American student involvement on campus. Some of the tactics were collaborating with other student groups, finding issues freshmen felt were important, listening to their concerns and ideas, and always encouraging them to get involved in activities. They also felt that once freshmen were involved, leaders had to be motivating and demonstrate effective and responsible leadership skills.

The end of the fall semester celebration took place in the activity room of Akers hall. The end of the year format was similar to the Mix and Mingle format. Both the mentors and the students in the experimental and control group

attended the program. The day before the event the mentors reminded their mentees about the celebration and the Board contacted students in the control group.

During finals week the Board contacted all the participants in the AASMP. All the participants in the program were contacted to wish them luck on their finals and to see if they were returning to Michigan State the following semester. The Board did not report any freshmen participants who were thinking about dropping out of MSU.

At the start of second semester, mentors were emailed by the Board to welcome mentors back to school, remind them about second semester training meetings, and to contact their mentees. The Board met to review the curriculum for spring semester. They agreed the focus for the semester was making sure mentors were mentoring their mentees, to analyze time 1 data to improve mentee outcomes, and to help mentors get their mentees more involved with campus activities.

Spring Semester Training

Table 4.3

Spring Semester Training Outline

Trainings	Training Units	Mentoring	Supervision
January 12, 2004	No training	Yes	No
January 19, 2004	Unit 1	Yes	Yes
January 26, 2004	No training	Yes	No
February 2, 2004	Unit 2 – 8 review	Yes	Yes

Table 4.3 (Cont'd).

February 9, 2004	No training	Yes	No
February16, 2004	Unit 9	Yes	Yes
February 23, 2004	No training	Yes	No
March 1, 2004	Unit 10	Yes	Yes
March 8, 2004	Spring Break	No	No
March 15, 2004	Unit 11 & Survey Administered	Yes	Yes
March 22, 2004	No training	Yes	Yes – for surveys
March 29, 2004	Interview training	Yes	Yes
April 5, 2004	No training	Yes	No
April 12, 2004	Interviews	Yes	Yes
April 19, 2004	No training	Yes	No
April 26, 2004	End of year celebration	Yes	No
May 3, 2004	Finals	Yes	No

During their first meeting mentors reviewed program goals, expectations, and established their own goals for the semester (unit 1). This allowed mentors to share their positive and negative experiences from last semester. Based on the mentor's feedback, the Board made adjustments to AASMP programming and supervision.

Mentors with the Boards support conducted home (mentee dorm room) visits to see each mentee. They divided into groups based on where their mentees lived. When they visited the mentee's, they welcomed the mentees back to school, provided information about a bowling party, and established

97

available times that mentees could meet during the week. If mentees were not in their room, the mentors would leave a note stating they stopped by and would be contacting them.

At the second training mentors were presented the aggregated data from time one. They reviewed the topics on racial identity, social support, psychological support, academic support, sense of belonging, and leadership development (units 2-8). The presentation of data and review of topics were used to guide the improvement of the mentor's skills in the areas mentees scored low. By improving the mentor's skills the goal was to improve the mentee's outcomes.

The Board met with the mentors to review their logs. Board facilitators focused on the type of contact mentors were making with their mentees. Through logs, mentors provided documentation of their goals to involve students in campus activities. All of the mentors based their goals on activities during Black History month. Mentors felt getting mentees involved in Black History month activities would help increase mentees' racial identity, sense of belonging, and adjustment.

At the third training mentors learned about peer education (Unit 9). The goal of teaching mentors about peer education was to help them learn alternative techniques to support their mentees. Peer education was then applied to reinforce the mentees social, psychological, and academic adjustment. Mentors also learned about social marketing and how to recruit new Board members and mentors for the 2004-05 academic school year.

When mentors met with their board facilitators to review logs, they focused on the methods mentors were using to support their mentees socially, psychologically, and academically. This was important because mentees were encountering the stressors of completing class assignments. In addition, some professors were preparing for mid terms and mentees should be in a position to do well. When Board facilitators reviewed the mentors logs groups shared positive and negative situations for providing social, psychological, and academic support to their mentees. From these discussion mentors supported mentees by helping them set goals, manage their time, form study groups, and encourage them to talk to their professors.

The following training mentors developed skills in organizational development (Unit 10). This was taught to mentors for the purpose of helping students establish goals to create program sustainability and actively recruiting mentors for next year. The way the senior and graduate MSU students developed the program structure was based on the current mentors mentoring their mentees as sophomores and new mentors being admitted to the program to mentor the freshmen. Therefore the mentors were educated about this process and taught the influence it will have on the program and their mentoring.

For supervision the Board facilitators discussed how mentors were supporting their mentees. This meeting was also used to discuss proctors arranging times with mentees to administer surveys when they returned from spring break.

The next training date, mentors learned about community development (unit 11) for African American students at PWI's. Mentors attended a lecture by Rod Watts PhD and reviewed literature about various community-based initiatives African American students have made on other college campuses. Students split into groups and discussed the community issues for African American students at MSU. Then they discussed the approaches African Americans used at other schools, and how those approaches could be implemented at MSU.

After the discussion mentors took the AASMP survey. Once mentors completed their surveys they were informed a proctor would be contacting their mentee to administer the post-test survey. The mentors provided advice for contacting mentees that were difficult to reach (i.e, personal cell phone numbers).

The following training the board held discussion groups with the mentors. The mentors were asked to provide feedback on the positive and negative aspects of the program. Mentors also provided suggestions for future planning, activities, and initiatives that would improve the program. After the meeting the group ate dinner together in the cafeteria. This provided an excellent opportunity for more group bonding.

For the last training of the program the Board held a social activity for mentors and mentees at FunTyme amusement park. This activity included mentors and mentees playing put-put golf, riding go-karts and playing video

games. This activity gave mentors and mentees a chance to relax, socialize, and discuss scheduling fall 2004 classes two weeks prior to their finals.

The End of Year Celebration was held the last week of classes with MSU administrators, faculty, staff, mentors, and program participants. The celebration included an award ceremony with presentation of several plaques to mentors, graduating mentors and faculty and administrators who supported the program. All participants in the program were sent letters to wish them luck on their finals, reminded about registering for the correct classes, and contacted to see if they were returning to Michigan State the following semester. None of the students reported they would not be returning to MSU.

CHAPTER FIVE

Results

The purpose of this study was to experimentally evaluate the effectiveness of an ethnic-based mentoring model and the factors that influence mentee college adjustment and GPA in an African American student mentoring program. From September 2003 to May 2004 (first and second semester of the 2003-04 academic school year) the mentor program evaluation involved the recruitment and training of 30 African American student mentors, and recruitment of 80 African American freshmen students. Participants answered a 253 item survey that assessed Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, and Leadership Development.

This chapter presents the findings of the current study. First retention is reported, followed by the statistical analyses that address each research question for the study.

After one semester two students in the experimental group did not return for the spring semester 2004. Both students were from out of state and one had a GPA below 1.0. For the entire school year 97% (N = 78) of the participants were retained (Control Group = 100%, and Experimental Group = 96%).

Statistical Analysis

The Statistical Package for Social Sciences (SPSS), Version 11.0 for Windows, was used for all statistical analyses. First, preliminary analyses were conducted to clean the data, examine time one differences, and to determine the

amount of time mentees received mentoring. The next analysis included

MANCOVAs. To conclude, an exploratory analysis was conducted that included

mediation models.

Preliminary Analysis

After all the surveys were entered for time one and two, frequencies were

conducted for missing data and data entered incorrectly. If data were missing for

any of the measures, participants were contacted. Less than 1% of the items

were missing in all the surveys combined.

Time one data was examined for between group mean differences and no

significant differences were found. Analyses are in Appendix D.

Using data from the mentor logs, frequencies were conducted on the

amount of time mentees received mentoring. For fall semester the amount of

mentoring mentees received was M = 68 minutes (SD = 60.40, median = 49,

minimum time = 15 minutes and maximum time = 229 minutes) and for spring

semester the amount of mentoring was

M = 58 minutes, (SD = 47.63, median = 46, minimum time = 16 minutes and

maximum time = 141 minutes). Mentoring time was categorized into 3 groups:

Low (5 to 29 minutes), Moderate (30 to 60 minutes), and high (61 minutes and

above). Approximately 15% of mentors provided mentoring that was high.

Mentors conducted various activities with their mentees. The most

frequent activities were attending Black Caucus and Black Student Alliance

meetings and events, having dinner, going bowling and to the movies, discussing

stress over classes and feeling alone at the university, and tutoring mentees in math and writing.

Research Question 1: Does the Experimental group report significantly higher scores at time two on proximal outcomes (Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging and Leadership Development) and distal outcomes (College Adjustment, GPA, and Retention) compared to the Control group?

Multivariate Analysis of Covariance

The Multivariate Analysis of Covariance (MANCOVA) "examines whether there are significant differences among the dependent variables simultaneously" (pg 280) (George & Mallery, 2001). Within-Subjects multivariate analysis examined the mean differences of the Experimental Group by College Adjustment, and GPA at time two factoring out the effect of time one College Adjustment and GPA variables. The Between-Subjects Univariate analysis examined the grand mean differences of the Experimental Group by College Adjustment and GPA variables at time two factoring out the effect of time one College Adjustment and GPA variables.

For this study time two College Adjustment and GPA were entered into the SPSS General Linear Model procedure as dependent variables. Group was entered as a fixed factor with time one College Adjustment and GPA entered as covariates. The Within-Subjects Multivariate test for Experimental Group by dependent variables (Time two College Adjustment and GPA) covaried by time

one College Adjustment and GPA was not significant $F(1,78) = .133$, $p = .876$ (Appendix E).

To determine the effects of the proximal outcomes on the Experimental Group a second MANCOVA was performed. Time two Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, and Leadership Development were entered into the SPSS General Linear Model procedure as dependent variables (Table 5.1). Group was entered as a fixed factor with time one Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, and Leadership Development entered as covariates.

The MANCOVA (Table 5.1) demonstrated that the Within-Subjects Multivariate test for Experimental Group by dependent variables (Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, and Leadership Development) covaried by time one Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, and Leadership Development was significant $F(1, 78) = .269$, $p < .05$. The Between-Subjects ANCOVA (Table 5.2) by group demonstrated significant results on time two Racial Identity $F(1, 78) = 5.388$, $p < .05$ and Academic Support $F(1, 78) = 5.879$, $p < .05$, when covaried by time one Racial Identity and Academic Support.

105

Table 5.1

Tests of Multivariate MANCOVA on Dependent Variables

Effect	Multivariate F	P	Partial Eta Squared
Covariates			
T1 Racial Identity	5.522	.000	.331
T1 Social Support	7.526	.000	.403
T1 Psych Support	7.387	.000	.398
T1 Academic Support	1.711	.132	.133
T1Sense of Belonging	4.506	.001	.288
T1 Leadership Dvlpmnt	17.208	.000	.606
Experimental Group	2.609	.025	.189

df = 1, 78

Table 5.2

Tests of Between-Subjects Univariate ANCOVAs on Dependent Variables by Group

Measures	N	M(SD)	F	P	Partial Eta Squared
Racial Identity			5.388	.023	.070
T2 Control	30	49.40(5.66)			
T2 Experimental	50	50.70(5.54)			
Social Support			.415	.522	.006
T2 Control	30	103.26(18.76)			
T2 Experimental	50	99.90(16.51)			
Psychological Support			.196	.659	.003
T2 Control	30	83.76(12.12)			
T2 Experimental	50	84.98(14.80)			

Table 5.2 (Cont'd).

	N		F	p	
Academic Support			5.879	.018	.075
T2 Control	30	20.13(5.02)			
T2 Experimental	50	21.66(4.98)			
Sense of Belonging			1.364	.247	.019
T2 Control	30	78.30(7.93)			
T2 Experimental	50	80.58(7.77)			
Leadership Development			.390	.535	.005
T2 Control	30	49.93(12.39)			
T2 Experimental	50	46.16(11.72)			

df = 1, 78

The mean analysis in the MANCOVA test for covariance demonstrated that the means for Racial Identity and Academic Support significantly covaried for the Experimental Group. Table 5.3 shows that the Experimental Group had an increase on Racial Identity at time two (M=50.70, SD=5.54) and an increase on Academic Support at time two (M=21.66=SD=4.98). In comparison, Table 5.3 shows that the Control Group had a decrease on Racial Identity at time two (M=49.40, SD=5.66) and a small increase on Academic Support at time two (M=20.13, SD=5.02).

Table 5.3

Means for significant MANCOVA Variables

Measure	N	Time One M(SD)	Time Two M(SD)
Racial Identity			
Control	30	50.90(4.84)	49.40(5.66)
Experimental	50	49.94(5.41)	50.70(5.54)
Academic Support			
Control	30	20.05(4.57)	20.13(5.02)
Experimental	50	19.76(4.57)	21.66(4.98)

Mediation Analysis

This section outlines the process for testing mediation, which addresses research questions two through four.

A primary focus of the ethnic-based mentoring model was training African American student mentors based on Mitchell's and Dell's (1992) and Parham's and Helms' (1981) theory on Racial Identity. Mitchell and colleagues (1992) suggested that Racial Identity was a way for African Americans to explore and embrace group differences, eliminate barriers while maintaining their own individuality, and was a major factor in their social and academic outcomes at PWIs. The ethnic-based mentor training focused to help African American mentors become closely connected and support their mentees Racial Identity (beliefs and attitudes about their own race and that of others).

Mediation "implies a causal hypothesis whereby an independent variable causes a mediator which influences a change in the dependent variable" (Research In Prevention Laboratory, 2001).

A variable is considered a mediator under the following conditions: (a) "variations in levels of the independent variable significantly account for variations in the mediator" (path between the independent variable and the mediating variable), (b) "variations in the mediator significantly account for variations in the dependent variable" (path between the mediating variable and the dependent variable), and (c) when the paths between the independent variable and the mediating variable and the path between the mediator and dependent variable are "controlled, a previously significant relationship between the independent variable and the dependent variable is no longer significant, with the strongest demonstration of mediation occurring when the path between the initial independent and dependent variables is zero" (Baron & Kenny, 1986). When this path is "reduced to zero", it is suggested that there is a single "dominant" mediator. When this path however, is not zero, then there may be multiple mediating variables influencing the relationship between the initial independent variable and dependent variable. If however, there is a significant decrease in the path between the independent and dependent variables, there is an implication that the given mediator does indeed have an effective, but not necessary, "condition for an effect to occur" (Baron & Kenny, 1986). This significant reduction defines a "partial" mediation.

