

AN EXAMINATION OF CONTEXTUAL AND PROCESS VARIABLES
INFLUENCING THE CAREER DEVELOPMENT OF AFRICAN-AMERICAN MALE
ATHLETES AND NON-ATHLETES

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The purpose of this study was to examine the career development of African-American male athletes and non-athletes. The study utilizes Gottfredson's circumscription and compromise model of career development as a framework for understanding the way individuals go about selecting different career paths based on various contextual variables and career development processes. A sample of 71 African-American male college students completed self-report questionnaires measuring different aspects of their background make-up, relevant career development processes, and career development outcome variables. Results of the study suggest that non-athlete students have a more developmentally appropriate approach to careers. Results also suggest that perceived career barriers and career locus of control mediate the relationship between athletic status and maturity surrounding careers. Career development is a complicated process and further study on this population is very important, especially when considering athletes. Implications for the findings are discussed as are suggestions for directions of new research concerning African-American career development.

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	v
LIST OF ILLUSTRATIONS	vi
Chapters	
I. INTRODUCTION	1
II. LITERATURE REVIEW	4
III. METHOD	27
IV. RESULTS	34
V. DISCUSSION.....	46
APPENDICES	65
REFERENCES	93

LIST OF TABLES

	Page
B.1	Frequencies of Contextual Variables71
B.2	Means and Ranges of Contextual Variables72
B.3	Means, Standard Deviations, and Ranges for Processes.....72
B.4	Means, Standard Deviations, and Ranges for Outcome Variables73
B.5	Correlations for Variables and Scales' Alpha Coefficients: Overall Sample74
B.6	Correlations for Variables: Athlete Sample75
B.7	Correlations for Variables: Non-Athlete Sample.....76
B.8	Contextual Variables Predicting Career Commitment77
B.9	Contextual Variables Predicting Career Congruence77
B.10	Contextual Variables Predicting Career Maturity.....78
B.11	Contextual Variables Predicting Educational Aspirations.....79
B.12	Contextual Variables Predicting Occupational Aspirations79
B.13	Contextual Variables Predicting Career Barriers.....80
B.14	Contextual Variables Predicting Athletic Identity80
B.15	Contextual Variables Predicting Career Locus of Control 81
B.16	Processes Predicting Career Congruence..... 81
B.17	Processes Predicting Career Commitment..... 82
B.18	Processes Predicting Career Maturity83
B.19	Summary of Hierarchical Regression Analysis Predicting Career Commitment.....84
B.20	Summary of Hierarchical Regression Analysis Predicting Career Congruence.....85
B.21	Summary of Hierarchical Regression Analysis Predicting Career Maturity86

LIST OF ILLUSTRATIONS

	Page
C.1 Proposed Hypotheses 1, 2, and 3	88
C.2 Findings from individual multiple regressions	89
C.3 Hierarchical regression – career congruence	90
C.4 Hierarchical regression – career commitment	91
C.5 Hierarchical regression – career maturity	92

CHAPTER I

INTRODUCTION

Beginning in the 1970s, the field of psychology recognized that the career development of racial/ethnic minorities, specifically African Americans, was important. However, it has not been until recently that the research on career development reflected that recognition, and relatively little is still known. A notable reason for the increase in interest in the career development literature of African Americans is an increase in African-American graduation rates from both high school and college.

In a recent review of contextual issues and multicultural vocational psychology research, Worthington, Flores, and Navarro (2005) note the increases in African-American graduation rates as per the United States Census. Specifically, the U.S. Census Bureau (2000) indicated that people of color (including African American, Asian American, Hispanic/Latino, American Indian/Alaskan Native, and multiracial) represent more than 31% of the American population, up from 25% in 1990 and 14% in 1980. Additional figures indicate that over 35 million Americans identify as African American. In addition to the increases in the population numbers, African-American high school graduation rates have increased from 40.8% in 1974 to 79.2% in 2000, and college graduation rates have increased from 5.5% in 1974 to 17.2% in 2000. The U.S. Census Bureau (2003) also revealed that the increase is still only 60% of that of Whites. According to the National Collegiate Athletic Association (NCAA), African-American student-athletes' college graduation rates have increased from 35% in 1984 to 59% for those who started college in 1998 (Simon, 2006).

Despite the increases noted here, disparity still exists and thus African-American career development is of concern. There is a specific concern for African-American males that comes

from differential findings with respect to career development for African-American males and females. Additionally, African-American males constitute over 39,000 NCAA student-athletes. Athletics is often seen as a pathway to success and fame, despite the low probability of professional-status attainment.

The role of athletics in the lives of youths from certain racial/ethnic, as well as socioeconomic, groups can be highly influential in their approach to their academic pursuits. The NCAA estimates that over 39,000 African-American, non-Hispanic males participated in Division I-A sports in 2003-2004. Of those, over 19,000 participated in football and over 6,700 participated in basketball. Additional estimates show that only 1.3% of NCAA athletes make it from the college ranks to professional for men's basketball, and 2.0% for football. The combination of dreams and reality can create goal discrepancy in athletes. Sellers and Kuperminc (1997) found that a small percentage of their African-American male sample was goal discrepant in terms of their status on their athletic team and their career goals. Of those who were discrepant in their status and career goals, the majority were in the 'underclassman' category when choices about careers may be less salient and therefore take on a lower level of importance. It is suggested here that underclassmen be targeted for appropriate development and exploration of career goals in order to guide and enhance their academic careers while supporting their athletic careers.

For African Americans in general, the role and importance of the family is well known. The role and importance of the family in career development is also well known. The family's role in impacting career development can be seen during many different life stages (Whiston & Keller, 2004). Specifically, the family plays an important role in the development of ideas of youths about the future. Those ideas include areas such as career development, career and

educational aspirations and expectations, future orientation, and possible selves. Additionally, research has shown that those ideas tend to vary with gender, ethnicity, culture and social class (Seginer & Halabi-Kheir, 1998; Yowell, 2000).

Whiston and Keller (2004) as well as others (see Brown, 1995; Flores & Ali, 2004; Brown, 2004) suggest that high quality research on minorities is severely lacking in the literature. Specifically noted is the low sample size of studies examining minorities and the apparent piecemeal areas of interest used in those studies. Their concern is for those in counseling relationships with minorities and their ability to relate to those minorities with accurate and relevant information.

The current study examines further the discrepancies existing between the career goals of college athletes and the sometimes-harsh realities that exist. This study also examines more broadly the positive role of family on the career exploration of African-American males. It is not the goal of this study to discourage any athlete or non-athlete from pursuing their dream; rather, the goal is to provide those individuals who have certain dreams with other possibilities to consider while en route to those dreams. Additionally, the information gathered here should aid young athletes and non-athletes as well as their families, career counselors, sport psychology consultants, and counseling psychologists.

CHAPTER II

LITERATURE REVIEW

Theories of Career Development

There are numerous theorists who discuss issues within the realm of career development. John Holland (1959) developed a model of career development based on a classification system of traits. Holland's theory states that an individual who can match their traits to that of their chosen career will find the most satisfaction. Donald Super (1954) proposed a career development model that was developmental in nature. Instead of traits, as individuals developed, they progressed through different stages of career development. According to Super's theory, college-aged students would be at the end of the crystallization stage and into the specification stage of development. A third theorist is John Krumboltz. Krumboltz and his colleagues (Krumboltz, Mitchell, & Jones, 1976) proposed a theory of career development built on the ideas of social learning theory. According to Krumboltz, one's career decisions are influenced by the countless numbers of social interactions one has throughout their life. Recently, a derivative of Bandura's social cognitive theory – social cognitive career theory (SCCT) – was proposed (Lent, Brown, & Hackett, 1994). SCCT integrates the ideas of interest, choice, performance, and satisfaction. Additionally, SCCT has been researched with the ideas that will be defined later as contextual variables (SCCT refers to these as person inputs and contextual influences proximal to choice behavior) and process variables (referred to as learning experiences). Linda Gottfredson (1981, 1996, & 2002) proposed a theory of vocational development influenced by each of the previously mentioned theorists, and added the ideas of circumscription and compromise.

Gottfredson's (1981, 1996, & 2002) theory of vocational development is organized in a way where circumscription and compromise are at the forefront of occupational choice. This theory integrates the different typologies from Holland's (1973) theory of personality type with prestige and sextype of different vocations. Circumscription is a rejection of unacceptable alternative occupations. This rejection is based on the sextype of the job, prestige level of the job, and the tolerable boundary levels (both as a ceiling and a floor), and is generally seen before age 14. Compromise begins around age 14 and is a process by which individuals abandon their previously most-preferred occupational alternatives. Compromise is subdivided into anticipatory compromise, which takes place when perception of reality moderates a person's hopes; and experiential compromise, which takes place when a barrier is met while the individual is implementing their most-preferred choice (Gottfredson, 1981, 1996, & 2002).

In 2002, Gottfredson revisited the theory and revised it somewhat to differentiate it from socialization theory (see Scarr, 1997), and align it more with the modern nature-nurture partnership theory of individual differences (see Eysenck, 1998). To this end, Gottfredson is able to account more fully for individual differences and culture-independent (i.e., Big Five, Spearman's *g*), as well as culture-dependent (e.g., producing particular goods and services) traits in vocational interests. The interaction, as Gottfredson points out, is that culture constrains and facilitates, but does not create, the most basic differences (i.e., personality, intelligence, physique) among people. These basic differences influence how we create and seek culturally valued but genetically compatible niches in society, thus becoming unique psychological and social beings. Considering Gottfredson's (2002) theory may be an answer to calls made for more within-groups racial-cultural identity models (Pope-Davis & Hargrove, 2001). While Gottfredson's theory is not a racial-cultural identity model per se, Gottfredson does discuss the

within-groups ideas, and in its initial form, the theory was intended for both the majority groups and underserved groups (i.e., women, racial/ethnic minorities). Because the current study is concerned with only one racial/ethnic group, within-groups relevance of the backing theory is important to consider.

African-American Career Development

Presently, there is no specific theory of African-American career development. The previously mentioned theories – with the exception of Gottfredson's and Lent, Brown, and Hackett's – fall short of specifically addressing race as a factor in theory development. Holland's (1959) theory is an easy to use, and easy to understand theory, but it does not address issues of diversity and rather focuses on values, self-concept, and preferred skills as the driving forces influential in one's vocational preference. Super's (1954) theory is developmental and comprehensive in nature, but it was developed and tested on a group lacking in diversity. Krumboltz and his colleagues (1976) proposed a theory which allowed the idea of social learning to come into play in one's career decision-making, but it falls short of addressing specifically the issues proposed in the current study. Lent, Brown, and Hackett (1994) and Lent (2005) discuss SCCT as a theory that accounts for person inputs (e.g., gender, race/ethnicity). While SCCT is a new and increasingly popular career theory, it does not address the developmental processes proposed in Gottfredson's theory. Gottfredson's (2002) theory is intended as an inclusive theory with regard to majority and minority groups. Additionally, Gottfredson used the ideas of race, sex, and self-concept in her theory while integrating some of the positive aspects of the other theories mentioned. Thus, as a leading theory, Gottfredson's (2002) is the leading candidate.

In the past 10 to 12 years, there have been a number of review articles, book chapters, and theoretical examinations of factors thought to affect career development in African

Americans (i.e., Brown, 1995; Fouad & Bingham, 1995; Worthington et al., 2005; Byars-Winston, 2006). Within those reviews, there are a number of contextual factors and processes examined regarding African-American career development. Contextual factors are considered to be factors that are environmental in nature or are seen as background influences (Flores et al., 2006; e.g., socioeconomic status (SES), educational level, class, athletic status, family factors). Processes, in terms of career development, are defined as factors that are influenced by one's context yet are still influential in one's career development (e.g., aspirations and expectations, perceived career barriers, athletic identity). For both contextual factors and processes, there are conflicting reports as to the impact or influence each has on the career development of African Americans (Brown, 1995; Whiston & Keller, 2004; Worthington et al., 2005).

With no guiding theory of African-American career development, the research specifically on African-American career development is somewhat difficult to come by. Many times there are comparisons made within ethnic minority groups or between a majority group and an ethnic minority group without separation of those minority groups. Considering the above-mentioned studies and ideas, many researchers indicate that there are too many within group differences in African Americans to keep researching between racial and ethnic groups. Most of the larger literature reviewers and the individual researchers suggest that to advance the understanding of African-American career development, theory and research should be directed within the racial/ethnic group. It is with these ideas in mind, and an awareness of both contextual factors and processes being influential in one's career development that the present study was conceptualized.

Contextual Factors Affecting Career Development

In a recent content and trend analysis of racial/ethnic minority career development literature, Flores et al. (2006), revealed that contextual factors were the number one topical area considered in the last 36 years. Contextual factors can be defined as factors that are predetermined or in the past that have influenced how one interacts with their world now.

Numerous demographic and contextual variables have been shown to be significant predictors of various aspects of career development in African Americans. Those factors include, but are not limited to, socioeconomic status, education level, class, family variables, and athletic status. Specifically, Whiston and Keller (2004) conducted a review of literature examining the influences of the family on an individuals' career development. One population they reported on was that of college students and young adults. They concluded consideration of socioeconomic differences and other contextual factors was imperative when exploring racial/ethnic differences in career development, because those contextual factors are often confounded with racial/ethnic characteristics.

Slaney and Brown (1983) reported on the possible socioeconomic differences across racial and ethnic groups. They reported, in a sample of Caucasian and African-American males, that individuals with higher socioeconomic index scores reported greater career indecision than those with lower socioeconomic index scores. This may indicate that, in general, African-American males and those with lower socioeconomic index scores may be more likely to foreclose early on a career decision and thus report less indecision. This is an important finding to consider given the present study with regard to the participant pool. By taking a sample of African Americans, and looking within that sample, the effects of socioeconomic status will be more clearly visible.

Additionally, within the African-American community, with regard to career development, the full impact of poverty, racism, and social class differences may not be understood. There are a few studies that have explored certain ideas such as social class and life satisfaction that may speak to the impact of certain cultural factors. With respect to social class, Luzzo (1992) examined ethnic group and social class differences in the career development of college students. He reported essentially no significant differences in social class or between African Americans and other ethnic groups on career decision-making attitudes, although the overall number of African-American participants was low ($N = 27$).

As mentioned earlier, the family environment is a contextual factor seen as highly influential in one's career development. Parental aspirations and expectations, as well as parental educational experiences are thought to affect a child's career development. Dillard and Campbell (1981) examined ninth through twelfth grade Puerto Rican, Anglo, and African-American males and females. Within the African-American sample of 105 students, Dillard and Campbell (1981) found that aspirations were rated as more important than values for African-American parents, and that parental aspirations account for 20% of the variance in adolescent career aspirations, and 23% of the variance in adolescent career expectations. They also reported that neither parents' career values nor aspirations have a significant effect on their child's career maturity, as measured by the attitude scale of the Career Maturity Inventory (ATT-CMI; Crites, 1973). These findings illustrate the importance of parental factors in aspirations and expectations of African-American youth. In their research on Latino high school students, Romo and Falbo (1996) indicated that parents with little educational experience had children who tended to leave school earlier.

Other factors within the family seen as influential to an individual's career development are career choices of siblings, and perceived family conflict. Whiston and Keller (2004) indicated that family of origin, including siblings, heavily influences career development and career maturity. Specific factors influencing career development and maturity are parental emotional support, autonomy support, encouragement, and warmth. Whiston and Keller also reported that while aspirations and expectations are well researched in younger individuals, there is a lack of research in those areas within college students and young adults. Constantine and Flores (2006) found that high career indecision was associated with lower degrees of career certainty and greater perceived family conflict. Lastly, they reported that greater levels of perceived family conflict predicted lower career aspirations.

A contextual factor outside of the family that may have a significant effect on one's career development is peer influence. Seginer and Halabi-Kheir (1998) and others (see Nurmi, 1991) found that adolescents in different sociocultural contexts develop different images of their future. These different images, for African-American adolescents, are seen as more heavily influenced by the adolescents' peers than by the parenting style to which they are exposed (Steinberg, Dornbusch, & Brown, 1992). While the current study is not concerned specifically with parenting style or peer influence, per se; it is important to consider these factors as having the potential to be influential (see Pizzolato, 2006).

Contextual factors have been demonstrated to be highly influential in the career development of individuals. Many of those factors have to do with the individuals' family of origin. Thus, for the current study, factors like parental and sibling education and occupation were collected. A socioeconomic index was calculated as well. Other contextual factors have been discussed amongst the recommendations from the previous research and reviews. Calls

were made for more research examining gender differences in African Americans, and controlling for SES as a factor when comparing across racial/ethnic groups. In order to address some of these concerns, the current study is focused only on African-American males. The contextual factors are proposed here to have an influence on career development by interacting with various career development processes.

Processes Affecting Career Development

As with contextual factors, various processes thought to affect career development have been studied. Recently, Swanson and D'Achiardi (2005) examined various constructs dealing with how individuals come to their career decisions. The term used for the how in the career decision-making process was "process-oriented" or "process" (Swanson & D'Achiardi, 2005). Additionally, processes can be defined as those factors an individual interacts with on their career development journey that are influenced by contextual factors and that, in turn, influence their overall career development. Processes are factors such as one's own occupational and educational expectations and aspirations, one's perceived barriers to career attainment, one's locus of control with regard to career, and one's athletic identity.

Aspirations and expectations. The major reviews of literature on African Americans (i.e., Brown, 1995; Fouad & Bingham, 1995; Worthington et al., 2005; Byars-Winston, 2006) focus on expectations and aspirations as major processes affecting career development. The aspirations and expectations of African Americans may have an influence on the choices made or the options seen as possible once in the educational or occupational selection process. As one considers expectations and aspirations, it may be easier to consider expectations as realities, and aspirations as goals. Whiston and Keller (2004) write that, "occupational aspirations are the occupations individuals would ideally like to pursue, whereas occupational expectations are the

occupations an individual believes he or she will most likely enter” (p. 520). The definition used by Whiston and Keller (2004) can be expanded to include educational aspirations and expectations. How aspirations and expectations affect career development can be understood by viewing those processes through the lens of Gottfredson’s (1981, 1996, & 2002) ideas of circumscription and compromise. For example, an individual in the circumscription phase of Gottfredson’s theory would initially have a large number of aspirations, which would be modified based on sex type, prestige, and boundary levels of the job field. Further modification would occur once the individual approached and entered the compromise phase. Aspirations would change as anticipatory compromise arose, and expectations would become solidified as experiential compromise took place.