Another possible outcome from a mediation model is "complete" mediation. To establish complete mediation the following conditions must be met: (a) the independent variable must affect the mediator when the mediator is regressed on the independent variable, (b) the independent variable must affect the dependent variable when the dependent variable is regressed on the independent variable, and (c) the mediator must affect the dependent variable when the dependent variable is regressed on the mediating and independent variables. If these models hold true, then "full" or complete mediation is established, which implies that the independent variable has no effect on the dependent variable when the mediator is controlled (Baron & Kenny, 1986).

The premise of the mediation model is that mediation depends on the degree to which the "independent variable affects the mediator (path a) and the degree to which the mediator affects the dependent variable (path b)" (MacKinnon & Dwyer, 1993). The independent variable causes the dependent variable and is called the unmediated model (Figure 5.1). When the effect of the independent variable on the dependent variable is influenced by the mediating variable and the independent variable may still affect the dependent variable this is called the mediated model (Figure 5.2) (Kenny, 2001).

As observed in figure 5.2, path "a" is the β-coefficient relating the independent variable to the mediating variable. Path "b" is the β-coefficient relating the mediating variable to the dependent variable while adjusting for path "a". The product of these parameters are defined as the indirect or mediated effect (calculation: a * b). To determine the percentage of the total effect that was

mediated when the direct effect is nonzero, the following equation is employed:

(a*b/[a*b + c']).

Figure 5.1 Unmediated Model (Correlation)
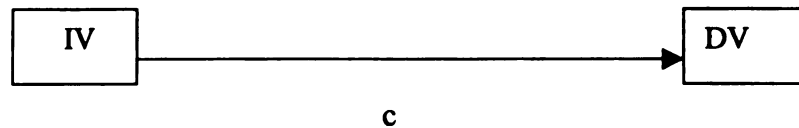
Figure 5.2 Simple Mediation Model
Source: MacKinnon and Dwyer, 1993; Kenny, 2001
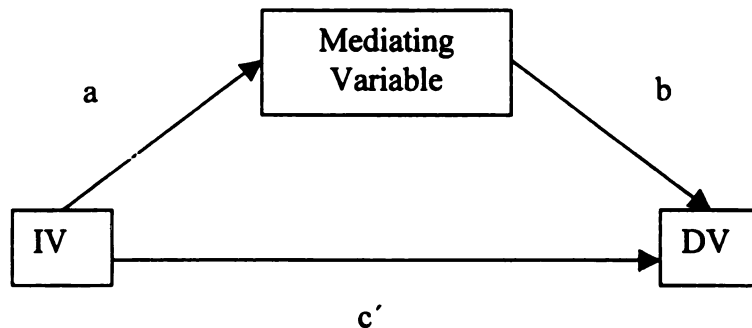
The test for mediation included a series of regressions: (1) regress the dependent variable on the independent variable, (2) regress the mediator on the independent variable, and (3) regress the dependent variable on both the independent and the mediating variables (Baron & Kenny, 1986; Judd & Kenny, 1981). It is not correct to "correlate the mediator with the dependent variable; the mediator and the dependent variable may be correlated because they are both caused by the initial independent variable. Therefore, the initial independent variable must be controlled in establishing the effect of the mediator on the dependent variable" (Kenny, 2001).

111

Since the MANCOVA test was not significant for Experimental Group by College Adjustment and GPA, research questions 2, 3, and 4 could not be tested with the independent variable mediating the relationship between the Experimental Group and College Adjustment, GPA, and Retention. In other words, since there was no mean difference between the Experimental Group and the two distal outcomes (College Adjustment and GPA) mediation could not be tested.

The MANCOVA test was significant on the Experimental Group by proximal outcomes. The ANCOVA test on Experimental Group was significant on Racial Identity and Academic support. Based on Mitchell and Dells Racial Identity theory we examined the relationship between Racial Identity and College Adjustment, GPA, and Retention. As a result, an exploratory analysis was conducted to test whether Social Support, Psychological Support, Academic Support, Sense of Belonging, and Leadership Development mediate the relationship between Racial Identity and College Adjustment, GPA, and Retention.

Exploratory Analysis of Mediation Models

The correlation (Appendix F) between Psychological Support and College Adjustment produced a high correlation at time one (r = .76, p < .01) and time two (r = .69, p < .01). Psychological Support was omitted from this analysis because College Adjustment was accounting for participants' psychological well-being. The relationship between Social Support and Academic Support also produced a high correlation at time one (r = .65, p < .01) and time two (r = .66, p

112

< .01). Both scales were originally combined as a new variable (Extended

Support), however when retested in the MANCOVA analysis it produced a non

significant result on group. Therefore Social Support and Academic Support

were tested as separate variables in the mediation models.

The correlation between Racial Identity and College Adjustment proved to

be significant (r = .38, p< .01). The correlation between Academic Support and

College Adjustment was not significant (r =.17, p = .11). The mediation test

demonstrated that Sense of Belonging (Figure 5.3, Table 5.4), and Leadership

Development (Figure 5.4, Table 5.5) significantly mediated the relationship

between Racial Identity and College Adjustment.

Figure 5.3 Mediation Model of Racial Identity and College Adjustment
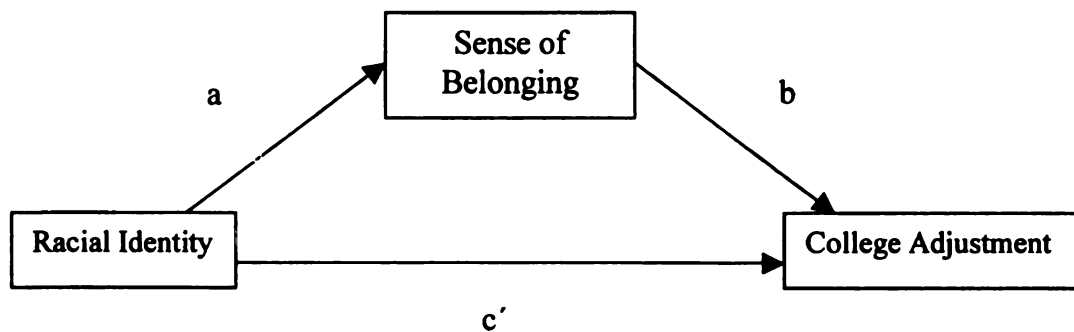
To establish statistical mediation the three primary steps, as discussed by

Baron and Kenny (1986) and Judd and Kenny (1981), were performed: **Criterion**

I: regress College Adjustment on Racial Identity, **Criterion II:** regress Sense of

Belonging on Racial Identity, and **Criterion III:** regress College Adjustment on

Racial Identity and Sense of Belonging.

Criterion I: Show that the independent variable was correlated with the dependent variable. Results from the regression analysis in model 1 demonstrated Racial Identity was a significant predictor of College Adjustment (β= .38, p < .01) and a test for mediation should be conducted.

Criterion II: Regress the mediator variable on the independent variable. Sense of belonging was regressed on Racial Identity. Results from the regression model reached statistical significance (β= .36, p < .01), indicating that the criterion was fulfilled, suggesting that the initial independent variable was related to the mediating variable.

Criterion III: Regress the dependent variable on both the independent and mediating variables, and establish that the intervening variable completely mediates the relationship between the independent and dependent variables. The College Adjustment variable was regressed on a linear combination of Racial Identity and Sense of Belonging. It was established that College Adjustment was partially mediated by Sense of Belonging when Racial Identity (β= .20, p < .05) and Sense of Belonging (β= .48, p < .01) were entered into the regression equation as the independent variables (see Table 5.4).

Mediated Effect and Percentage Mediated. Further inspection of Table 5.4 shows that the indirect/mediated effect for Model 1 was .17, with 44% of Racial Identity being mediated by Sense of Belonging.

Table 5.4

Model 1: Racial Identity, Sense of Belonging, and College Adjustment Mediation Model

Model	β	p	R^2	Comment
Criterion I: Racial Identity←College Adjustment				
Total Sample	.384	.000	.147	Criterion fulfilled
Criterion II: Racial Identity←Sense of Belonging				
Total Sample	.368	.001	.136	Criterion fulfilled
Criterion III: Racial Identity←Sense of Belonging←College Adjustment				
Total Sample			.346	Evidence for partial mediation
Racial Identity	.207	.040		
Sense of Belonging	.480	.000		
(mediated effect = .17) (% mediation = 44.7%)				

Figure 5.4 Mediation Model of Racial Identity and College Adjustment

115
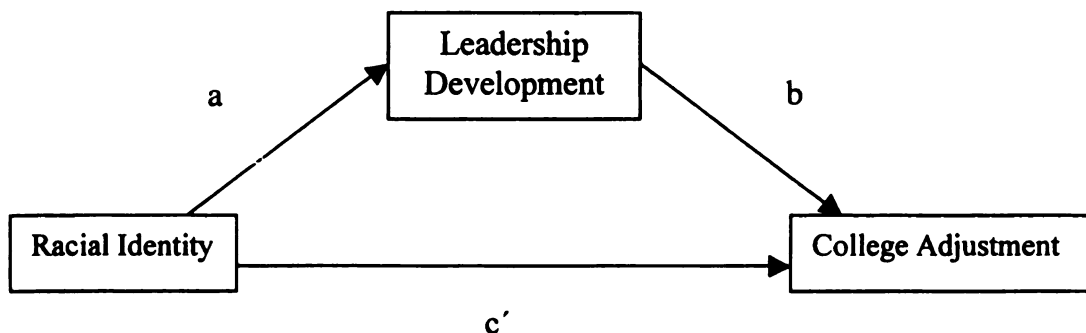
For the second mediation model the steps included **Criterion I:** regress College Adjustment on Racial Identity, **Criterion II:** regress Leadership Development on Racial Identity, and **Criterion III:** regress College Adjustment on Racial Identity and Leadership Development.

Criterion I: Show that the independent variable was correlated with the dependent variable. Results from the regression analysis in model 2 demonstrated Racial Identity was a significant predictor of College Adjustment (β= .38, p < .01) and a test for mediation should be conducted.

Criterion II: Regress the mediator variable on the independent variable. Leadership Development was regressed on Racial Identity. Results from the regression model reached statistical significance (β= .28, p < .01), indicating that the criterion was fulfilled, suggesting that the initial independent variable was related to the mediating variable.

Criterion III: Regress the dependent variable on both the independent and mediating variables, and establish that the intervening variable completely mediates the relationship between the independent and dependent variables. The College Adjustment variable was regressed on a linear combination of Racial Identity and Leadership Development. It was established that College Adjustment was partially mediated by Leadership Development when Racial Identity (β= .28, p < .01) and Leadership Development (β= .35, p < .01) were entered into the regression equation as the independent variables (see Table 5.5).

Mediated Effect and Percentage Mediated. Further inspection of Table 5.5

shows that the indirect/mediated effect for Model 2 was .09, with 24% of Racial

Identity being mediated by Leadership Development.

Table 5.5

Model 2: Racial Identity, Leadership Development, and College Adjustment
Mediation Model

Model	β	p	R^2	Comment
Criterion I: Racial Identity←College Adjustment				
Total Sample	.384	.000	.147	Criterion fulfilled
Criterion II: Racial Identity←Leadership Development				
Total Sample	.288	.010	.083	Criterion fulfilled
Criterion III: Racial Identity←Leadership Development←College Adjustment				
Total Sample			.261	Evidence for partial mediation
Racial Identity	.283	.007		
Leadership Development	.352	.001		
(mediated effect = .098) (% mediation = 24.3%)				

As a result of the mediation models Racial Identity was significantly

correlated with College Adjustment for the total group. The criterion for

mediation was met for Sense of Belonging (Model 1), and Leadership

Development (Model 2). When Sense of Belonging mediated the relationship

between Racial Identity and College Adjustment, the total group had an indirect

117

effect of .17, with 44% of Racial Identity being mediated by Sense of Belonging. When Leadership Development mediated the relationship between Racial Identity and College Adjustment, the total group had an indirect effect of .09, with 24% of Racial Identity being mediated by Leadership Development.

Summary

The MANCOVA demonstrated that there were not significant mean differences between the Experimental Group and the distal outcomes (College Adjustment and GPA) at time two. However the MANCOVA did result in significant mean difference for the Experimental Group by proximal outcomes. The ANCOVA proved to be significant on Racial Identity and Academic Support by Experimental Group. The results of the MANCOVA mean scores for Racial Identity and Academic Support demonstrated that the experimental group scores were significantly moving in a positive direction compared to the control group. To determine if other variables mediated the relationship between Racial Identity and College Adjustment several mediation models were tested. We found that Sense of Belonging and Leadership Development mediate the relationship between Racial Identity and College Adjustment.

CHAPTER SIX

Discussion

Over the last two decades much attention has focused on mentoring programs to support African American students attending Predominately White Institutions (PWI) (Allen, 1992; Harris, 1999). The goals of these programs are often aimed at helping African American students thrive academically, socially, mentally, and to graduate. Despite the success of some programs, there continues to be a problem regarding the academic performance and social adjustment of African Americans students in higher education (Sellers, Chavous, & Cooke, 1998).

The purpose of this study was to evaluate the influence of an ethnic-based mentoring model and the factors (i.e., Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, Leadership Development) that influence African American student College Adjustment, GPA, and Retention in an African American based student mentoring program at a PWI. The primary goal of the study was: 1) to train African American junior and senior mentors how to mentor African American mentees using an ethnic-based mentoring model, 2) for mentors to provide mentoring to African American mentees (African American Freshman) once a week for an hour, 3) to determine if participating in an ethnic-based mentoring program significantly affected the Experimental Group compared to the Control Group on proximal and distal outcomes, and 4) to determine if Racial Identity, Social Support, Psychological

Support, Academic Support, Sense of Belonging, and Leadership Development mediated the relationship between mentoring (Experimental Group) and College Adjustment, GPA, and Retention. The findings from this study are discussed in the following sections.

Major Findings

This section is organized around answering each of the research questions and relating these findings to the primary goals of the current investigation.