In Brown’s (1995) review, there are many contradicting reports as to the expectations of African Americans, the levels of expectations and aspirations in African Americans, and the relationship of aspirations to expectations in African Americans. Expectations are seen as important for African Americans in terms of career development; however, there is confusion as to whether African Americans hold lower career expectations than whites (see Gurin, 1981) or not (see Pelham & Fretz, 1982). Slaney and Brown (1983) noted that while aspirations tend to remain high for African Americans, expectations do not tend to reach those of Whites. This effect may be more related to the Rojewski (2005) finding that across research studies on socioeconomic status and career aspirations a positive correlation exists. While more recent research is available regarding aspirations and expectations, much of that research is focused more on future orientation. That is, the current study examined aspirations and expectations for a relatively short future orientation which much of the current research examines individuals as children or high school students (see Elliot, 2009; Helwig, 2008).

There does seem to be agreement in the literature with respect to African Americans holding higher professional athletic expectations than whites. This may be modified by the age of the athletes, as Picou (1978) found that athletic behavior had a facilitative effect on the educational aspirations of White high school seniors, but an unmediated effect for African-American high school seniors.

There have been some studies examining the effects of the aforementioned process variables with regard to levels of the contextual variables. Some of these studies have led to conflicting reports of levels of aspirations and expectations relative to race/ethnicity (Brown, 1995; Fouad & Bingham, 1995). Brown (1995) posits that the conflicts are due to differences in the sample populations – some factors being more contextual: geographic origin of populations (urban vs. rural; north vs. south), gender, SES; and some being more processes: type of expectation/aspiration studied (educational vs. occupational). Brown reported that the same factors influence the relationship of aspirations to expectations; and noted that some studies found African Americans to have lower expectations than aspirations, whereas others find the gap between the two is just bigger for African Americans than whites. Cook et al. (1996) sampled 255 inner-city boys from Grades 2, 4, 6, and 8 from two distinctive areas and reported on their educational aspirations and expectations. Their findings indicated that after second grade the educational aspirations and expectations of inner-city youth are similar to the actual adult job settings. The underlying construct at work seems to be the obstacles with boys see while interacting in their society, not a lack of expectations. Still other studies reported no racial/ethnic differences on the relationship between aspirations and expectations (Brown, 1995; Fouad & Bingham, 1995). Fouad and Bingham (1995) support the idea of identifying where a client is in terms of their racial ethnic identity development prior to career counseling, as this is suspected to

have implications on career aspirations and expectations. Byars-Winston (2006) supports this same idea after relating the social cognitive career theory (Lent, Brown, & Hackett, 1994) to the idea of racial ideology. Within aspirations, Brown (1995) notes that there are gender differences in educational and occupational aspirations. Brown (1995) hypothesizes that the reason for these gender differences is that African-American males tend to have a sex/gender role socialization that operates in career choice. The aspirations and expectations of African Americans may have an influence on the choices made or the options seen as possible once in the educational/occupational selection process. Brown (1995) noted that African Americans either prefer or select primarily low-level occupations, such as the realistic and social areas of Holland's typology (Fouad & Bingham, 1995). This may be because of the real or perceived employment barriers experienced by African Americans (Brown, 1995), or because of level of cultural mistrust (Terrell & Terrell, 1993). Additionally, Terrell and Terrell (1993) found no differences in educational expectations with regard to levels of mistrust, but did find a significant difference in occupational expectations. Aspirations and expectations are but one example of a career process proposed as influential in one's career development. Perceived career barriers are another of those processes.

Barriers. As indicated in Gottfredson's (2002) theory, perceived or actual barriers can be extremely influential in vocational development. Lent (2005) also discusses the idea of barriers influencing the individual in SCCT. In SCCT, barriers are lumped into "environmental factors" along with other factors considered as contextual factors in the current study. In addition, it has been shown, in a sample of African-American university students, perceived career barriers lead to a lower grade point average (GPA; Robinson & Swanson, 1997). They measured career barriers through use of the Career Barriers Inventory (CBI; Swanson, 1994; Swanson & Tokar,

1991) and through a hierarchical regression analysis found significant associations between two of the scales (Lack of Significant Support from Spouse and Unsure of How to Find a Job) and lower cumulative GPA.

Career locus of control. Rotter (1954; 1966) introduced the idea of locus of control in his social learning theory. Locus of control is understood generally as one's expectations of where control over the events in their life is initiated. That is, does an individual have control over the events in their life (internal locus of control) or do other factors influence the events in their life (external locus of control). To further this idea, career locus of control is suggested to be the expectation of one's control over their career outcomes (Lease, 2004).

It is suggested in the literature (i.e., Rotter, 1966) that an internal locus of control is associated with more attributes seen as valuable: better coping strategies, better cognitive processing, and higher achievement motivation. Sue and Sue (1999) caution the conclusion that an internal locus of control is 'better' especially when considering individuals from different cultures and backgrounds. Sue and Sue (1999) also cite other research (i.e., Carter, 1995) that suggests that persons of color experience the idea of external control as much broader than originally identified and measured. The use of the Career Locus of Control Scale (CLCS; Trice et al., 1989) in recent literature seems to address some of the aforementioned concerns.

Additionally, the current study focused solely on an African-American sample and thus avoided the majority-minority comparisons commonly found in the literature.

Luzzo and Ward (1995), using the CLCS, found a statistically significant predictive relationship between locus of control and one's career congruence. Additionally, Lease (2004) in a more comparative study reported that African-American students had greater work knowledge and more external locus of control (measured by the CLCS) when compared to White students.

She also reported that all students with an external career locus of control reported more decision-making difficulties. These findings are even more interesting given the caution of Sue and Sue (1999) with regard to the locus of control of those from different backgrounds.

Career Development Outcome Variables

Career congruence. Career congruence was first postulated in Holland's (1959) theory of vocational choice. At that point, the idea was that an individual's personality and environment could be explored for congruence and thus satisfaction. In the present study, the idea of congruence stems from one's articulated career aspiration and their calculated career path.

Luzzo (1995) found that congruence between a student's current job and their career aspirations was indicative of a higher level of career maturity. With a portion of the current sample being entrenched in their sport, one could argue that they are 'employed' in a career field. While it is not the primary focus of the study to examine the relationship between congruence and maturity, it is important to note that a relationship does exist. A similar relationship was found in Luzzo and Ward's (1995) examination of congruence and locus of control. As mentioned earlier, they found that those individuals with an internal locus of control were more likely to seek jobs during school that fit their career aspirations. This finding was supported by Luzzo, McWhirter, and Hutcheson (1997) who found high current occupation-career interest congruence to be associated with an internal locus of control. These findings are again important because of the relationship between congruence and locus of control, which happens to be a relationship explored in the current study.

Another relationship of interest for the current study is that between congruence and perceived career barriers. A recent study by Magerkorth (2000) examined the relationship between vocational interest and vocational choice goals with the idea that perceived barriers

would moderate that relationship. While the findings were non-significant as to the proposed hypotheses, the current study examined a different path in order to establish a relationship between barriers and congruence.

While the idea of career congruence has been around for quite some time, the relationships examined in the current study are thought to be unique to the study and the study's population.

Career commitment. For the purposes of the current study, career commitment is the extent to which one has selected, solidified, and made plans toward their chosen career path. Using career commitment as an outcome variable in the current study is somewhat different given the contextual factors and processes that precede it in analysis. Previous studies have used commitment as an outcome variable in a single prediction situation, and others have used it as a mediating/moderating variable.

The current study examined career commitment as an outcome while exploring the contributions of contextual factors and processes. Zanardelli (2002) found that parental factors predicted career commitment in both male and female participants. While the same parental factors were not examined currently, it is important to note previous significant findings with regard to such factors. Koslowsky (1987) examined commitment as a correlate of demographic variables and determined that the demographic variables were not correlated with career commitment. There was some evidence, however, for commitment's place as a mediating/moderating factor. Farmer and Chung (1995) had similar findings in that gender and educational level did not predict commitment in college students. This was in contrast to Farmer (1985) who found those same factors were predictive of commitment in adolescents.

Additional recent studies have found significance where the current study is concerned. Wu (1995) found a significant difference in line with the current study's exploration of educational level. Wu (1995) found that senior females were more developmentally advanced than freshman females on career commitment. Additionally, Koestenblatt (1999) found GPA to be a modest predictor of career commitment. Educational level and GPA are two of the contextual factors thought to be influential for the current study.

Career maturity. Career maturity, as a construct, is one of the most widely used outcome measures in career counseling (Spokane, 1991; Naidoo, 1998). Originally identified as vocational maturity by Super (1955), it is defined as one's readiness to make informed, age-appropriate career decisions and cope with career development tasks (Savickas, 1984). With regard to research on persons of color, Worthington, Flores, and Navarro (2005) illustrate a controversy with respect to career maturity. The controversy surrounds the comparison (and subsequent conclusions) of groups of persons of color with groups of white individuals on measures of career maturity. In a number of studies (i.e., Rojewski, 1994) persons of color have been found to score lower on measures of career maturity than their white counterparts. Brown (1995) reports other studies (i.e., Westbrook, Sanford, & Donnelly, 1990) that did not find such a difference. Naidoo (1998) reviewed forty years of research on career maturity and noted the aforementioned controversy as well as a number of correlates of career maturity, some of which are included in the present study. Naidoo (1993) reported specifically on the career maturity of African-American male and female university students. He found that 'commitment to work' and 'educational level' were significant predictors of career maturity, and that no significant relationship between SES and career maturity existed. The current study hopes to explore similar variables with a more specific population, and expand on the findings of Naidoo (1993).

Summary. The variables considered in the current study are an attempt to address issues raised in previous research and answer some of the questions posed therein. For instance, the current study measured the socioeconomic status (SES) of the sample in order to address concerns about studies done on persons of color without controlling the SES of the sample (Brown, 1995; Worthington et. al, 2005). Another variable of interest is that of career maturity. It is important to note that educational level and SES are proposed as contextual variables related to career maturity, a proposed career development outcome variable. Additionally, Worthington, Flores, and Navarro (2005) call for more research on career maturity conducted with persons of color. Naidoo, Bowman, and Gerstein (1998) found statistical support for the influence of educational level and SES on the career maturity of African-American college students. Naidoo (1993) found statistical support for commitment to work and education level with regard to career maturity. Brown's (1995) contention that SES is a confounding variable in some of the aforementioned studies is important to address here as well. The present study sample is confined to African-American males to avoid the somewhat typical between-group comparisons that lead to overemphasized differences between the target population and the white comparison group (Worthington, Flores, & Navarro, 2005).

As mentioned earlier, another process for consideration in the current study is that of athletic identity. Because of the chosen participant group, the idea of athletic identity and athletic career development is of foremost importance. A thorough discussion of athletic career development which would include athletic identity is thus appropriate.

Athletic Career Development

With regard to career development, athletes are a subgroup of the general population for which career development is very important. The athletic life of a professional athlete is not long

in comparison to overall life expectancy. Athletes have been researched with respect to previously defined contextual variables (i.e., Picou, 1978; Smallman & Sowa, 1996) and career process variables (i.e., Brewer, Van Raalte, & Linder, 1993; Murphy, Petitpas, & Brewer, 1996).

While there are contextual factors present in a number of studies published with regard to student-athletes, the contextual factors were used more as an afterthought rather than a purposeful means of determining statistical significance. For instance, Picou (1978) examined African-American males separately, but reported no significant findings despite asking about other contextual factors such as educational background of the parents of the participants. Smallman and Sowa (1996) examined male intercollegiate varsity athletes, but speculated about the influence of other contextual factors such as race/ethnicity and SES. There have been a few studies done examining a contextual factor within an athlete sample. Wiechman and Williams (1997) noted that Mexican-Americans indicated a stronger athletic identity than African American or Caucasians, but that African Americans had higher expectations of performance in college and professional levels. And, in terms of career choice and preferential occupation for student-athletes, Smallman and Sowa (1996) found that Caucasian athletes were better at identifying a preferred occupation when compared to minority athletes (African-American and Hispanic). These two studies lend some evidence to differences among racial/ethnic groups within athletes.

In addition to traditional factors influencing career development (career decision-making, race/ethnicity), an individual's identity as an athlete is influential as well. Athletic Identity has been defined by Brewer et al. (1993) as "the degree to which an individual identifies with the athletic role". Athletic identity has been researched with regard to career development because of the potential of one's athletic identity to affect the difficulty of the transition from the role of

athlete to non-athlete. Brewer et al. (1993) reported that athletes indicating a higher athletic identity experienced more anxiety related to career exploration and decision-making. Additionally, Murphy et al. (1996) using the CMI (Crites, 1978) and the Athletic Identity Measurement Scale (AIMS; Brewer et al., 1993) in a sample of 124 intercollegiate Division I student-athletes, found that athletic identity was inversely related to career maturity. Athletic identity in high school athletes has been shown to be more salient in males than females, and tends to strengthen from freshman year, through junior varsity, into varsity sport years (Wiechman & Williams, 1997). Conversely, Brown and Hartley (1998) reported that athletic identity in collegiate athletes was unaffected by level of school competition (Division I versus Division II). Because of the time commitment and the structure of life as a student-athlete, it is apparent that identifying oneself as an athlete has an effect on the individual (Martens & Lee, 1998).

Murphy, Petitpas, and Brewer (1996) reported, in a sample of 124 intercollegiate Division I student-athletes (99 males, 25 females), identity foreclosure was inversely related to career maturity. Identity foreclosure can be described as the premature commitment one makes to an occupation or an ideology (Petitpas, 1978). Brown, Glastetter-Fender, and Shelton (2000) found no such connection when measuring athletes on the Objective Measure of Ego Identity Status (OM-EIS; Adams et al., 1979) and the Career Decision-Making Self-Efficacy Scale Short Form (CDMSE-SF; Betz, Klein, & Taylor, 1996). Brown et al. (2000) found, in their sample of 189 Division I collegiate student-athletes; a greater number of hours spent in sport participation yielded lower career decision-making self-efficacy scores on the CDMSE-SF (Betz et al., 1996). Additionally, they reported that career locus of control, as measured by the Career Locus of Control Scale (CLCS; Trice, Haire, & Elliot, 1989), was inversely related to career decision-

making self-efficacy. They conclude that it is perhaps the number of hours, not athletic identity that contributes to lower career development in athletes. This is supported with respect to Kornspan and Etzel's (2001) study of junior college student-athletes. They reported career locus of control, as measured by the CLCS (Trice et al., 1989), and career decision-making self-efficacy, measured by the CDMSE-SF (Betz et al., 1996) were the most influential predictors of career maturity, measured by the CMI-R (Crites & Savickas, 1996).

While the aforementioned studies examine different areas and different populations within athletics, it is thought that this study is the first of its kind – incorporating traditional career development factors in combination with the idea of athletic identity in a single gender, single race/ethnicity sample. Additionally, the current study addresses issues in the literature to examine more contextual variables including SES, GPA, and family factors.

Rationale

Career development is a broad construct, and much of the research on this broad construct has focused solely on one idea within that construct. This study considered different aspects of career development: contextual variables, processes, and outcome variables (career commitment, career congruence, and career maturity). Career development is an outcome, an outcome of the interaction of processes and contextual variables. The processes get at how one makes decisions, and the contextual variables get at what can influence one's possible choices. With an increased knowledge of the interaction of the contextual, process, and outcome variables presented here, students will be able to make a confident decision and hopefully achieve satisfaction when that decision is put into action. The outcome variables considered here were ultimately the definition of career development for the current study. Career commitment is the extent to which one is focused developmentally on a career, career congruence examines the

choice one makes relative to their self-identified interests, and career maturity is one's readiness to make appropriate career decisions based on their developmental level.

The number of empirically based studies on African-American career development is surprisingly small. The majority of studies done with respect to African-American career development have been done on a mixed sample with African Americans comprising a portion of the individuals involved in the study. Additionally, the majority of research on career development has not considered contextual variables such as socioeconomic status, age, and athletic status – all variables thought to be influential to an individuals' career development. It is with this in mind that the currently proposed contextual variables (socioeconomic status, education level, parental and sibling education level, and athletic status) were examined as to their contribution to career development variables. Further, it is expected that the contextual variables will have an influential relationship to career development outcome variables (Hypothesis 1).

When considering Gottfredson's (1981, 1996, & 2002) theory, career processes such as aspirations and expectations become even more relevant. Gottfredson's theory states that developmentally, individuals in college should have progressed through the circumscription aspect of career development. That is, they have already narrowed their career options and some aspirations have been ruled out. With other aspirations in mind, individuals begin their collegiate careers; and, they are theoretically well into the compromise portion of career development. As they progress through, compromises are made and the aspirations get transformed into expectations. This process is even more important in athletes as many times they begin to realize the realities of professional athletic attainment and those aspirations are compromised.

Additionally, other processes like perceived barriers become more salient as one is in the compromise stage. The idea being, one's perceived barriers may unnecessarily shrink the field of possible career options for a particular individual. While there are mixed results in the research literature for the effects of aspirations and expectations, perceived barriers have been demonstrated to be higher in minorities. There is little to no research with regard to athletes' aspirations and expectations, or perceived barriers.

Another proposed process thought to be influential in one's career development is career locus of control. Career locus of control is an off-shoot of more generalized locus of control and it seen as important for both students and especially student-athletes. Student-athletes are faced with different difficulties when considering career development, thus their career locus of control and their athletic identity was measured. It is proposed here that these processes will be significantly related to the contextual variables proposed (Hypothesis 2) and that they will then be related to the career development outcome variables proposed such that they mediate the relationship between the contextual variables and career development variables (Hypothesis 3).

According to National Collegiate Athletic Association (NCAA; 2006) statistical estimates from 2003-2004, approximately 19% of male athletes involved in NCAA sponsored sports are African American. Considering that approximately 75% are white, African-American males make up the largest minority of NCAA male athletes. The percentage of African-American males increases when considering the highest revenue-producing sports (i.e., football, basketball). Additionally, the NCAA reports that, on average, less than 4% of collegiate student athletes make the jump to the professional level in their sport (with the highest percentage, 10.5%, coming from baseball). Those students identified as athletes by their university may indeed hold a high athletic identity of themselves. The idea of the athletic identity may actually

take away from attention to other aspects of career development, despite the dismal numbers as to the probability of making it into the professional ranks. Most of the research that has examined the idea of athletic identity with regard to career development has not been focused solely on African Americans, and those that have did not consider many of the contextual variables proposed here. Lastly, there are a few studies that have compared athletes to non-athletes, however, those have not accounted for the other variables, both contextual and process, that have been proposed here to be influential.