Research Question 1. Does the Experimental Group report significantly higher scores at time two on proximal outcomes (i.e., Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, Leadership Development) and distal outcomes (i.e., College Adjustment, GPA, and Retention) compared to the Control Group?

At time two the Experimental Group did not report significantly higher mean scores on the distal outcomes compared to the Control Group. In other words, there were no differences between the mentored group on College Adjustment, GPA, or Retention.

The Experimental Group did report significantly higher mean scores on two proximal outcomes (Racial Identity and Academic Support) compared to the Control Group at time two. Compared to the other proximal outcomes (Social Support, Psychological Support, Sense of Belonging, and Leadership Development), Racial Identity and Academic Support were the only variables to

demonstrate an interaction over time. Likewise, the significant results on Racial Identity and Academic Support were consistent with Friereson (1996) findings, which suggested that mentoring plays a critical role in the racial and academic development of African American students.

The significant finding on Racial Identity and Academic Support were the most important in this study because the Control Group had higher scores at time one on Racial Identity and Academic Support than the Experimental Group. At time two this pattern reversed, with the Experimental Group scoring significantly higher than the Control Group. Based on the theory presented about ethnic-based mentoring, one would hope Racial Identity would be significant. Research has shown that a Black experience, like those found at an HBCUs, for African American college students promotes greater ethnic identity, ethnically-based social encounters (e.g., support and nurturing from African American faculty, staff, and students), and academic growth (Whitler, Calantone, & Young, 1988; Terenzini et.al., 1997; Phelps et.al., 2001). This was important because the foundation of the program was based on an ethnic-based curriculum. The curriculum was implemented because it had been used at other universities (including an HBCU), was theory driven, and had the potential to produce positive African American student College Adjustment, GPA, and Retention (Thomas, 1999; Harris, 1999).

Academic excellence is the foundation of education. Therefore, it was important that Academic Support was significantly related to the mentoring. Research has demonstrated that academic support from other students and

faculty can possibly lead to increased retention and grades (Monk, 1998). Although not significant, the trend for GPA demonstrated that while the mentored group grades decreased second semester, the students who did not receive mentoring did even worse. In essence, the mentored students earned higher grades than those not mentored. For many institutions of higher education, academic achievement is the "bottom line". Thus, why have a mentoring program that supports African American freshmen if it does not have the potential to reduce the risk of academic failure and dropout? Despite these results, several methodological, implementation, and theoretical concerns must be addressed.

Methodological Concerns

The methodological issues for this study included the need for a longer follow-up, effect size, and the possible need for a more representative sample. The Board hopes that time will tell the short and long term benefits of this program. The advantage of conducting a longitudinal study may yield significant results to better understand the differences between the Experimental and Control Groups. For example, by examining the long term effects of continued mentoring, it may be possible to observe greater and more significant differences on participant College Adjustment, GPA, and Retention.

A failure to report significant results on distal and proximal mean differences may be based on small effect size. DuBois, Halloway, Vallentine, Cooper's (2002) research on mentoring programs for youth suggested the non significant results can be attributed to small effect size. Compared to educational and mental health prevention programs for youth with large mean effect sizes,

the average estimated effect sizes for mentoring programs was .14 and .18 (DuBois et.al., 2002).

Based on the effect sizes observed in this study and the size of the sample, power was calculated to be .05 for College Adjustment and .06 for GPA. For this study, 5,542 participants would be needed to detect significance at 80% power on GPA. Therefore, to detect significant results between the Experimental and Control Group, the mean difference must be large when the sample size is less than 80 participants. For example, the Experimental Group averaged a 2.50 GPA and the Control Group a 2.41 GPA. The GPA scores demonstrated a .09 difference between the Experimental Group and the Control Group at time two. Based on these results the Experimental Group's GPA scores would need to demonstrate a much greater difference from the Control Group to report significant results. Despite these results, Dubois and colleagues (2002) shared that their findings were inconsistent with the widespread success and support mentoring programs have enjoyed over last few years.

Another methodological challenge would be the recruitment of mentees who were interested and qualified (were not in required first year university support programs) to be mentored for a year. It was not difficult to create a group that received mentoring (Experimental Group) but the challenge is finding interested students who are willing to be randomly assigned to a group that does not receive mentoring (Control Group). This process was necessary in order to report any short and long term effects on College Adjustment, GPA, Retention,

and graduation that can be attributed causation and rule out the effects due to selection, maturation, and historical confounds.

For the Fall 2003 school year, Michigan State University retained 87% (MSU Registrar's office, 2004) of its freshmen class (Caucasian = 87%, Black = 81%). The current study retained 97% of its Black students (Control Group = 100%, Experimental Group = 96%). An issue for this study was the 100% retention among the Control Group. It is apparent that the Control and Experimental Groups may have had participants with special characteristics or received additional Academic Support. The Board did their best to control for confounding factors prior to randomly assigning students to the Experimental and Control groups. For instance, we were successful in screening out students in CAAP, however, program leaders learned second semester from the mentors that several mentees were in academic, athletic, and other support programs. It was possible that several of these students were randomly assigned to the Control Group while few were assigned to Experimental Group. Even though the Control Group achieved 100% retention its first year, it will be interesting to see how many students are retained second year and persist to graduation compared to the Experimental Group.

Despite the high retention among the sample, one must caution the idea that this sample is not at risk for academic failure (Freeman, 1999). For example, at the end of spring semester (time 2) the participants in this study had a GPA (2.46) that was approximately (.46) lower than the freshmen class GPA (2.92). Moreover, based the on participants aggregated time one and two GPA scores,

124

23% of the participants in the Control Group and 14% of the participants in the Experimental Group were below a 2.0 GPA and on or at risk for academic probation.

Implementation Concerns

There are a number of concerns regarding the implementation of this study. As stated in the purpose of this study, two primary goals of the intervention were: 1) to train African American junior and senior mentors how to mentor African American mentees using an ethnic-based mentoring model, and 2) for mentors to provide mentoring to African American mentees (African American Freshman) once a week for an hour. Even though the two primary goals of the study were accomplished, some of the concerns regarding implementation included how mentors applied the factors to their mentees over time, how mentors translated theory into tangible mentoring tasks, the mentor mentee relationships, mentor accountability, and mentee satisfaction.

As a first year program the evaluation drove the programming at the beginning of the year. This created a problem, because mentors and mentees were ready to be paired by mid September. However, without human subjects approval surveys could not be administered. Therefore survey administration had to wait until October 6 (date of human subjects approval).

The literature suggested that the first six to eight weeks is the most important for a first year college student's successful transition into the university. By pairing mentees and mentors mid to late semester, mentors felt that some mentees did not need a mentor to support their adjustment at Michigan State

University. Mentors were trained to address mentees who appeared uninterested in receiving mentoring. For some mentors this challenge existed for the entire school year.

By implementing the factors of an ethnic-based mentoring model into the African American Student Mentoring Program over time, it was thought that African American mentees would significantly improve their College Adjustment, GPA, and Retention compared to the Control Group at time two. However, it appears that the lack of time (from mid semester to the end of spring semester) may have limited the ability to demonstrate significant differences between the Control and Experimental Groups. It was anticipated that the Experimental Group would receive at least 25 weeks of mentoring from fall to spring semester. In actuality, they received approximately 16 weeks of mentoring. This is equal to one full semester. The lack of time mentors had to mentor mentees could have negatively influenced the increase of mentee scores.

Another issue with implementing the factors of an ethnic-based mentoring model may have been the amount of one to one mentoring that took place between mentors and mentees. For example, may be mentors should have spent three hours a week with mentees instead of one. If mentors were able to spend more time with their mentees it might have positively increased mentee outcomes. Nevertheless, increasing mentor mentee time together could be difficult to coordinate and manage because of the mentor mentee schedules. Many mentors work, are student leaders, or involved in other programs. Likewise, mentees are busy navigating their academic classes, work, going

home, and socially adjusting to campus life. Research demonstrated that mentor mentee contact alone was not related to outcome measures and other factors than mentor mentee contact mediated the effect of successful mentoring programs (Thile and Matt, 1995). However, more recent findings from the intervention literature (e.g., Lipsey, 2001) indicated that more than 16 hours of mentoring is necessary to produce desired change.

Based on the review of literature there were limitations on understanding how the theory of the six factors were translated into tangible tasks (limited mentoring methodology) in order to create behavior change. For example, it was a challenge helping mentors change theory into tangible task that could support their mentees. During supervision meetings mentors discussed their logs and their lack of understanding how to report the different factors (i.e., Sense of Belonging) they applied to support their mentees. As a result, some mentors struggled with applying the appropriate tasks to possibly help mentees report an increase on proximal outcomes. To help mentors apply the appropriate task for mentoring mentees, mentors reviewed the questions in the Sense of Belonging measure (i.e. mentee not sure if they fit with friends). Mentors reported that this process helped them better understand how to apply mentoring theory into tangible task that might enhance their mentees Sense of Belonging at a PWI.

Some mentor mentee relationships struggled because of personality differences, campus proximity, and mentors not fulfilling their responsibilities. The issue of mentor mentee personality differences is consistent with Haring's (1999) manuscript, where she suggested that most mentoring relationship are

built on good chemistry, and more often than not, forced matching (gender, race or ethnicity, majors, career interest, or hobbies) is ineffective when creating successful relationships. Likewise, Michigan State has the largest on campus housing (23 undergraduate residence halls, one graduate hall, and four apartment villages) in the United States. Mentors and mentees being separated by residence halls across campus proved to be challenging for developing relationships, especially in the winter.

While the program had many outstanding student mentors, several did not fulfill their mentoring responsibilities. To increase mentor accountability the Board tried to secure class credits for student mentors prior to training and mentoring. However, the Board was unsuccessful due to time constraint that would have allowed a college department to accept the mentoring curriculum. After first semester (semester with retreat), approximately 95% of the mentors attended all the trainings (some mentors had time conflicts), events sponsored by the program, and 95% had weekly contact with their mentees. Second semester, approximately 70% of the mentors attended all the trainings (25% of mentors had time conflicts), events sponsored by the program, and 70% had weekly contact with their students. When the Board contacted (contact made after first four weeks of second semester) mentees to discuss their relationship with their mentor, some mentee reported they had not been contacted by their mentor the first few weeks of the semester. The Board felt the lack of mentor accountability to attend training and provide weekly mentoring created negative effects on some mentees.

At the end of the school year (time 2) mentees reported on their mentoring relationships and satisfaction. Fifty-eight percent of the mentees were satisfied or strongly satisfied with their mentoring experience compared to 42% of the mentees who were not satisfied. In planning for the second school year (2004 - 2005), the Board restructured its matching process, (took into consideration proximity and mentor mentee chemistry) and secured class credits through African and African American Studies.

Theoretical Concerns on Ethnic-based Mentoring

As a first year study, the proposed theoretical model proved to show some promising results. Without a significant difference between the Control and Experimental Groups on distal outcomes, it was impossible to examine if the proximal outcomes mediated the relationship between the mentored group and the distal outcomes.

A major concern that exists in the literature is the absence of an empirically tested theory that relates to mentoring in general and to an ethnic-based mentoring in particular (Jacobi, 1991; Allen et.al., 1997). Without scientific information that examined the theoretical factors that influence African American College Adjustment, GPA, and Retention, this appears to be the only study that attempts to understand the theory of ethnic-based mentoring scientifically.

More important, with the lack of empirical examination of the six factors, it was a challenge to understand if these factors accurately represent an ethnic-based mentoring model. Theoretically, many manuscripts discuss at length the factors that promote successful College Adjustment, GPA, and Retention, but it

cannot be determined how these factors are related to the distal outcomes without an experimental evaluation (Jacobi, 1991; Allen et.al., 1997). Thus, the success of the Harris and Thomas' ethnic-based mentoring models (relationship between proximal and distal outcomes) may be related to other factors than what they reported as positive outcomes in their studies (i.e., Racial Identity).

Based on the theoretical concerns surrounding ethnic-based mentoring, one should not be surprised that significant relationships were not found between Group and the distal outcomes. The empirical design for this study was tested on a theory that has been marginally examined in the literature from an experimental perspective. Therefore, the implications of experimentally evaluating the theory surrounding an ethnic-based mentoring model could possibly prove to be highly beneficial for future researchers.

Despite these theoretical concerns, this study produced significant positive correlations between College Adjustment and five proximal outcomes (Racial Identity, Social Support, Psychological Support, Sense of Belonging, and Leadership Development) (Figure 6.1). It was also found that College Adjustment was significantly related to GPA and GPA to Retention. This provided support empirically that five of the ethnic-based factors were significantly related to African American student College Adjustment and GPA was related to College Adjustment and Retention (Appendix F).

Figure 6.1 Ethnic-based Mentoring Model Significant Mean Differences and Correlations
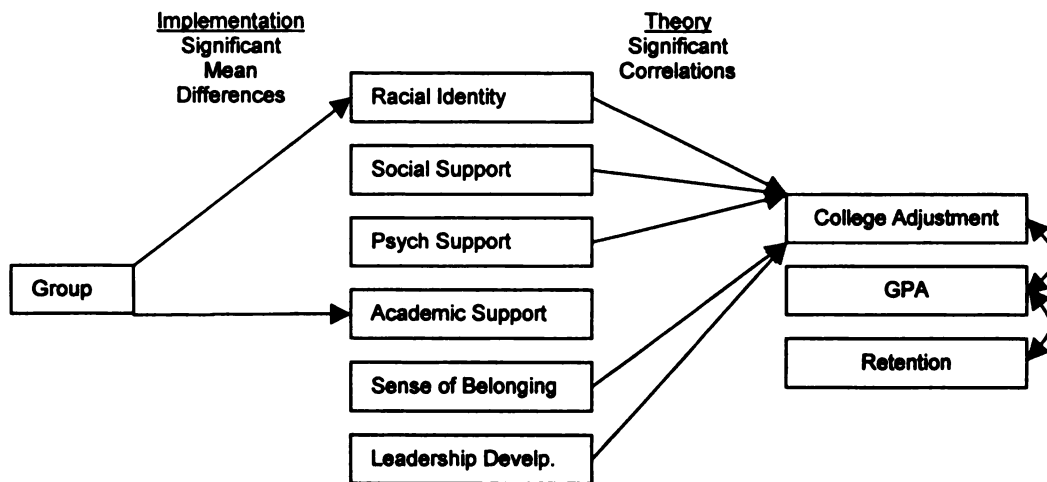
These correlations in figure 6.1 were consistent with several findings showing the theoretical positions on the relationship between mentoring, college adjustment, and GPA (Good et. al., 2000; Lavant et. al., 1997; Newman & Newman, 1999; Shultz et. al., 2001; and Thile & Matt's, 1995). More important, this theoretical position is consistent with the limited empirical mentoring research, which suggested GPA was significantly related to mentoring (Thile & Matt's, 1995).