There are some examples of studies done examining expressly the career development of athletes (such as Murphy, Petitpas, & Brewer, 1996; Kornspan & Etzel, 2001). While these studies and others like them are commendable, they have shortcomings. One such shortcoming is the broad nature of the samples. Another is inadequate control for some of the contextual variables known to affect career development in individuals. With few exceptions, most of the studies involving athletes and career development are over ten years old. While many of the issues athletes face remain the same, there have been considerable advances in many fields over the past ten years that would warrant a return to examinations of athletes and career development. As with African Americans, many articles about athletes and career development are theoretical in nature, speaking more about what counselors *should* do and not what the field has found to be true.

Considering the aforementioned factors, this study is seen as unique and important in a number of ways. The use of a single gender, single ethnic group sample allowed for within group conclusions not previously reported. Additionally, the exploration of student-athletes within that sample allows for interesting comparisons and possible conclusions. With all of this in mind, the following purpose and hypotheses are offered.

Purpose and Hypotheses of the Study

The primary purpose of this study is to expand the literature base on career development with respect to African-American male athletes. By exploring different contextual factors, such as SES, education level and occupation of parents, and age, and controlling for those variables, a more complete picture of career development in African-American male athletes and non-athletes can emerge.

Additionally, certain processes – such as athletic identity, perceived cultural barriers, vocational aspirations and expectations – were measured and examined as to their contribution to the career development of African-American male athletes and non-athletes.

The overall outcome variable desired is career development. Based on previous work, career commitment, career maturity, and career congruence were used as measures of career development. It is expected that:

- 1.) Contextual variables (SES, age, educational level, and athletic status) are related to the career development outcome variables (career congruence, career maturity, career commitment).
- 2.) Contextual variables are related to processes (occupational and educational aspirations, career barriers, career locus of control, and athletic identity).
- 3.) Processes are related to the career development outcome variables such that they mediate the relationship between the contextual variables and the career development outcome variables.

CHAPTER III

METHOD

Participants and Procedure

The participants selected for this study were 71 African-American male college students with ages between 17 and 27 years. Forty-two of the participants were athletes, and the remaining 29 were non-athletes. The athletes were recruited from the athletic department on campus and the non-athletes were recruited from classes and organizations across campus. Athletes are defined as those individuals participating in National Collegiate Athletic Association (NCAA) sanctioned sports on campus. Participants were recruited from a large, Division I university in the Southwestern part of the United States. Participation was voluntary and participants were offered a one-time payment of \$20. Additionally, participants were offered career feedback sessions following the completion and scoring of their measures. Only one participant was interested in career feedback. The institutional review boards (IRBs) at both the host institution for the principal investigator as well as the data collection institution approved all procedures.

Instruments

Demographic information. Background information as to the participants' age, educational level, GPA, scholarship status, and major was collected. Additional data concerning marital status of the parents of the participants, parents' level of education, and parents' occupation was collected. Parents' level of education was used to identify those participants who are first generation college students. Level of education and occupational information about the siblings of the participants was also collected, as this information relates to, and can be influential for, the career development of the participants. Socioeconomic status (SES) was

determined by parental occupation. Occupations were coded as to socioeconomic prestige using the Socioeconomic Index (SEI; Stevens & Cho, 1985). For many of the participants, only one parental occupation was available. In the cases where two occupations were available, the SEI used to estimate SES was the larger of the two calculated SEI scores. Participant age was obtained and used as a contextual variable along with SES, educational level, and athletic status (athlete versus non-athlete).

Aspirations and expectations. Occupational and educational aspirations and expectations were assessed by the Aspiration and Expectations questions (AE; McNair & Brown, 1983). The AE is a 2-item questionnaire measuring participants' ideal occupational choices (aspirations) and their real occupational choices (expectations). It was expanded to four questions to account for the educational aspirations and expectations. The questions were only modified to allow participants to express the educational, as opposed to occupational, aspirations and expectations. Test-retest estimates for the original AE are considered adequate (.77 and .81 respectively). For the purpose of analysis, only the aspirations (educational and occupational) were used.

Athletic identity. The Athletic Identity Measurement Scale (AIMS; Brewer, Van Raalte, & Linder, 1993) was used to assess athletic identity. The AIMS is a 10-item instrument rated on a 7-point, Likert-type rating scale, anchored by *strongly agree* and *strongly disagree*. Higher scores indicate a greater degree of identity with the athletic role, and lower scores indicate a lower degree of identification. The highest score possible is 70, and the lowest score possible is 10. Internal consistency and two-week test-retest reliability are high, .93 and .89 respectively. Additionally, good construct validity (.83) was established with the importance of sports competence scale on the Perceived Importance Profile (PIP). The AIMS is the most widely used measure in research examining athletic identity.

In 2001, Brewer and Cornelius further examined the factor structure of the original AIMS and found that a shortened version (7-items) of the AIMS was structurally sound. The results of their analysis revealed that athletic identity is a multidimensional construct with three distinct, yet highly correlated factors (social identity, exclusivity, negative affectivity). The internal consistency of the shortened AIMS remained high (.81) and the 7-item version is highly correlated with the original 10-item version. The 7-item version was used in the current study to assess athletic identity. The internal consistency reliability for the AIMS in the current study was calculated at .92.

Career barriers. The Career Barriers Inventory – Revised (CBI-R; Swanson, Daniels, & Tokar, 1996) was used to assess the perceived barriers of the participants. This 70-item measure has 13 scales that appear to relate to two of the factors discussed in Gottfredson's theory of vocational development (Carson & Dawis, 2000). The internal consistency for the scales of the CBI-R range from .64 to .86, and the scales from the CBI-R correlate between .72 and 1.00 with the original CBI scales (Swanson et al., 1996). The internal consistency for the current study was found to be .97, considerably higher than the aforementioned estimates. The total score on the scale was used for the analyses.

Career locus of control. The Career Locus of Control Scale (CLCS; Trice et al., 1989) is an 18-item scale assessing one's perception of their career outcomes. If the respondent answers as though their career outcomes are based on their own actions, a lower score is achieved; whereas, if the respondent answers as though their career outcomes are based on the nature of the situation, powerful others, or chance factors, a higher score is achieved. Kuder-Richardson Formula 20 reliability coefficients of .78 and .81 in two separate samples were reported, as well as test-retest reliability of .93 over three weeks was reported (Trice et al., 1989). In the current

study, the alpha coefficient calculated was .42; significantly lower than the above estimates. Because of the low internal consistency reliability for this scale, caution is used when interpreting the findings with regard to the CLCS.

Career maturity. The Career Maturity Inventory – Revised (CMI-R; Crites & Savickas, 1996) was used to measure the competence and readiness to make effective career decisions by tapping into attitudes, feelings, and knowledge about career decision-making. The CMI-R yields three scores: an overall total maturity score, an attitude score based on identification of attitudes and feelings toward making a career choice, and a competence score based on measurement of knowledge about occupations and decisions involved in choosing a career. The Attitude scale consists of the first 25 items, and the Competencies scale consists of the final 25 items, for a total of a 50-item measure. The internal consistency of the initial version is adequate (.74; Crites, 1973). The CMI-R has norms for adults ages 18 to 23 and a review by McDivitt (2002) demonstrated support for internal consistency, reliability, and construct and criterion-related validity. The internal consistency for the current study was calculated to be .78, comparable to that reported by Crites (1973). For the analyses, the total maturity score was used. Additionally, the CMI-R is still viewed as the best career maturity measure in use; however, the first version is seen as better psychometrically than the second (C.E. Watkins, personal communication, November 17, 2006).

Career congruence. The Career Decision-Making System – Revised (CDM-R; Harrington & O’Shea, 2000) assesses self-reported occupational choice based on values, interests, and abilities. The CDM-R provides a valid and reliable measure of occupational choice based on Holland’s (1973) theory of vocational development (Harrington & Schafer, 1996). High internal consistency (median .93) has been demonstrated in the interest scales, and further evidence has

been reported for their content, construct, and cross-cultural validity. The internal consistency between the interest scales for the current study was calculated to be .79, somewhat lower than previous estimates. Congruence ratios between the participants' career interest scores and their stated career aspirations were determined using the K-P index (Kwak & Pulvino, 1982).

Research indicates that the K-P index is correlated with other methods of comparison and that it makes finer distinctions. The congruence ratios were used as an exploratory measure of career congruence as has been the case in previous research (see Schapeler-Bergen, 2006). The K-P Index (Kwak & Pulvino, 1982) consists of a formula – $X = 7^{-1}(W_1AD + W_2BE + W_3CF)$ – that considers the three letters of an individual's CDM-R code type, and the three letters of the individual's aspired to (or expected) code type. There are individual weights given to the pairings – W_1 is an arbitrary weight of 4, W_2 is an arbitrary weight of 2, and W_3 is an arbitrary weight of 1 – that account for the decreasing influence of the second and third letters of one's code type. The A, B, and C represent the letters of the CDM code type, whereas the D, E, and F represent the letters of the individual's aspired to (or expected) occupational choice code type. The correlations between code types were taken from empirically derived values based on Holland's (1973) hexagonal model, and were used in this study. Possible K-P Index scores range from .12-1.00 with low scores indicating little congruence and 1 indicating perfect congruence. The same procedure was used, although separately, for both aspirations and expectations. The CDM-R is also designed and set up very well, and was used, to allow the researcher to provide feedback to the participants.