The significant correlations in this study appear to fill a gap in the literature because no studies have been found that report these results using a randomized pre-post test design with African American college students. Therefore, it is suggested that in order to address some of the theoretical concerns in the literature, researchers should continue to examine the significantly related factors of an ethnic-based mentoring model. Further examination of these results can assist researchers in understanding the

131

significant factors that influence College Adjustment, GPA, and Retention within an ethnic-based mentoring model.

Mediation Model Analysis

Research Questions on Mediation Models. Several research questions were asked to determine if Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, and Leadership Development mediated the relationship between the Experimental Group, and College Adjustment, GPA, and Retention (i.e., Does Racial Identity mediate the relationship between the Experimental Group and College Adjustment?, Does Social Support mediate the relationship between the Experimental Group and College Adjustment?).

These research questions could not be tested because there was no relationship between mentoring and College Adjustment, GPA, or Retention. In other words, a significant difference did not exist between the mentored group and the distal variables. Nevertheless, the results of this study demonstrated that mentoring positively effected mentee Racial Identity and Racial Identity was significantly related to mentee College Adjustment (Figure 6.1). Based on these results, an exploratory analysis was conducted to determine if the proximal variables mediated the relationship between Racial Identity and College Adjustment.

Exploratory Analyses of Mediation Models

Significant indirect relationships were found on Sense of Belonging and Leadership Development mediating the relationship between Racial Identity and

College Adjustment. For Sense of Belonging a significant partial mediation was found for the total sample. The significant partial mediation for the total sample suggested that while Sense of Belonging partially explains the relationship between Racial Identity and College Adjustment, there may be other variables that contribute to the relationship between Racial Identity and College Adjustment. Terenzini's (1997) research on student development in Predominately White Institutions and Historically Black Colleges and Universities (HBCUs) suggested that a student's Racial Identity and College Adjustment are influenced by their Sense of Belonging to their environment.

Significant partial mediation was found for Leadership Development mediated the relationship between Racial Identity and College Adjustment in the total sample. The significant partial mediation for the total sample suggested that there may be other variables that contribute to the relationship between Racial Identity and College Adjustment. Striffolino and Saunders (1989) showed that Leadership Development enhances a student's identity and develops a student who is an active and not passive participant involved with their education.

The results from these mediation models demonstrated that Sense of Belonging and Leadership Development proved to be two significant variables that contribute to the influence on ethnic-based mentoring model. These two variables along with Racial Identity and Academic Support have proven to be important theoretically and now empirically. Still, only by testing this model over time and on different samples can credible inferences be made about the effectiveness of an ethnic-based mentoring model, its' proximal outcomes, and

whether it significantly influences African American student College Adjustment, GPA, and Retention. Further, while implementation and methodological issues (addressed in following sections) are solved, confirmation of the theoretical adequacy of these observations should be studied.

Limitations

Power (small sample) was a limitation of the study. However, for program continuity, having to many mentees and mentors (more than 60) in a mentoring program can hinder mentor relationships, mentor mentee relationships, and the cost of the program and evaluation (Thomas, 1999). When a maximum of two mentees were assigned to one mentor the program was limited to the number of mentees that could participate in the study. Even though a large group of African American students were interested in being mentored, by omitting students who were in CAAP limited the control group to 30 students. Having a larger sample might have addressed some of the sampling issues, but would have also increased our evaluation cost significantly. Therefore, more funding is needed to possibly have a larger sample.

The inability to secure class credits was another limitation. Without mentor accountability the Board could not hold students responsible for their mentoring. The majority of students became mentors because they wanted to support the success of other African American students. However, when other obligations (work, class, relationships, other activities) developed for mentors the program

was no longer a priority. By having class credits, mentoring becomes a priority because students do not want to receive a poor or failing grade.

Lastly, it was learned while conducting the study that some of the measures could be improved, collapsed, or omitted. The measure for Psychological Support was not measuring the support mentors provide to their mentees, but was measuring mentee well being. Psychological Well-being was captured in the College Adjustment scale as a subscale and questions for Psychological Support should be developed based off McGraths Social Support Scale. Researchers found out later that an updated Scale for Sense of Belonging was developed. This measure had questions that provided greater detail compared to the first measure. Also the questions were measured on their degree of relevance compared to the degree of agreement.

Moreover, the measure for Racial Identity was the only scale used on large populations of African American college students. The measures used to examine the proximal and distal outcomes must continue to be tested for reliability to determine their effectiveness with an African American sample. Therefore some of the results in this study might be based on measures that do not work well with a sample of African American College students.

Strengths

A major strength of the study was the overall methodology. A strong framework was developed to implement and evaluate an ethnic-based mentoring program over time. The framework included a Board comprised of students and

university staff. The Board provided leadership to monitor the program implementation and evaluation. The framework also included a year long curriculum that encompassed a student mentor retreat, bi-weekly training meetings, and weekly mentoring. Lastly, the framework included a strong evaluation design that employed a randomized pre-post test design to help the Board understand how and whether ethnic-based mentoring influenced African American freshmen Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, Leadership Development, College Adjustment, GPA, and Retention at a PWI.

Another strength of the study proved to be the recruitment of student mentors. Junior and senior African American students were excited about a new program to support African American freshmen students at Michigan State University. As a result over 100 students applied to be mentors. The recruitment of African American freshmen students was successful because there was a large pool of students to choose from. This allowed us to self select from students who were not chosen to participate in CAAP.

With one-fourth of participants attending the Mix and Mingle to complete surveys, our community based outreach plan helped us collect surveys to have a successful random assignment. By having a participant outreach plan, the Board was prepared to conduct door to door dorm visits and randomly assign students to groups. As a result, the Board was two students short of having 100% of their participants in the Experimental Group. The door to door outreach plan also allowed the Board to collect 100% (N = 80) of the data at post-test.

Conclusion

Overall the purpose of this study was to evaluate the influence of an ethnic-based mentoring model and the factors (i.e., Racial Identity, Social Support, Psychological Support, Academic Support, Sense of Belonging, Leadership Development) that influence African American student College Adjustment, GPA, and Retention in an African American based student mentoring program at a PWI. As a first year mentoring program in higher education, we were able to conduct a large randomized pre-post test empirical study to address the critical evaluation concerns on mentoring programs mentioned or missing in the literature. By teaching mentors the factors of an ethnic-based mentoring model, we found that mentees benefited the most form mentoring and demonstrated significantly higher scores on Racial Identity and Academic Support. The results also showed that the mentored students achieved a higher GPA (2.50) than those not mentored (GPA = 2.41). The mentees grades also proved to be better than the total samples predicted GPA (2.42). It was also discovered that Sense of Belonging and Leadership Development indirectly influenced the correlations between Racial Identity and College Adjustment. We also felt the significant relationships (College Adjustment on Racial Identity, Social Support, Psychological Support, Sense of Belonging, Leadership Development, and GPA) within an ethnic-based mentoring model demonstrated positive scientific findings that can possibly benefit the College Adjustment and GPA of African American college students at PWIs. Although two mentees were not retained (both from out of state) from the Experimental

Group, we can be satisfied with retaining 96% of our first year African American mentees in the study.

Future Directions

There are several areas that can be explored to better understand the factors associated with an ethnic-based mentoring model for African American college students. Some key areas would include the theoretical and methodological issues surrounding the field of higher education and mentoring.

While the last 20 years has produced literature on ethnic-based mentoring programs for African American college students, the majority of these programs lack empirically sound evaluations. Therefore it is important to examine if ethnic-based mentoring programs for African American high school or middle school students have been rigorously examined empirically. If so, these programs might provide strong methodological designs that could be used to better structure and test an ethnic-based mentoring model on African American college students. Likewise, by examining ethnic-based mentoring models at different educational levels (middle school, high school, college, graduate school), a grounded theory can be universally applied and tested on the factors that significantly contribute to student adjustment, GPA, retention, and graduation.

A basis for having a strong grounded theory for ethnic-based mentoring research includes an implementation process that effectively leads to desired outcomes. This means there needs to be a clear articulation of theory (e.g. the relationship between Racial Identity and College Adjustment) into tangible task

that can be applied to various contexts and are consistent with the goals of the study. It is important to have empirically tested studies in the literature that reports the strengths and weakness of implementation within an ethnic-based mentoring study. Without this information a gap exists in the literature that would help researchers create strong methodologically experimental designs that can be rigorously examined.

In order to address some of these methodological issues, researchers examining ethnic-based mentoring models must be mindful of sampling issues, identifying people who really need and want mentoring, and the amount of time spent mentoring. As discussed in this study, power was an issue to report significant results. Therefore when developing a randomized pre-post test design, more than 80 participants are suggested. However, if a sample is smaller than 80 participants, the difference between mean scores among two groups must be large enough to possibly report significant results. Likewise, it is important to understand the risk (e.g., academic failure or dropout) associated with the target population and that the sample chosen is representative of needing support. For example, it is questionable how much high achieving African American students benefited from an ethnic-based mentoring program. More important, mentors must be held accountable for meeting with their mentees and vice versa. This is critical because the mentoring, or lack there of, can positively or negatively influence the primary goals and outcomes of the research. Lastly, researchers should be aware of the amount of time mentees need to be mentored to demonstrate significant results. Issues with using too

much of the mentors and mentees time may exist. However, mentees might have demonstrated significantly better results than the Control Group if more than 16 hours were dedicated to mentoring during the school year.

To achieve an effective and significant ethnic-based mentoring model, several areas would have to be improved in order to produce positive results on both proximal and distal outcomes. First, each mentee would need to receive at least 3 to 4 hours of mentoring a week. As a result, mentors would be enrolled in a 2 credit class (6 hours a week and 12 hours every 2 weeks) and continue to mentor 2 mentees. To improve accountability and the transfer of theory into practice mentors would receive 2 hours of class training and 1 hour of supervision every other week. The remaining hours will be allotted to the retreat and developing mentor mentee relationships. To hold mentees accountable they would enroll in a 1 credit class (3 hours).

To optimize the mentoring programs effectiveness, it would collaborate with the university's academic departments. This would allow the program to help academic departments share resources and reduce duplication (e.g., cultural programming). To ensure students from departments participate in the program, mentors and mentees would be interviewed and randomly selected into the program. For example, if there are 10 students form natural science 5 would be randomly selected to participate in the program.

Lastly, program management is the most important. Two people should manage the program and evaluation aspects of the mentoring organization. Both

positions would work hand and hand to achieve the desired results of an ethnic-based mentoring model.

The present findings convey an important message for continued research on ethnic-based mentoring for African American college students attending PWIs. Understanding these issues may provide an avenue for researchers, faculty, staff, and students to fully appreciate the potential of an ethnic-based mentoring model on African American student College Adjustment, GPA, and Retention.

APPENDIX A

CONSENT FORM

Consent Form to Participate in a study of an African American Student Mentoring Program

October 6, 2003

Dear Michigan State Student,

As you may have heard, *The Office of Racial Ethnic Student Affairs and the James Madison College* are supporting an African American mentoring program to strengthen the adjustment and sense of belong of first year African American college students. Part of this initiative involves a study to learn from student mentors and their mentees about the effects of the program on their racial identity, social support, psychological well-being, academic success, sense of belonging, leadership development, and college adjustment over time. The program is a five-year pilot study. The study is being conducted under the supervision of Lee N. June, Ph.D. and E. Nathan Thomas III, M.A. A part of this study is being used for Mr. Thomas' dissertation.

Because of your interest in the program, it is important for us to understand the challenges African American students must address in order to help them successfully navigate the campus environment. If you agree to participate in this study, your involvement will include the following:

1. Completing a pre and post-test survey to learn about your perceptions and attitudes during fall and spring semester. The pre-test will be administered during the first eight weeks of the semester (October for fall and February for spring) and the post-test a week before finals (December for fall and April for spring).
2. Your participation in this study will take approximately 30 to 40 minutes.
3. Providing your personal identification (PID) number, which allows us to access your grade point average (GPA) and enrollment status (i.e., are you registered for classes). If you refuse to provide your PID it does not affect your rights to participate in the Mentoring Program.

This study involves minimal risk; that is, no risks to your physical or mental health beyond those encountered in the normal course of everyday life. The information you provide will be important in helping to inform and improve the African American Student Mentoring Program. **Your privacy will be protected to the maximum extent allowable by law.** Your name will never be associated with the information you provide in this study, unless subpoenaed by a court order or a request from UCRIHS.

As a way of thanking you for your participation, when you turn in the completed survey and consent form **you will be entered in a drawing for a monetary gift at the end of the semester: There is one $100 gift, two $50 gifts, and five $20 gifts.** The drawing will take place at the end of the semester celebration during fall and spring semester.

If you have any <u>questions regarding this survey or would like assistance completing this survey</u>, please contact Nate Thomas at (517) 353-7745 or the evaluation project director, Dr. Lee June, (517) 355-2264 at Michigan State University.

If you have any <u>questions regarding your rights as a survey participant</u>, or are dissatisfied at any time with any aspect of this survey, you may contact – anonymously if you wish – Peter Vasilenko, Ph.D., Chair of the University Committee on Research Involving Human Subjects (UCRIHS) by phone: (517) 355-2180, email: <u>ucrihs@msu.edu</u>, or regular mail: 202 Olds Hall, East Lansing, MI 48824.

Appendix A (Cont'd).

Provide your PID # on the line below if you agree to allow us to access your academic information for purposes of this study (If you refuse to provide your PID it does not affect your rights to participate in the Mentoring Program):

PID #_____

I, _____, voluntarily agree participate in this study.
(print your name here)

_____   _____
(please sign here)   (Date)

RELEASE OF INFORMATION

**African American Student Mentoring Program Contact & Release of Information
Form**
(PLEASE PRINT CLEARLY & COMPLETE FRONT and BACK)
<u>Current Permanent Address (i.e. parents or guardian)</u>

Name
(First)_____(Last)_____

Address_____City_____State_____Zip_____

Phone_____

Contact Person
If you were to move or otherwise be difficult to reach, who would be most likely to know
how we could contact you?

Name
(First)_____(Last)_____

(Relationship)_____   Phone_____

Address_____City_____State_____Zip_____

Release of Information Form
In order for the above person to provide your contact information we need your consent
to release information.

RELEASE OF INFORMATION FORM

October 9, 2003

Dear (Put contact persons name from
above):_____

      I'm helping the African American Student Mentoring Program at Michigan State
University with a project on student adjustment, retention, and graduation. If in the next 8
years they should be having a hard time reaching me, I've given them permission to
contact you to find out where I am. Please feel free to give them any information you

Appendix B (Cont'd).

might have regarding where I might be. The names of the persons in charge of the project are Nathan Thomas and Robert Biddle. The contact number for Mr. Thomas is 734-730-8490 and Mr. Biddle 517-353-7745.

Sincerely,

_____
(PRINT name here)

_____
(SIGN name here)

Date:_____

Contact Person

If you were to move or otherwise be difficult to reach, who would be most likely to know how we could contact you?

Name

(First)_____(Last)_____

(Relationship)_____   Phone_____

Address_____City_____State_____Zip_____

APPENDIX C

SURVEY

DEMOGRAPHICS: To help us understand who has responded to our survey, we would like to know some information about you. Please answer the following questions by circling the answer that applies to you.

1. What is your racial/ethnic identification?
   a. African American
   b. African (specify nationality)_____

   c. West Indian (specify nationality)_____

   d. Latino non-white (specify nationality)_____

   e. Other (specify)_____

2. What is your current citizenship status?
   a. US citizen
   b. Permanent resident but not a citizen
   c. Temporary resident
   d. Other (Specify)_____

3. Gender
   a. Male
   b. Female

4. What **YEAR** were you born?
   _____

5. Classification
   a. Freshman
   b. Sophomore
   c. Junior
   d. Senior
   e. Other (Please Specify)
      _____
   f.

6. Marital Status?
   a. Single
   b. Married
   c. Separated/Divorced
   d. Widowed

7. Do you have Children?   1. Yes   2. No

8. If yes how many? _____

9. High School cumulative GPA when you graduated? _____

10. Size of your high school (size range)?
    a. 0 to 500 students
    b. 501 to 1,000 students
    c. 1,001 to 2,000 students
    d. 2,001 to 3,500 students
    e. Over 3,501 students

11. Racial percentage of African American/ Blacks in your high school?
    a. 0 to 5%
    b. 6 to 10%
    c. 11 to 20%
    d. 21 to 40%
    e. 41 to 60%
    f. 61 to 80%
    g. 81 to 100%

Appendix C (Cont'd).

12. After all your years of education (starting at age 5) through high school graduation (grade 12), how many have you spent attending integrated schools (Provide number of years)?_____

13.

Prior to graduation who encouraged you to attend college?	Not at all	A Little	Some-what	Quite a Bit	A lot
a. Parents/Guardian	1	2	3	4	5
b. High school counselors/Teachers	1	2	3	4	5
c. Friends	1	2	3	4	5
d. Other:_____	1	2	3	4	5

14.

Why did you decide to attend this university?	Not at all	A Little	Some-what	Quite a Bit	A lot
a. Academic reputation	1	2	3	4	5
b. Family encouraged	1	2	3	4	5
c. Location	1	2	3	4	5
d. Programs offered	1	2	3	4	5
e. Financial considerations	1	2	3	4	5
f. High School teachers/Counselors encouraged	1	2	3	4	5
g. Friends encouraged	1	2	3	4	5
h. School popularity (i.e. social life and sports)	1	2	3	4	5
i. It was the only school that accepted you	1	2	3	4	5
j. Other reasons_____	1	2	3	4	5

147

15. Where are you from?
    a. City/town_____
    b. State_____
    c. Country_____

16. Have you spent most of your life in a rural area, small town or city?
    a. Rural area (Fewer than 1,000 people)
    b. Small Town (1,001 to 50,000 people)
    c. Small city (50,001 to 100,000 people)
    d. Medium size city (100,001 to 500,000 people)
    e. Large size city (Over 500,001 people)

17. What was the primary racial makeup of your city (circle all that apply)?
    a. African American
    b. Asian American
    c. Latino
    d. White

18. With whom did you live with most of the time while you were growing up (until age 18)?
    a. Both Natural parents
    b. Mother and stepfather
    c. Father and stepmother
    d. Mother only
    e. Father only
    f. Grandparents
    g. Foster parents
    h. Other

19. What was your parent's combined income from the last year?
    a. Less than 10,000
    b. 10,000 to 15,000
    c. 15,000 to 20,000
    d. 20,000 to 25,000
    e. 25,000 to 35,000
    f. 35,000 to 45,000
    g. 45,000 to 60,000
    h. 60,000 to 80,000
    i. 80,000 and above

20. Where are you living during this academic year?
    a. University residence hall
    b. Rented apartment or condominium
    c. Rented house
    d. Rented room or apartment in a private home
    e. My own house or condominium

    f. Home of my parents or other relative
    g. Other_____

21. Your cumulative GPA as of last semester (**First year students put the average grade of all your classes combined, i.e., 2.0 +3.0 = 2.5**)
    _____

22. How important is it to get a college degree?
    a. Extremely important
    b. Very important
    c. Somewhat important
    d. Not at all important

23. How important is it that you graduate from this university?
    a. Extremely important
    b. Very important
    c. Somewhat important
    d. Not at all important

24. How important is it that you make all A's?
    a. Extremely important
    b. Very important
    c. Somewhat important
    d. Not at all important

25. So far has your desire to make all A's reflect your cumulative GPA?
    a. Yes   b. No

26. Why?

    _____

27. How sure are you that you made the right choice to attend this university?
    a. Definitely right choice
    b. Probably right choice
    c. Not sure
    d. Probably wrong choice
    e. Definitely wrong choice

28. Will you return to this university next semester?
    a. Definitely will return
    b. Probably will return
    c. Not sure
    d. Probably will not return
    e. Definitely will not return

29. If no, why?

    _____

Appendix C (Cont'd).

30. Have you ever seriously considered leaving the university?
    a. Yes
    b. No

31. If yes, why?_____
    _____

SECTION III STUDENT EXPERIENCES

32. As a Black student how much do you feel part of campus life with other black students
    a. Never
    b. Sometimes
    c. Often
    d. Very often

33. In general, as a Black student how much do you feel part of the overall campus life?
    a. Never
    b. Sometimes
    c. Often
    d. Very often

34. To what extent do campus extracurricular activities reflect your interest?
    a. Never
    b. Sometimes
    c. Often
    d. Very often

35. To what extent do off campus extracurricular activities reflect your interest?
    a. Never
    b. Sometimes
    c. Often
    d. Very often

STUDENT INTERACTIONS AT THE UNIVERSITY

36. Have you encountered racial discrimination in any form (i.e., symbols, gestures, words or behaviors) on or around campus (i.e. in class, where you live, at restaurants, while shopping, etc)?
    a. Yes   b. No

37. If yes, how frequently have you experienced discrimination on around this campus?
    a. Never
    b. Once or twice during a semester
    c. Three to five times during a semester
    d. More than five times during a semester

38. How satisfied or dissatisfied have you been with your with your social life/dating at the university?
    a. Very satisfied
    b. Satisfied
    c. Unsatisfied
    d. Very unsatisfied

39. Was (is) your first college roommate from the same racial ethnic background as you?
    a. Yes   b. No

40. How long did it take for you to develop a relationship?
    a. About One day
    b. About One week
    c. About One month
    d. About Two months
    e. Never

41. How often do you do things together?
    a. Everyday
    b. At least once a week
    c. At least every other week
    d. At least once a month
    e. Never

42. Do you or have you received any financial aid?
    a. Yes   b. No

43. What type have you received?
    a. Loan
    b. Academic scholarships
    c. Research assistantship
    d. Teaching assistantship
    e. Fellowship
    f. Outside, non-university funding
    g. Work study
    h. Other _____

44. Approximately what percent of your tuition does your financial aide cover?
    a. 25%
    b. 50%
    c. 75%
    d. 100%

45. To what degree has your financial aid reduce your stress about paying for college?
    a. Not at all
    b. Some
    c. A little
    d. A lot

46. Do you work on or off campus to support your college education?
    a. Yes   b. No

47. How many hours a week do you work?
    a. 0-10
    b. 10-20
    c. 20-30
    d. 30-40

48. Do you have health insurance?
    a. Yes   b. No

49. If you were physically sick (symptoms of the flu) at what point would you go get professional help?
    a. Immediately
    b. After one to three days
    c. After one week
    d. After two three weeks
    e. Never

50. If you were mentally sick (i.e. depressed) at what point would you go get professional help?
    a. Immediately
    b. After one to three days
    c. After one week
    d. After two to three weeks
    e. Never

Appendix C (Cont'd).

51. Are you involved in any other support programs (i.e., mentoring, academic, athletics) that are not social programs (i.e., Black Caucus, Greek Fraternity, or Sorority)? a. Yes   b. No
(if no skip question 52 below)

52. List Program (P)

Program (P)	P(1)_____	P(2)_____	P(3)_____
a. What type of support do you receive? (Circle all that Apply)?	1. Academic 2. Social 3. Other_____	1. Academic 2. Social 3. Other_____	1. Academic 2. Social 3. Other_____
b. How often do you receive support? (Circle one)	1. None 2. Once or twice a week 3. Every other week 4. Once a month	1. None 2. Once or twice a week 3. Every other week 4. Once a month	1. None 2. Once or twice a week 3. Every other week 4. Once a month

SECTION 1 - The following statements have to do with your feelings. Beside each statement, circle the number that best describes how you feel using the scale below.

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1. I believe that being Black is a positive experience.	1	2	3	4	5
2. I know through experience what being Black in America means.	1	2	3	4	5
3. I feel unable to involve myself in **White experiences and am increasing my involvement in Black experiences.**	1	2	3	4	5
4. I believe that large numbers of Blacks are un- trustworthy.	1	2	3	4	5
5. I feel an overwhelming attachment to Black people.	1	2	3	4	5
6. I involve myself in causes that will help oppressed people.	1	2	3	4	5
7. I feel comfortable wherever I am.	1	2	3	4	5
8. I believe that white people look and express themselves better than Blacks.	1	2	3	4	5
9. **I feel very uncomfortable around Black people.**	1	2	3	4	5

Appendix C (Cont'd).

10. I feel good about being Black, but do not limit myself to Black activities.   1   2   3   4   5

11. I often find myself referring to White people as honkies, devils, pigs, etc.   1   2   3   4   5

12. I believe that to be Black is not necessarily good.   1   2   3   4   5

13. I believe that certain aspects of the Black experience apply to me, and others do not.   1   2   3   4   5

14. I frequently confront the system and the man.   1   2   3   4   5

15. I constantly involve myself in Black Political and social activities (art shows, political meetings, Black theatre, etc.).   1   2   3   4   5

16. I involve myself in social action and political groups even if there are no other Blacks involved.   1   2   3   4   5

17. I believe that Black people should learn to think and experience life in ways similar to white people.   1   2   3   4   5

18. I believe that the world should be interpreted from a Black perspective.   1   2   3   4   5

19. I have changed my style of life to fit my beliefs about Black people.   1   2   3   4   5

20. I feel excitement and joy in Black surroundings.   1   2   3   4   5

21. I believe that Black people came from a strange, dark, and uncivilized continent.   1   2   3   4   5

22. People regardless of their race have strengths and limitations.   1   2   3   4   5

23. I find myself reading a lot of Black literature and thinking about being Black.   1   2   3   4   5

24. I feel guilty and/or anxious about some of the things I believe about Black people.   1   2   3   4   5

25. I believe that a Black person's most effective weapon for solving problems is to become a part of the White person's world.   1   2   3   4   5

152

26. I speak my mind regardless of the consequences (e.g., being kicked out of school, being imprisoned, being exposed).	1	2	3	4	5
27. I believe that everything Black is good, and consequently, I limit myself to Black activities.	1	2	3	4	5
28. I am determined to find my Black identity.	1	2	3	4	5
29. I believe that white people are intellectually superior to Blacks.	1	2	3	4	5
30. I believe because I am Black, I have many strengths.	1	2	3	4	5
31. I feel that Black people do not have as much to be proud of as White people.	1	2	3	4	5
32. Most Black people I know are failures.	1	2	3	4	5
33. I believe that White people should feel guilty about the way they have treated Blacks in the past.	1	2	3	4	5
34. White people cannot be trusted.	1	2	3	4	5
35. In today's society if Black people don't achieve, they have only themselves to blame.	1	2	3	4	5
36. The most important thing about me is that I am Black.	1	2	3	4	5
37. Being Black just feels natural to me.	1	2	3	4	5
38. Other Black people have trouble accepting me because my life experiences have been so different from their experiences.	1	2	3	4	5
39. Black people who have any White people's blood should feel ashamed of it.	1	2	3	4	5
40. Sometimes I wish I belonged to the White race.	1	2	3	4	5
41. The people I respect most are White people.	1	2	3	4	5
42. A person's race usually is not important to me.	1	2	3	4	5
43. I feel anxious when White people compare me to other members of my race.	1	2	3	4	5

Appendix C (Cont'd).

44. I can't feel comfortable with either Black people or White people.	1	2	3	4	5
45. A person's race has little to do with whether or not he she is a good person.	1	2	3	4	5
46. When I am with Black people, I pretend to enjoy things they enjoy.	1	2	3	4	5
47. When a stranger who is Black does something embarrassing in public, I get embarrassed.	1	2	3	4	5
48. I believe that a Black person can be close friends with a White person.	1	2	3	4	5
49. I am satisfied with myself.	1	2	3	4	5
50. I have a positive attitude about myself because I am Black.	1	2	3	4	5

SECTION 2 – This section contains questions about how you feel and how things have been going with you. For each question, circle the answer which best applies to you.