Career commitment. The Career Commitment Scale (CCS) is a 3-item measure of career commitment originally developed by Schapeler (2004) and it was used to examine participants in this study as to their level of career commitment. The three questions are: "I've decided on a

career to pursue,” “I’m comfortable with my career decision and I believe that I will not change my mind concerning pursuing this career,” and “I’ve taken steps and made plans in order to reach my career goal.” Each question is rated on a 4-point Likert scale, from 1 to 4 with anchors at *not at all true* and *very true*. Schapeler (2004) calculated the internal consistency of the measure to be .89. The current study revealed an internal consistency of .84, somewhat lower, yet comparable to previous reports.

Procedure

The researcher administered the questionnaire packets to individuals and groups of individuals available during specified times throughout the day. Additionally, in order to obtain the athlete data, the researcher met with individual athletes and small groups of athletes during their study hall periods in order to maximize participation and completion of the questionnaires.

Data analysis. Data from this study were examined via the SPSS statistical package, Version 18.0, using a hierarchical linear regression analysis procedure. The independent variables for the study were contained in one block: contextual block – containing SES (this appears to be the most influential demographic variable as the current study controls for both gender and race/ethnicity), age, educational level and athletic status (athlete versus non-athlete). The dependent variables were arranged in two different groupings: processes (or mediator variables) and career development. The processes grouping included educational and occupational aspirations, career barriers (CBI), career locus of control (CLCS), and athletic identity (AIMS). The educational and occupational aspirations and expectations for each participant were measured, although only the aspirations were used in the analyses. Finally, the career development, or outcome variables, grouping consisted of measures of career maturity

(CMI), career congruence (based on a calculations described above), and career commitment (CCS).

CHAPTER IV

RESULTS

Description of the Sample

Contextual variables. The current study participants were 71 African-American males. In order to be part of the sample, participants had to be enrolled as students at a large university in the Southwestern part of the United States. Frequencies and means for the contextual variables can be found in Tables B.1 and B.2. At the time of data collection, the group had a mean age of 20.31 years ($SD = 1.75$). Juniors were most frequent (22; 30.1%), followed by freshmen (18; 24.7%), sophomores (12; 16.4%) and seniors (14; 19.2%). Seven (9.6%) of the participants, for unknown reasons, did not identify a year in school. The mean grade point average (GPA) for individuals in the study was 2.91 ($SD = .44$), and the range was from 1.97 to 3.73. As in the case of the year in school variable, 9 individuals did not list their GPA; 5 of those were students who indicated they did not yet have an established GPA at college, and the other 4 did not indicate why they did not include a GPA.

Of the individuals in this study, over half ($n = 42$; 59.15%) of them are considered athletes as they, at the time of data collection, were participants in Division I, NCAA sanctioned athletics sponsored through the athletic department. Twenty-nine (40.85%) of the sample were considered non-athletes, as they do not fit the description of “athlete” above.

When examining the scholarship variable, it is important to consider that some of the NCAA sanctioned sports require full scholarships be given if a student-athlete is on scholarship at all (e.g., football), whereas other NCAA-sanctioned sports can award partial scholarships (e.g., track & field). Over half ($n = 37$; 52.1%) of the individuals in the study indicated that they were on full scholarship. Of those, 31 are from the athlete sample leaving only 6 from the non-athlete

sample. Sixteen (22.5%) indicated that they were on partial scholarship, and 13 (18.3%) indicated they were on no scholarship, 8 of whom were non-athletes. As with the other variables discussed earlier, 5 (7.0%) of the individuals did not indicate a scholarship status, and it is unknown why they chose not to indicate a status.

In order to calculate socioeconomic status (SES), participants were asked for their parents' occupations. Those occupations were then coded based on socioeconomic prestige as proposed by Stevens and Cho (1985). Exploration of those codes revealed that 26 of the 71 individuals (36.62%) had only one parent with an occupation available for coding. Some indicated that one parent was not involved in their life; others indicated that one parent was out of work, and still others indicated that one parent was deceased, and for some the exact reasons for this are unknown. For purposes of analysis, if participants indicated an occupation for just one parent, that occupational code was used. If participants indicated an occupation for two parents, the prestige score for the higher of the occupations was used for analysis. Based on this coding system, there was a range from 15.38 to 86.96 with 7 individuals not indicating an occupation for either parent. The overall mean ($M = 50.51$; $SD = 18.99$) was in the 59th percentile. The mean for the parents of athletes was not significantly different from that of the parents of non-athletes, $t(62) = -1.08$, $p = .286$.

Process variables. A complete array of the means and standard deviations for the process variables can be found in Table B.3. Additionally, a series of simple, independent samples t -tests were run on each of the following variables in order to explore possible differences between athletes and non-athletes on these measures.

Athletic identity scores covered the entire range of the AIMS, and an overall mean of 31.98 ($SD = 11.31$) was found for the 71 participants in the current sample. Athletes had a higher

athletic identity than non-athletes ($t(46.49) = 9.07, p < .001$). All of the athletes ($N = 42$) scored above the midpoint of the scale, showing identification with the athletic role (range 27 to 49) – as expected given their status as athletes. Non-athletes ($n = 29$) tended to report lower athletic identity (range 7 to 39), although some non-athletes actually scored higher on athletic identity than some athletes.

Career locus of control was measured by the CLCS. For the overall sample of 71 individuals, the CLCS ranged from one to 13, with a mean of 7.69 ($SD = 2.48$). The range mentioned is of note given the range for the measure is from one to 18 – suggesting that individuals in this study were excluded from the upper end of the scale, which would indicate a more external locus of control. Given the means, comparing athletes to non-athletes, athletes were significantly more external in locus of control when it came to their careers, $t(67.78) = 4.28, p < .001$.

Career barriers were measured by the CBI. Due to the nature of the scores generated by the CBI, the means and standard deviations were divided by the total number of questions in the questionnaire (70) in order to speak to the anchors on the scale itself. Overall, the participants indicated that their perceived barriers would somewhat hinder their career progress ($M = 4.10$; $SD = 0.96$). The simple t -test revealed that the athletes and non-athletes in the sample did not differ significantly on the CBI, $t(69) = 1.172, p = .245$. The non-significance of the comparison is an interesting finding given the homogeneous nature of the sample.

Educational aspirations and expectations were categorical variables classified as ordinal in nature. Due to the ordinal nature of the data, frequencies were reported. In the overall sample educational aspirations ($N = 69$) ranged from a high school degree to a professional degree. Despite the range, only a small percentage (5.6%) indicated their educational aspiration

to be less than a college degree ($n = 4$), and those four were athletes. Of those four, one senior indicated that he aspired to a high school degree; a freshman indicated he aspired to a community/junior college degree, and two others – a freshman and a junior – aspired to some college. All of these categories are less education than their current standing. The remainder of the sample aspired to a college degree or higher. All individuals within the non-athlete sample ($n = 28$) indicated they aspire to at least the level of a college degree.

The overall sample for educational expectations ($N = 69$) ranged from some college to a professional degree. The non-athlete sample had a range from college degree to professional degree, whereas the athlete sample reported a range from some college to a master's degree. It is notable that one individual from the sample indicated some college as their educational expectation. Further exploration revealed this individual was a sophomore from the athlete sample. Additionally, no one in the athlete sample indicated they are expecting to obtain a professional degree.

Occupational aspirations and expectations were quantified using the SEI scores from the socioeconomic prestige scores presented in Stevens and Cho (1985). As the score on the SEI increases, so does the prestige of the job or career path. Only the occupational aspirations data was used for analyses. The average prestige score for occupational aspiration ($M = 65.06$; $SD = 16.80$) within the overall group in this study ($N = 62$) tended towards the upper part of the range (26.67 – 88.49). The non-athletes and athletes had similar prestige scores as the difference between the two groups was not statistically significant, $t(60) = -1.14$, $p = .26$.

Career development outcome variables. A complete array of the means and standard deviations for the career development variables can be found in Table B.4. Career congruence was calculated using the K-P Index. This index yielded quantitative scores for each individual's

chosen career type – taken from their CDM-R – and their career aspiration. An overall discrepancy score was computed by taking the absolute value of the difference between the K-P Index scores for one's CDM-R and their aspired to occupation. This is in line with what has been done in previous research of this type (see Rojewski, 1995). For the purpose of the analysis, the discrepancy scores were used. Those scores ranged from zero to .51- zero indicating that the individuals' calculated and aspired to occupations fell in the same Holland category. Thirty-five of the 64 individuals (54.69%) who had discrepancy scores calculated had no discrepancy between their scores. Thus, there was no surprise when the comparison analysis between athletes and non-athletes was not statistically significant; indicating there was no difference in congruence.

Career commitment scores spanned the entire range of the three-question career commitment scale, and an overall sample mean of 9.73 ($SD = 2.08$) was calculated. The non-athletes had a significantly higher career commitment than athletes, $t(69) = -3.46, p = .001$. A further examination of the frequency of scores revealed that the non-athletes all scored in the upper half of the scale (from 6 to 12), whereas the athletes covered the full range of the scale (from 3 to 12). Given the concentrated nature of intercollegiate athletics, one may think that this finding is backwards and that the athletes would be more career committed.

Career maturity was measured with the CMI-R where an overall sample ($N = 71$) mean was calculated to be 31.44 ($SD = 6.19$). All scores fell between 17 and 42, and – as was the case above – the non-athletes had a more restricted range towards the upper end of the overall range. When comparing the means of athletes to non-athletes, there is an interesting and significant discrepancy, $t(68.97) = -4.66, p < .001$, indicating the non-athletes were more career mature than

their athlete counterparts. This is a remarkable, yet unsurprising, finding given the suspected slower development of some athletes' maturity due to their participation in high-level athletics.

Preliminary Analyses

Prior to the principle analyses, the data were examined for accuracy and out of range values. Missing values were also examined. Some data were missing due to omission by the participants, and some were missing due to a parent being deceased. Other data were missing due to the participants being unsure of the information (i.e., parental occupation), and other data were missing due to unknown reasons. One important evaluation of the data was in considering the power of the study given the overall number of participants and the number of predictor variables. While there is debate as to the most accurate way to evaluate the power based on the number of predictors, one was is to consider the number of predictors and multiply that by five. This equation gives the appropriate number of participants given the number of predictors. In this study, there were nine predictors; thus, nine times five is 45, and there were 71 participants. So, given the number of participants the power and thus effect size is considered acceptable.

An examination of the data for multicollinearity was conducted due to possible contamination amongst those variables with regard to regression analyses (Tabachnick & Fidell, 2001). Multicollinearity exists when two variables are highly correlated (greater than or equal to .80). The high correlation can cause problems in interpretation and even misinterpretation of the relevant data. One method of detecting multicollinearity is direct examination of the bivariate correlation between the variables in question. If the correlation exceeds the acceptable level, the two variables are said to measure the same construct and should be considered for elimination in order to reduce the risk of multicollinearity (Tabachnick & Fidell, 2001). The correlations for these variables are illustrated in Table B.4. There are two correlations that approach the point of

concern with regard to multicollinearity – the relationship between athletic status and measure of athletic identity (AIMS; $r = -.76, p < .001$); and the relationship between age and educational level ($r = .76, p < .001$). While the conditions of multicollinearity do not fully exist in these relationships, the high degree of correlation is something to consider in interpreting the data. Additionally, there is a correlation that violated the .80 level mentioned above – between occupational aspirations and occupational expectations ($r = .82, p < .001$). The implications here are minimal as only the aspirations were used in the analyses.

Additionally, the variables were examined for normality and for the impact of outliers. When examining the skewness and kurtosis for all variables, all variables, except age, were in the very good (± 1) or acceptable (± 2) ranges. Further exploration of age as a variable, the distribution appears to be leptokurtic indicating more scores around the mean, and a low variability. This is understandable given the intended sample – college students tend to be similar in age. Due to the nature of this variable, no corrections or alterations are necessary.

Correlations for all variables were conducted for the combined sample, including both athletes and non-athletes. A complete list of all correlations for the entire sample can be found in Table B.5, a complete list of the correlations for the athlete sample can be found in Table B.6, and a complete list of the correlations for the non-athlete sample can be found in Table B.7.

For the combined sample, athletic status was significantly correlated with a number of contextual variables, processes, and career development outcome variables. Due to the significant nature of this variable, it will be discussed in more detail later. Another interesting correlation between two contextual factors was seen with SES and age. The significant negative correlation ($r = -.31, p = .01$) indicates that those with a higher SES are younger. There was but one other significant correlation between contextual variables – age and educational level ($r =$

.76, $p < .001$). This correlation was in the direction of expectation. Correlations of the processes again yielded some interesting findings. Educational aspirations were positively correlated with educational expectations and occupational aspirations suggesting that those with higher aspirations for education have higher expectations for education and higher aspirations for career. Additionally, educational aspirations were significantly negatively correlated with athletic identity, and career locus of control suggesting that higher educational aspirations were indicative of lower identification as an athlete and a more internal locus of control with regard to careers. Another correlation of interest was a highly positive correlation ($r = .41, p < .001$) between athletic identity and career locus of control, indicating that those more identified as athletes have a more external locus of control with regard to careers. These relationships are important given the population of interest in the current study.

Athletes and non-athletes. Correlations were also conducted individually for the athlete sample and the non-athlete sample. From the athlete sample, there are a few correlations of interest. One of those is within the realm of correlations between contextual variables, specifically age and SES. Athletes who were older tended to have a lower SES ($r = -.41, p = .01$). Because of how the SES variable was calculated, it is difficult to ascertain possible reasons for this significant correlation. Some of the other significant correlations within the athlete sample are discussed later within the context of the regression analyses, and still others are unremarkable due to the expected nature of those relationships.

Within the non-athlete sample, the significant correlations are all either covered in the discussion of the regression results or are expected given the variables of interest. An interesting comparison can be made when looking across the athlete and non-athlete samples with regard to some of the correlations. The non-athletes had more significant correlations within educational

and occupational aspirations and expectations. Additionally, for the non-athletes, there were significant correlations between the outcome variables. The directionality of those relationships was seen in the athlete sample, however, those remained non-significant. The correlational data is important given the principle analyses for the current study.

Principal Analyses

Regression analysis. In order to address the specific hypotheses in this study, the principle analyses for the study involve both multiple and hierarchical regression analyses to determine which of the independent variables were predictors of the dependent variables, and whether or not mediation of the processes is present and significant. Baron and Kenny (1986) proposed a four step analytical process to determine mediation; that process was used for the current analyses. The first step of the process involves running a multiple regression to test for a path between the contextual factors and the career development outcome variables. The second involves another multiple regression to examine the path between the contextual factors and the process variables. The third step examines, via multiple regression, the path between the process variables and career development outcome variables; and the fourth step examines, via hierarchical regression, the prediction of the career development outcome variables by the contextual factors with respect to the process variables (Baron & Kenny, 1986).

To address the first hypothesis, multiple regressions were run – one for each of the career development outcome variables (career commitment, career maturity, career congruence) – assessing whether the factors in the contextual block (sex, age, educational level, athletic status) would be significant predictors of the career development outcome variables. The first analysis predicted career commitment from the contextual block. The overall model was significant, $F(4, 58) = 4.63, p < .01$, and significant beta weights existed for athletic status and educational level.

Interestingly, in the simple correlations previously run, only athletic status was significant. This model is summarized in Table B.8. The second analysis predicted career congruence from the contextual block. While the overall model was not significant, $F(4, 53) = 2.17, p = .09$, Age was a significant predictor of career congruence ($\beta = .55, p = .02$). This model is summarized in Table B.9. The model examining the prediction of career maturity from the contextual block was significant, $F(4, 58) = 5.09, p = .001$. The analysis revealed the significant predictors to be athletic status and SES. This model is summarized in Table B.10.

The second hypothesis was addressed by running individual multiple regressions – one for each of the processes (educational aspirations, occupational aspirations, career barriers, athletic identity, and career locus of control) – to assess whether or not the contextual block variables would be significant predictors of the processes. The first examined the prediction of educational aspirations from the contextual factors. A summary of this model is presented in Table B.11. This model was significant, $F(4, 56) = 2.94, p = .03$, and a significant beta weight ($\beta = .39, p < .01$) revealed that athletic status was the only educational aspirations. The model examining the contextual factors' prediction of occupational aspirations was non-significant. This model is summarized in Table B.12. The model looking at career barriers was significant, $F(4, 58) = 2.79, p = .04$, and the summary of this model is presented in Table B.13. Interestingly, the significant predictor of one's perceived career barriers was educational level ($\beta = -.51, p = .01$). The model examining the prediction of athletic identity from the contextual factors was significant, $F(4, 58) = 18.26, p < .001$. The analysis revealed the significant predictor to be athletic status ($\beta = -.73, p < .001$). This model is summarized in Table B.14. The model looking at career locus of control was also significant, $F(4, 58) = 4.56, p < .01$. The analysis revealed the

lone significant predictors to again be athletic status ($\beta = -.45, p < .01$), and the summary of this model is presented in Table B.12.

The final two steps of Baron and Kenny's (1986) process are to conduct a hierarchical regression with the blocks of contextual factors and processes predicting the career development outcome variables, and to then examine the paths for possible mediation. These steps address the third hypothesis. The first analyses were multiple regressions assessing the predictive nature of the processes with regard to each of the career development outcome variables. The processes were unable to predict either career congruence or career commitment (see Tables B.16 & B.17 respectively). However, perceived career barriers and locus of control with regard to careers were able to significantly predict career maturity (Table B.18). This step was important in making the eventual link between the contextual factors and career development outcome variables. The second analyses were hierarchical regressions predicting the career development outcome variables from both the contextual factors and processes. Those are discussed below.

The hierarchical regression for career commitment is summarized in Table B.19. The contextual block of variables was a significant predictor of career commitment as reported above. When the processes were added, the model was not significant; $F(9, 50) = 2.01, p = .06$; F change $(5, 41) = .78, p = .57$. When considering the previous analyses, this finding is not surprising. In the hierarchical regression analysis for career congruence neither of the blocks were significant predictors, $F(5, 41) = 1.00, p = .85$; this is summarized in Table B.20. Given the lack of significant findings in the previous steps of the analysis and the preliminary analyses, again this finding is not surprising.