1. How have you been feeling in general? (During The Past Month)
   a. In excellent spirits
   b. In very good spirits
   c. In good spirits mostly
   d. I have been up and down in spirits
   e. In low spirits mostly
   f. In very low spirits

2. Have you been bothered by nervousness or your "nerve"? (During The Past Month)
   a. Extremely so – to the point where I could not work or take care of things
   b. Very much so
   c. Quite a bit
   d. Some – enough to bother me
   e. A little
   f. Not at all

3. Have you been in firm control of your behavior, thoughts, emotions, or feelings? (During The Past Month)
   a. Yes, definitely so
   b. Yes, for the most part
   c. Generally so
   d. Not to well
   e. No, and I am somewhat disturbed
   f. No, and I am very disturbed

4. Have you felt so sad, discouraged, hopeless or had so many problems that you wondered if anything was worthwhile? (During The Past Month)
   a. Extremely so – to the point that I have just about given up
   b. Very much so
   c. Quite a bit
   d. Some – enough to bother me
   e. A little
   f. Not at all

5. Have you been under or felt you were under any strain, stress, or pressure? (During The Past Month)
   a. Yes – almost more than I could bear or stand
   b. Yes – quite a bit of pressure
   c. Yes – some, more than usual
   d. Yes – some, but about usual
   e. Yes – a little
   f. Not at all

6. How happy, satisfied, or pleased have you been with your personal life? (During The Past Month)
   a. Extremely happy – could not have been more satisfied or pleased
   b. Very happy
   c. Fairly happy
   d. Satisfied – pleased
   e. Somewhat dissatisfied
   f. Very dissatisfied

7. Have you had any reason to wonder if you were loosing your mind, or loosing control over the way you act, talk, think, feel, or of your memory? (During The Past Month)
   a. Not at all
   b. Only a little
   c. Some – but not enough to be concerned or worried about
   d. Some and I have been a little concerned
   e. Some and I am quite concerned
   f. Yes, very much so and I am very concerned

8. Have you been anxious worried or upset? (During The Past Month)
   a. Extremely so – to the point of being sick or almost sick
   b. Very much so
   c. Quite a bit
   d. Some – enough to bother me
   e. A little
   f. Not at all

9. Have you been waking up fresh and rested? (During The Past Month)
   a. Every day
   b. Most every day
   c. Fairly often
   d. Less than half of the time
   e. Rarely
   f. None of the time

10. Have you been bothered by any illness, bodily disorder, pains or fears about your health? (During The Past Month)
    a. All the time
    b. Most of the time
    c. A good bit of the time
    d. Some of the time
    e. A little of the time
    f. None of the time

11. Has your daily life been full of things that were interesting to you? (During The Past Month)
    a. All the time
    b. Most of the time
    c. A good bit of the time
    d. Some of the time
    e. A little of the time
    f. None of the time

12. Have you felt down-hearted and blue? (During The Past Month)
    a. All the time
    b. Most of the time
    c. A good bit of the time
    d. Some of the time
    e. A little of the time
    f. None of the time

13. Have you been feeling emotionally stable and sure of yourself? (During The Past Month)
    a. All the time
    b. Most of the time
    c. A good bit of the time
    d. Some of the time
    e. A little of the time
    f. None of the time

14. Have you felt worn out used-up or exhausted? (During The Past Month)
    a. All the time
    b. Most of the time
    c. A good bit of the time
    d. Some of the time
    e. A little of the time
    f. None of the time

Appendix C (Cont'd).

	For each of the four scales below, note that the words at each end of the 0 to 10 scale describe opposite feelings. Circle any number along the scale which seems closet to how you have generally felt. **During the last month**
15. How concerned or worried about your Health have you been?	0 1 2 3 4 5 6 7 8 9 10 Not Concerned At all Very Concerned
16. How Relaxed or Tense have you been?	0 1 2 3 4 5 6 7 8 9 10 Very Relaxed Very Tense
17. How much energy, pep, and vitality have you felt?	0 1 2 3 4 5 6 7 8 9 10 No energy At all Very Energetic listless dynamic
18. How Depressed or Cheerful have you been	0 1 2 3 4 5 6 7 8 9 10 Very Depressed Very Cheerful

SECTION 2A – This section contains 2 questions about your feelings on religion and spirituality. For each questions, circle the answer which best applies to you.

Appendix C (Cont'd).

1. How important is religion and
    spirituality in your life?
    a. Very Important
    b. Some What important
    c. Somewhat not important
    d. Not important at all

2. I attend religious services
    _____?
    a. Not at all
    b. Weekly
    c. Monthly
    d. A few times a year

Appendix C (Cont'd).

SECTION 3 – To what degree is each sense of belonging statement relevant to you as an MSU student? Circle the answer which best applies to you.

	Not relevant	Some-what relevant	Relevant	Very relevant
1. Wonder if I really fit	1	2	3	4
2. Important to be valued by others	1	2	3	4
3. Not sure if I fit with friends	1	2	3	4
4. Have felt valued in the past	1	2	3	4
5. Describe myself as a misfit	1	2	3	4
6. Important that I fit	1	2	3	4
7. People accept me	1	2	3	4
8. Piece of a jigsaw puzzle	1	2	3	4
9. I have qualities	1	2	3	4
10. What I offer is valued	1	2	3	4
11. Feel like an outsider	1	2	3	4
12. Working on fitting in	1	2	3	4
13. Have no place in this world	1	2	3	4
14. Want to be part of things	1	2	3	4
15. I could disappear for days	1	2	3	4
16. Mainstream of society	1	2	3	4
17. Important that my opinions are valued	1	2	3	4
18. Observe life rather than participate	1	2	3	4
19. Few people would come to my funeral	1	2	3	4
20. Feel like a square peg	1	2	3	4
21. Others recognize strengths	1	2	3	4
22. I don't really fit	1	2	3	4
23. Background and experience are different	1	2	3	4
24. Not see or call friends	1	2	3	4
25. Feel left	1	2	3	4
26. Make myself fit	1	2	3	4
27. Not valued or important	1	2	3	4

Appendix C (Cont'd).

SECTION 4 - Circle the answer that best applies to you.

1. How would you rate your leadership skills?   Among the...
   a. Highest 1% of your age group
   b. Highest 10% of your age group
   c. Average
   d. Below average for your age group

2. To what degree do you participate or are a leader in MSU student groups?
   a. No participation
   b. Be long to one or two groups but not active
   c. Active in one or two groups but hold no office
   d. Participate actively and hold an office in at least one group

3. What is the highest degree you feel you will complete?
   a. Bachelor's degree
   b. Master's degree
   c. Doctoral degree
   d. Undecided
   e. Other_____

4. Do you consider yourself a leader?   1. Yes   2. No

5. What campus organizations are you a member?
   a. _____
   b. _____
   c. _____
   d. _____

6. *The African American Mentoring Program is* also interested in building student leaders. Here is a list of abilities that student often need to be effective at promoting change on their campus. We would like to know how you rate your **OWN** ability in each of these areas. Circle the answer that applies to you.

How good are you at...	Not at all	A Little	Some-what	Quite a Bit	Very good	Excellent
a. Getting students to work on campus issues or projects.	1	2	3	4	5	6
b. Recruiting students to participate in campus activities.	1	2	3	4	5	6
c. Recruiting students to join a campus group.	1	2	3	4	5	6
d. Project planning.	1	2	3	4	5	6
e. Running effective meetings.	1	2	3	4	5	6
f. Developing new student leaders.	1	2	3	4	5	6

g.	Organizing a committee.		1	2	3	4	5	6
h.	Getting campus leaders to listen to you.		1	2	3	4	5	6
i.	Getting other groups or organizations to partner with your group in campus initiatives or improvement efforts.		1	2	3	4	5	6
j.	Knowing other leaders outside of your own group.		1	2	3	4	5	6
k.	Knowing strategies that would improve your campus.		1	2	3	4	5	6

SECTION 5

Below are several statements, some of which apply to you in greater or less degree. In the space next to the statement, please enter a number from "1" (**Doesn't apply to me at all**) to "9" (**Applies very closely to me**), which best represents your judgment concerning how closely the statement relates to you **at the present time.**

Please remember that you can use any number at any point in each statement, **but no more than one** number in each statement.

Please be sure to complete the entire questionnaire. **Be just as honest as possible.**

Does not apply to me at all		Can't decide					Applies very closely to me	
1	2	3	4	5	6	7	8	9

1. _____ I feel that I fit in well as part of the MSU environment.
2. _____ I have been feeling tense or nervous lately.
3. _____ I have been keeping up to date on my academic work.
4. _____ I am meeting as many people, and making as many friends, as I would like at MSU.
5. _____ I know why I am in college and want out of it.
6. _____ I am finding academic work at MSU difficult.
7. _____ Lately I have been feeling blue and moody a lot.
8. _____ I am very involved with social activities in college.
9. _____ I am adjusting well to college.
10. _____ I have not been functioning well during examinations.
11. _____ I have felt tired much of the time lately.
12. _____ Being on my own, taking responsibility for myself, has not been easy.
13. _____ I am satisfied with the level at which I am performing academically.
14. _____ I have had informal, personal contacts with MSU professors.
15. _____ I am pleased now about my decision to go to college.
16. _____ I am not pleased about my decision to attend MSU in particular.
17. _____ I'm not working as hard as I should at my coursework.

18. _____I have several close ties at MSU.
19. _____My academic goals and purposes are well-defined.
20. _____I haven't been able to control my emotions very well lately.
21. _____I'm not really smart enough for the academic work I expected to be doing now.
22. _____Lonesomeness for home is a source of difficulty for me now.
23. _____Getting a college degree is very important to me.
24. _____My appetite has been good lately.
25. _____I haven't been very efficient in study time lately.
26. _____I enjoy living in a college dormitory (skip if you live off campus).
27. _____I enjoy writing papers for courses.
28. _____I have been having a lot of headaches lately.
29. _____I really haven't had much motivation for studying lately.
30. _____I am satisfied with the extracurricular activities available at MSU.
31. _____I have given a lot of thought lately to whether I should ask for help from a counseling center
on campus, or from a psychotherapist outside of MSU.
32. _____Lately I have been having doubts regarding the value of a college education.
33. _____I am getting along very well with my roommate(s) at MSU. (Skip if you live alone).
34. _____I wish I was at another college or university rather than MSU.
35. _____I have put on (or lost) to much weight recently.
36. _____I am satisfied with the variety of courses available at MSU.
37. _____I feel I have enough social skill to get along well in the college setting.
38. _____I have been getting angry to easily lately.
39. _____Recently I have had trouble concentrating when I try to study.
40. _____I have not been sleeping very well.

Does not apply To me at all				Can't decide				Applies very closely to me
1	2	3	4	5	6	7	8	9

41. _____I am not doing well academically for the amount of work I put in.
42. _____I am having difficulty feeling at ease with other people at MSU.
43. _____I am satisfied with the quality or the caliber of courses available at MSU.
44. _____I am attending classes regularly.
45. _____Sometimes my thinking gets muddled up to easily.
46. _____I am satisfied with the extent to which I'm participating in social activities at MSU.
47. _____I expect to stay at MSU for a Bachelors degree.
48. _____I have not been mixing to well with the opposite sex.
49. _____I worry a lot about my college expenses.
50. _____I am enjoying my academic work at college.
51. _____I have been feeling lonely a lot at MSU lately.
52. _____I am having a lot of trouble getting started on homework assignments.
53. _____I feel have good control over my life situation at MSU.
54. _____I am satisfied with my program of courses for their semester.
55. _____I have been feeling in good health lately.
56. _____I feel I am very different from other students at MSU, in ways that I don't like.

Appendix C (Cont'd).

57. _____On balance, I would rather be home than here at MSU.
58. _____Most of the things I am interested in are not related to any of my course work at MSU.
59. _____Lately I have been giving a lot of thought to transferring to another college.
60. _____Lately I have been giving a lot of thought to dropping out of college altogether and for good.
61. _____I find myself giving considerable thought to taking time off from college and finishing later.
62. _____I am very satisfied with the professors I have now in my classes.
63. _____I have some good friends or acquaintances at MSU with whom I can talk about any problems may have.
64. _____I am experiencing a lot of difficulty coping with the stresses imposed upon me in college.
65. _____I am quite satisfied with my social life at MSU.
66. _____I am quite satisfied with my academic situation at MSU.
67. _____I feel confident that I will be able to deal in a satisfactory manner with future challenges here at MSU.

SECTION 6 – In thinking about your relationships on and off campus, we want to know **how friends, family, faculty/staff have supported you at college, how helpful was the support, and how often you received the support?** (Circle one answer under each category "Availability, Helpfulness, and Frequency")

Social Support Statement	How available is this type of support			How helpful is this type of support			How often do you receive this type of support		
	Never	Sometimes	Almost Always	Not Helpful	Somewhat	Very Helpful	Never	Sometimes	Frequently
1) My family helps me pay tuition.	1 2 3 4 5			1 2 3 4 5			1 2 3 4 5		
2) My friends listen to me talk about issues related to school.	1 2 3 4 5			1 2 3 4 5			1 2 3 4 5		
3) My parents help me manage my money/finances.	1 2 3 4 5			1 2 3 4 5			1 2 3 4 5		
4) My family helps me move to and from school (Prior to and after the semester).	1 2 3 4 5			1 2 3 4 5			1 2 3 4 5		
5) My friends can be trusted with secrets of personal matters.	1 2 3 4 5			1 2 3 4 5			1 2 3 4 5		
6) My friends offer constructive criticism concerning areas of personal difficulty.	1 2 3 4 5			1 2 3 4 5			1 2 3 4 5		

7) My friends help me
    with various task.   1   2   3   4   5   1   2   3   4   5   1   2   3   4   5

8) My family calls me to
    see how I'm doing.   1   2   3   4   5   1   2   3   4   5   1   2   3   4   5

9) My advisor helps me to
    plan my course
    schedule.   1   2   3   4   5   1   2   3   4   5   1   2   3   4   5

10) My friends help me
    assemble or put things
    together (furniture, loft,   1   2   3   4   5   1   2   3   4   5   1   2   3   4   5
    stereo).

11) My friends listen to me
    talk about issues   1   2   3   4   5   1   2   3   4   5   1   2   3   4   5
    related to my family.

12) My grandparents give
    me advice about life.   1   2   3   4   5   1   2   3   4   5   1   2   3   4   5

13) My friends take care of
    my things when I am   1   2   3   4   5   1   2   3   4   5   1   2   3   4   5
    gone.

14) My friends hug me
    when I need it.   1   2   3   4   5   1   2   3   4   5   1   2   3   4   5

15) My professors meet
    with me outside of
    class when I have   1   2   3   4   5   1   2   3   4   5   1   2   3   4   5
    questions.

16) My friends let me copy
    class notes if I miss   1   2   3   4   5   1   2   3   4   5   1   2   3   4   5
    lectures.

17) My friends back home
    write letters or call me. 1   2   3   4   5   1   2   3   4   5   1   2   3   4   5

18) My family helps me
    see both sides of a   1   2   3   4   5   1   2   3   4   5   1   2   3   4   5
    situation.

19) My friends let me stay
    over at their place if   1   2   3   4   5   1   2   3   4   5   1   2   3   4   5
    necessary.

20) My friends are there
    when I need to talk.   1   2   3   4   5   1   2   3   4   5   1   2   3   4   5

21) My roommate
    encourages me to go
    to classes (my friend   1   2   3   4   5   1   2   3   4   5   1   2   3   4   5
    encourages me to do
    well in classes).

22) My family gives me
    money for things I
    need (food, clothes,   1   2   3   4   5   1   2   3   4   5   1   2   3   4   5
    fun activities).

Appendix C (Cont'd).

23) My friends encourage me to participate in athletic, school, school or social activities	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
24) My friends proofread my writing assignments	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
25) My parents buy me supplies for school (books, computer, book bag, etc.).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
26) My friends listen when I need to talk about issues related to relationships.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
27) My friends help me study for my classes.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
28) My parents help pay my bills (credit card, phone., etc.).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
29) A counselor would listen to me or help me if I needed it.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
30) A counselor would listen to me or help me see both side of a situation.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
31) My friends lend me things if I want to borrow them (cd's, clothes, money, etc.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
32) Some one in my family listen to me when I need to talk.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
33) My friends take care of me when I am sick.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
34) My family sends me care packages or letters.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
35) My friends encourage me to live a healthy lifestyle.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
36) My friends give me rides when needed ((to school, store, work).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
37) My family helps me grieve in situations related to loss or death.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
38) My friends help me manage my time.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

Appendix C (Cont'd).

39) My friends lend me materials in class (paper, pen pencils).   1 2 3 4 5   1 2 3 4 5   1 2 3 4 5

40) My friends support me when I am going through a difficult time.   1 2 3 4 5   1 2 3 4 5   1 2 3 4 5

41) My family reminds me about important events (anniversaries, appointments, birthdays, etc).   1 2 3 4 5   1 2 3 4 5   1 2 3 4 5

42) My friends lend me their car when I need one.   1 2 3 4 5   1 2 3 4 5   1 2 3 4 5

43) My parents help me think about the direction I want to take my life.   1 2 3 4 5   1 2 3 4 5   1 2 3 4 5

44) My friends give me relationship advice.   1 2 3 4 5   1 2 3 4 5   1 2 3 4 5

45) I have a mentor I can talk to about class, relationships, family, roommate, close friend, etc.   1 2 3 4 5   1 2 3 4 5   1 2 3 4 5

46) I have a mentor who supports me during stressful times.   1 2 3 4 5   1 2 3 4 5   1 2 3 4 5

47) I have mentor that will listen to me when I can't talk to my family and friends.   1 2 3 4 5   1 2 3 4 5   1 2 3 4 5

48) I have a mentor who challenges me to do the best academically.   1 2 3 4 5   1 2 3 4 5   1 2 3 4 5

49) I have a mentor who encourages me to get involved with campus life and organizations.   1 2 3 4 5   1 2 3 4 5   1 2 3 4 5

50) I have a mentor that is knowledgeable about campus resources to help support my goals.   1 2 3 4 5   1 2 3 4 5   1 2 3 4 5

MANOVA Results & Graphs on Proximal and
Distal Outcomes by Group Over Time

Table 1

Tests of Within-Subjects Multivariate MANOVA on Distal Outcome

Effect	Multivariate F	P	Partial Eta Squared	Observed Power
Within-Subjects				
Time	1.553	.218	.039	.320
Time by Group	.116	.891	.003	.067

Table 2

Tests of Within-Subjects Univariate ANOVA on Distal Outcomes by Group

Measures	N	M(SD)	F	P	Partial Eta Squared	Power
College Adjustment			.000	.990	.000	.050
T1 Control	30	396.36(51.11)				
T1 Experimental	50	395.92(59.77)				
T2 Control	30	401.40(60.95)				
T2 Experimental	50	401.12(66.96)				
Change of T1 to T2						
Control		5.00(43.45)				
Experimental		5.20(64.67)				
Grade Point Average			.221	.63	.003	.075
T1 Control	30	2.58(.75)				
T1 Experimental	50	2.58(.68)				
T2 Control	30	2.41(.85)				
T2 Experimental	50	2.50(.84)				
Change of T1 to T2						
Control		-.17(.82)				
Experimental		-.08(.81)				

Appendix D (Cont'd).

Table 3

Tests of Within-Subjects Multivariate MANOVA on Proximal Outcomes

Effect	Multivariate F	P	Partial Eta Squared	Observed Power
Within-Subjects				
Time	1.369	.225	.134	.580
Time by Group	.921	.505	.094	.395

Table 4

Tests of Within-Subjects Univariate ANOVA on Proximal Outcomes by Group

Measures	N	M(SD)	F	P	Partial Eta Squared
Racial Identity			3.543	.064	.043
T1 Control	30	50.90(4.84)			
T1 Experimental	50	49.94(5.41)			
T2 Control	30	49.40(5.66)			
T2 Experimental	50	50.70(5.54)			
Change of T1 to T2					
Control		-1.50(5.92)			
Experimental		.76(4.71)			
Social Support			1.431	.235	.018
T1 Control	30	104.06(19.14)			
T1 Experimental	50	97.14(18.73)			
T2 Control	30	103.26(18.76)			
T2 Experimental	50	99.90(16.51)			
Change of T1 to T2					
Control		-.80(13.25)			
Experimental		2.76(12.65)			
Psychological Support			.095	.759	.001
T1 Control	30	83.60(14.01)			
T1 Experimental	50	85.60(12.56)			
T2 Control	30	83.76(12.12)			
T2 Experimental	50	84.98(14.80)			
Change of T1 to T2					
Control		.16(11.57)			
Experimental		-.62(10.73)			

Appendix D (Cont'd).

Table 4 (Continued)

Tests of Within-Subjects Univariate ANOVA on Proximal Outcomes by Group

Measure	N	M(SD)	F	P	Partial Eta Squared
Academic Support			3.021	.086	.037
T1 Control	30	20.05(4.57)			
T1 Experimental	50	19.76(4.57)			
T2 Control	30	20.13(5.02)			
T2 Experimental	50	21.66(4.98)			
Change T1 to T2					
Control		.08(4.41)			
Experimental		1.90(4.59)			
Sense of Belonging			.364	.548	.005
T1 Control	30	79.28(7.55)			
T1 Experimental	50	80.50(7.25)			
T2 Control	30	78.30(7.93)			
T2 Experimental	50	80.58(7.77)			
Change T1 to T2					
Control		-.98(7.74)			
Experimental		.08(7.73)			
Leadership Development		.093	.762	.001	
T1 Control	30	50.00(14.18)			
T1 Experimental	50	45.60(14.56)			
T2 Control	30	49.93(12.39)			
T2 Experimental	50	46.16(11.72)			
Change T1 to T2					
Control		-.06(7.60)			
Experimental		.56(9.61)			

Appendix D (Cont'd).

Graphs on Proximal and Distal Outcomes by Group Over Time

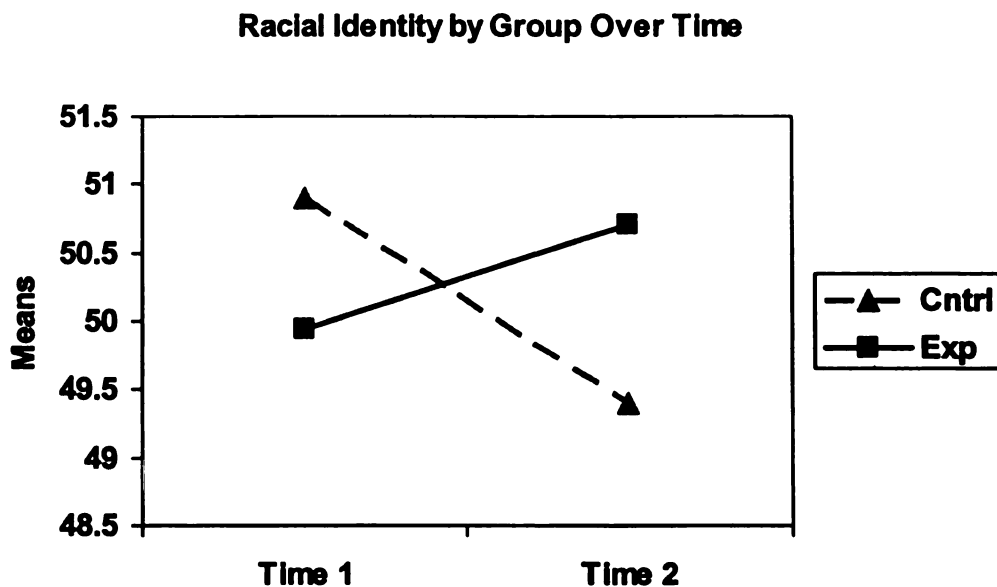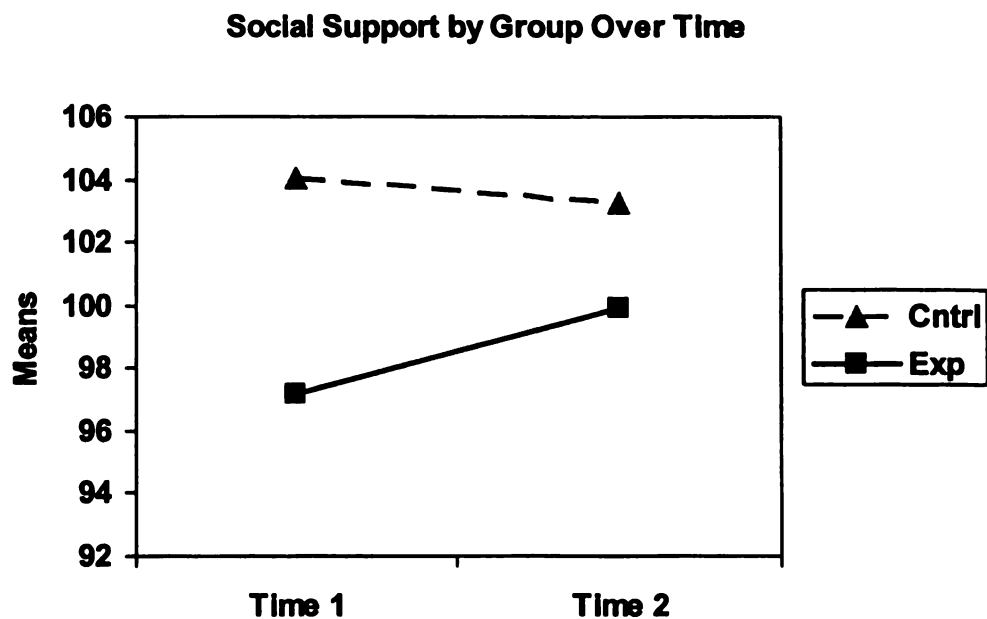Figure 1 Racial Identity by Group Over Time

Racial Identity by Group Over Time

Figure 2. Social Support by Group Over Time

Social Support by Group Over Time

Appendix D (Cont'd).
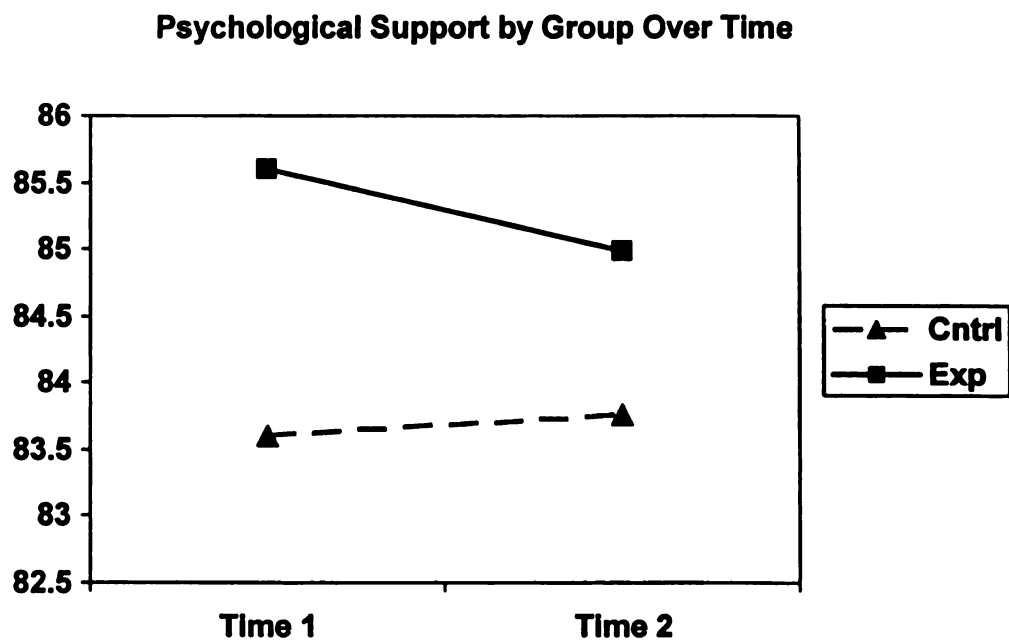
Figure 3. Psychological Support by Group Over Time
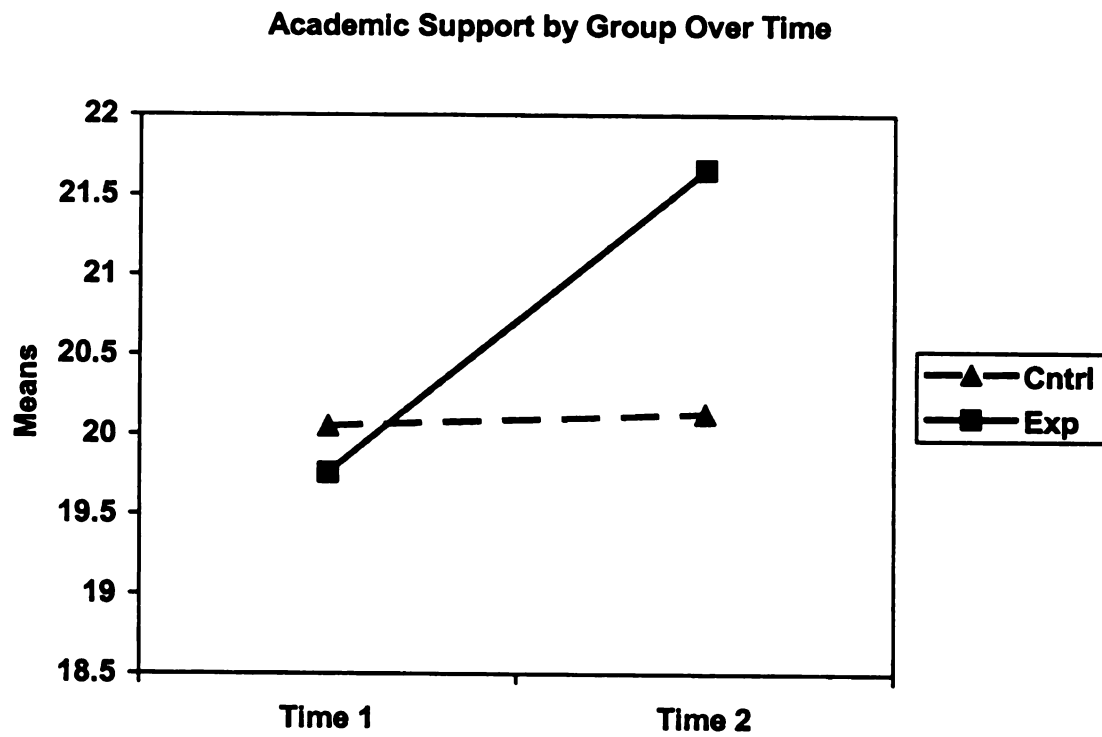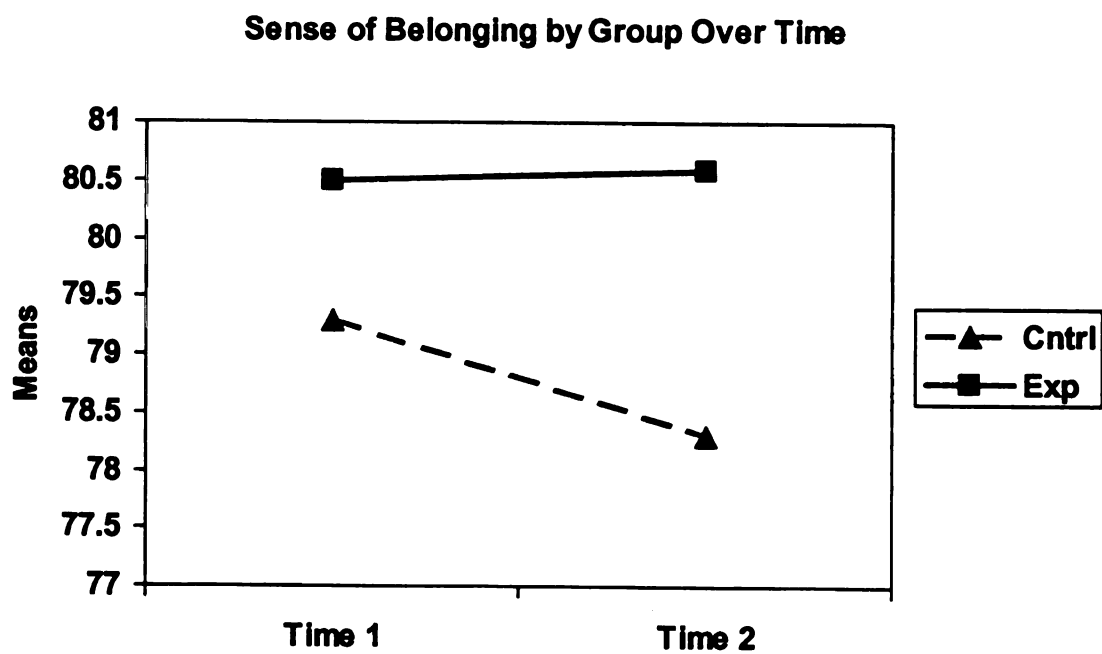
Psychological Support by Group Over Time

Figure 4. Academic Support by Group Over Time

Academic Support by Group Over Time

Figure 5. Sense of Belonging by Group Over Time

Sense of Belonging by Group Over Time

Appendix D (Cont'd).
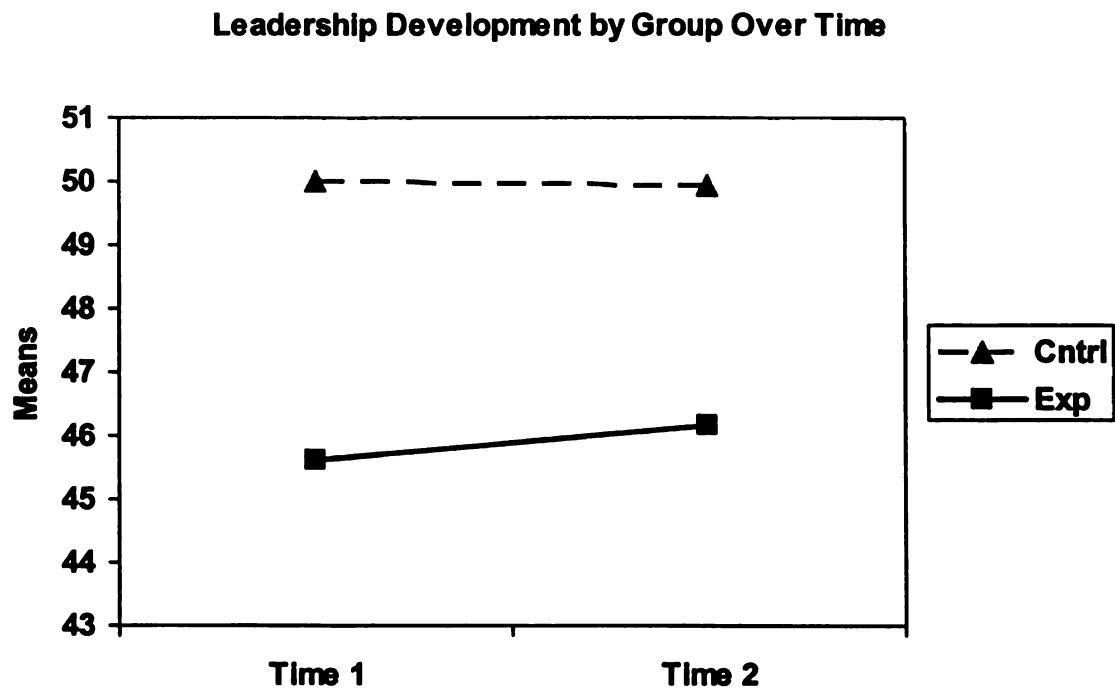
Figure 6. Leadership Development by Group Over Time

Leadership Development by Group Over Time

Figure 7. College Adjustment by Group Over Time

College Adjustment by Group Over Time

Figure 8 GPA by Group Over Time
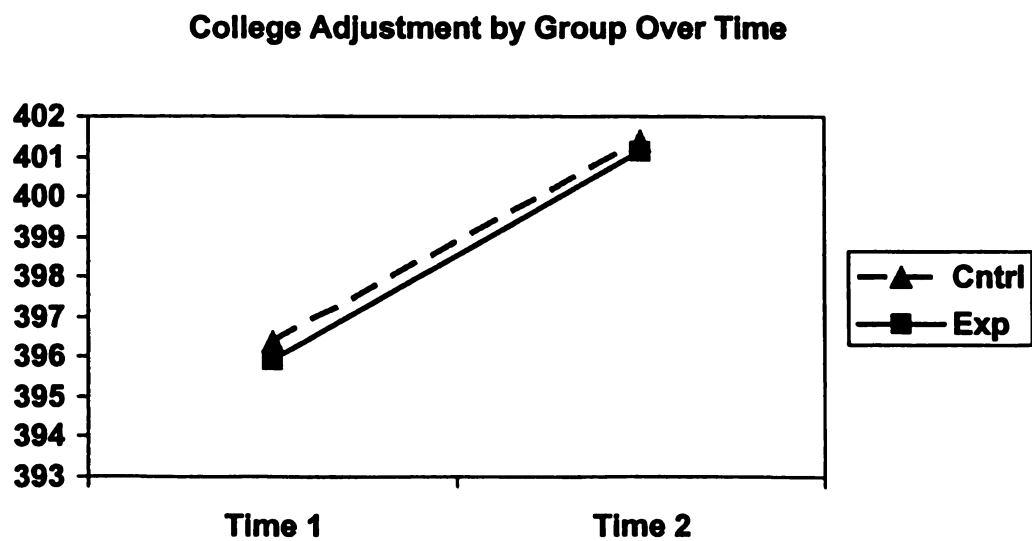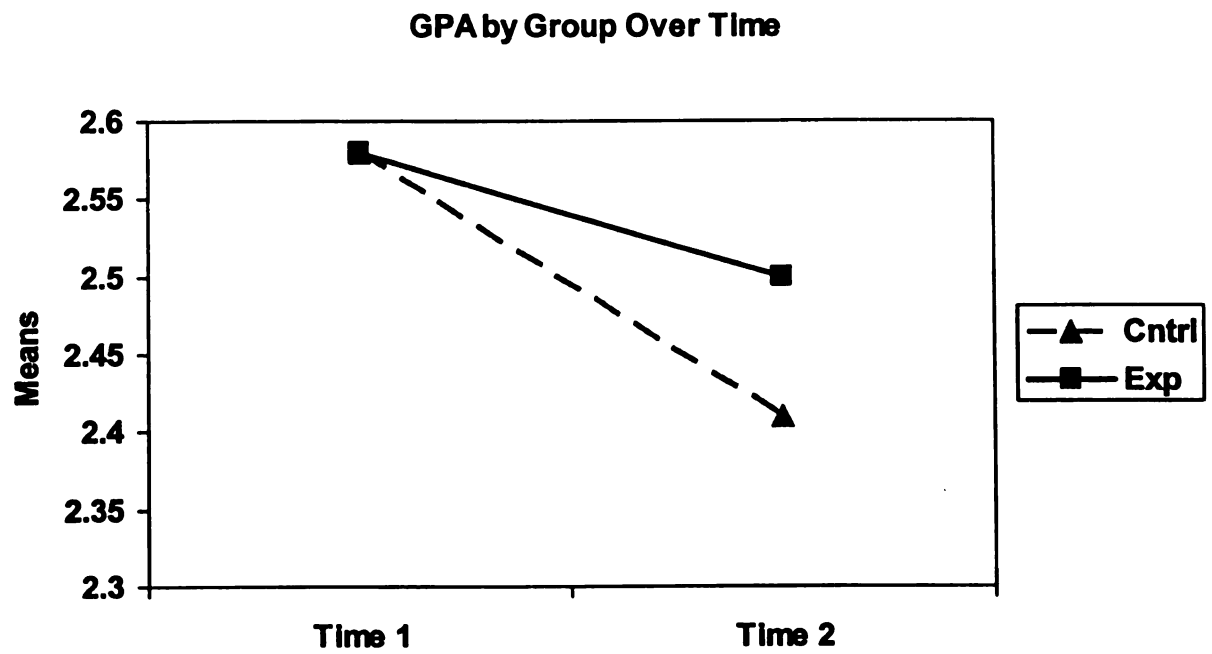

GPA by Group Over Time

MANCOVA on Distal Outcomes

Table 1

Tests of Multivariate MANCOVA on Dependent Variables

Effect	Multivariate F	P	Partial Eta Squared
T1 College Adjustment	17.107	.000	.313
T1 GPA	10.396	.000	.217
Group (Experimental)	.133	.876	.004

df = 1, 78

Table 2

Tests of Between-Subjects Univariate ANCOVAs on Dependent Variables on Group

Measures	N	M(SD)	F	P	Partial Eta Squared
College Adjustment			.001	.000	1.000
T2 Control	30	401.40(60.95)			
T2 Experimental	50	401.12(66.96)			
Grade Point Average			.252	.617	.003
T2 Control	30	2.41(.85)			
T2 Experimental	50	2.50(.84)			

df = 1, 78

APPENDIX F

Time One and Two Correlations

Table 1

Correlations for Independent and Dependent Variables at Time One

Variable	1	2	3	4	5	6	7	8	9
Racial Identity	1.00								
Social Support	.30**	1.00							
Psych Support	.32**	.35**	1.00						
Academic Support	.29**	.65**	.32**	1.00					
Sense of Belonging	.25*	.15	.38**	.19	1.00				
Leadership Development	.26*	.28*	.22*	.27*	.18	1.00			
College Adjustment	.33*	.45**	.76**	.27**	.26**	.28*	1.00		
GPA	-.05	.01	.11	.24*	-.05	-.04	27*	1.00	
Group	.09	.17	-.07	.03	-.08	.14	.00	.00	1.00

*p<.05, ** p<.01

Table 2

Correlations for Independent and Dependent Variables at Time Two

Variable 8 9	1 10	2	3	4	5	6	7
Racial Identity	1.00						
Social Support	.21	1.00					
Psych Support	.17	.26*	1.00				
Academic support	.06	.66**	.14	1.00			
Sense of Belonging	.36**	.09	.37**	.12	1.00		
Leadership Development	.28**	.28*	.22*	.23*	.13	1.00	
College Adjustment	.38**	.28*	.69**	.17	.55*	.43**	1.00

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