The most interesting hierarchical regression came with regard to career maturity. The contextual block of variables was a significant predictor of career maturity, $F(4, 50) = 4.05, p <$

.01 (Table B.21). Interestingly, when the block of process variables were added, the overall significance in the model, $F(9, 50) = 4.79, p < .001$ [F change (5, 41) = 4.24, $p < .01$], remained. Career barriers ($\beta = -.36, p = .01$) and career locus of control ($\beta = -.47, p < .01$) were the significant predictors in the overall model. Even more interesting is that athletic status was significant ($\beta = .36, p < .01$) when the contextual block was added, and dropped to a non-significant level when the processes block was added ($\beta = .08, p = .66$). This change in significance is indicative of the presence of mediation. Thus, it can be said that the relationship between one's athletic status and their level of career maturity is mediated by their perception of barriers to their career and their career locus of control.

CHAPTER V

DISCUSSION

Summary of Findings

The present study examined the complex relationship between various contextual factors and processes, and career development in African-American males. This study looked specifically at the contributions of each of the contextual factors and processes to career development. Previous research has suggested such connections in more heterogeneous groups, however, this study sought to examine those relationships for a specific, underserved group. It was not the goal of this study to discourage any athlete or non-athlete from pursuing their dream; rather, the goal was to provide those individuals who have certain dreams with other possibilities to consider while en route to those dreams.

The primary purpose of this study was to expand the literature base on career development with respect to African-American male athletes. By exploring different contextual factors, such as SES, education level and occupation of parents, and family variables (i.e., values, perceived obstacles), and controlling for those variables, a more complete picture of career development in African-American male athletes and non-athletes emerged. Additionally, certain processes – such as athletic identity, cultural barriers, vocational aspirations and expectations – were measured and examined as to their contribution to the career development of African-American male athletes and non-athletes.

While there is still no guiding theory of African-American career development, the use of Gottfredson's (2002) theory proved valuable in conceptualizing the issues and thus the current study. The theory guided the research question and hypotheses.

The first hypothesis that contextual factors including SES (as determined by parental employment), age, educational level, and status as a Division-I student-athlete would predict maturity in thinking about careers, commitment and comfort with a career choice, and congruence between aspired to and expressed career interest (as determined by CDM-R) was partially supported. Results indicated that the contextual factors predicted commitment to a career path and maturity in thinking about careers. Athletic status and educational level were significant predictors of career commitment, whereas athletic status and SES predicted career maturity. The area of the hypothesis not supported was that the contextual factors did not predict one's congruence between their aspired to and expected career paths.

The second hypothesis that contextual factors including SES (as determined by parental employment), age, educational level, and status as a Division-I student-athlete would predict various processes including level of athletic identity, locus of control about careers, perceived barriers to achievement in a career field, aspired to levels of education, and aspired to occupations was partially supported. Results indicated that the contextual factors predicted level of athletic identity, locus of control about careers, perceived barrier to career achievement, and aspired to educational level. Athletic status of the individual was seen as the sole predictive factor with regard to one's aspired to educational level, their level of athletic identity, and their level of locus of control about their career. Perceived barriers to career attainment were significantly predicted by their educational. The area of the hypothesis not supported was that the contextual factors did not predict one's aspired to occupational level.

The third and final hypothesis was that the processes including level of athletic identity, locus of control about careers, perceived barriers to achievement in a career field, aspired to levels of education, and aspired to occupations would be related to the maturity in thinking about

careers, commitment and comfort with a career choice, and congruence between aspired to and expressed career interest (as determined by CDM-R) of each participant such that those connections would mediate the relationship between the contextual variables including SES (as determined by parental employment), age, educational level, and status as a Division-I student-athlete and the career development outcome variables; this was again partially supported. Only maturity about careers was predicted by the block of processes, and then only significantly by perceived barriers and locus of control about careers. When examining the contextual factors and career maturity, the relationship between athletic status and career maturity was seen to be mediated by perceived career barriers and locus of control about careers.

Some important and interesting findings have surfaced in the current study. These findings are important in the emergence of an accurate picture of career development in African-American males. Several of the current findings supported what was previously found in the literature, and others went against what was previously found. Additionally, the design and selected sample for the current study differed from previous career development research in that it explicitly examined athletes in comparison to non-athletes. Support was found for aspects of the contextual variables and processes having significant influence in one's career development, although many of those factors were less predictive than originally thought. Findings from this study support the idea that various constructs should be explored when discussing an individual's overall career development. This study got its origins from the idea that family and individual factors directly influence processes that then result in a one's career development. While that idea was not fully supported, it was supported in a way that can be expanded to have meaning amongst the population.

What follows is a discussion of career development in African-American males with respect to the variables of interest in this study. The current findings were discussed in light of previous research, shortcomings, and extensions into where future research could be focused. First the importance of the contextual factors are discussed; next the importance of the processes are discussed; and then, the overall picture of the complex nature of career development are discussed. Finally, the implications and limitations of the current study and directions for future research are explored.

African-American Males and Career Development

Contextual variables. The importance of the inclusion of contextual variables in a study of this type has been well established. As mentioned by Flores et al. (2006), contextual factors were the most popular topical area considered in recent decades. Whiston and Keller's (2004) review mentioned the importance of the consideration of family factors in studies examining racial/ethnic career development. Given the amount of evidence supporting the examination of contextual factors in studies of career development, the literature supported the idea that the contextual factors chosen for the current study would be highly influential in the career development of the participants.

While all the contextual factors were expected to be influential, results showed that athletic status was most influential. SES was expected to be influential although the exact influence on the process and outcome variables was not specifically predicted. The relevant finding with regard to SES was that it was not in line with the Slaney and Brown (1983) finding with regard to career indecision. Slaney and Brown (1983) found that higher SES was associated with greater career indecision. In the present study, there was no significant finding with regard to career commitment level and SES. Age was less interesting in terms of significant findings,

although there was a negative correlation between age and SES in the overall and athlete samples. A final comment on SES is the significant relationship found between SES and career maturity, suggesting – as has been previously speculated – those with higher SES levels have higher levels of career maturity. This finding is possibly a result of those individuals being afforded more opportunities with which to learn about and explore careers.

The most remarkable finding within the contextual factors is that of the influence of athletic status. Due to the unique nature of this study, athletic status emerged as an extremely important factor not known to have been previously considered as a contextual factor, particularly within a sample of all African-American males. Generally speaking, studies either looked exclusively at athletes or at a sample where athletic status was not a factor. Given the unique culture of intercollegiate athletics, this factor is indeed very important to consider. When looking at athletes versus non-athletes, they were statistically similar on such variables as age, educational level, GPA, occupational aspirations and expectations, career barriers, and career congruence. With regard to other variables, being an athlete is associated with more scholarship monies, lower SES, lower educational aspirations and expectations, higher levels of athletic identity, more external locus of control, and lower levels of both career maturity and career commitment. The educational aspirations relationship with athletic status is important due to a previous finding by Picou (1978) who found no effect in his African-American sample. In the current sample, athletes aspired to much lower levels of educational achievement than non-athletes. Four of the athletes in the study actually aspired to a lower level of education than they were currently pursuing. One of them – a senior – reported an educational aspiration equivalent to achieving a high school diploma – a level necessary to even be enrolled at the university! It is possible that these individuals' athletic abilities, not their educational desires, have led to their

current academic standing. The non-athlete sample had 50% of its participants aspiring to an educational level defined as a professional degree whereas less than 10% of the athlete participants shared that as an educational aspired to level. These findings are somewhat disturbing given what is expected of the student-athletes at the university level. This may speak more to the idea that student-athletes seek to achieve excellence in their sport while disregarding their educational aspirations and achievements. While this mindset is commendable for their ability to focus on an area of interest, it is disturbing from the perspective of an academic mindset where the ‘student’ part of student-athlete is still very important. It is also concerning given the expected professional career of athletes – many careers being over before the individual is 30 years of age. It is important to remember, when considering this finding, the potential impact of the size and athletic context of the university where the data was collected. It is possible that, at a smaller university, the findings may be different. This finding is in contrast to Picou (1978) and that is perhaps due to the differences between high school and collegiate athletics.

The pattern discussed above can be seen within the realm of career aspirations as well, although the finding was not significant in terms of SES. Almost half of the athlete sample reported aspiring to and expecting to achieve careers in the athletic world. While this may be a reflection of their interest in athletics, it may also be said that they have foreclosed on (due to circumscription and compromise) a career in an athletic-related field. Even more concerning is if this is the case due to a lack of motivation to explore more about themselves and their careers due to outside influences. The non-athlete sample is riddled with higher prestige-level occupations. Given the differences in aspirational prestige between athletes and non-athletes, it seems as though there is something else at work. And, if the “athletic machine” – the idea that

athletics is life, and is thus all that matters – is taxing the student-athlete to the point of lacking motivation for exploration, then serious consideration needs to be given to the role of athletic administrators, academic advisors, coaches, and peers in articulating to young people the importance of exploring something outside of their comfort zone. Again, consideration for the specific university where data was collected is important, and at a less athletically competitive institution, this finding may be different.

This role of athletic status is significant due to the known influence of athletics in the lives of youths from certain racial/ethnic and socioeconomic backgrounds. Specifically, individuals who identify as African-American males constitute over 39,000 of more than an estimated 125,000 Division-I student-athletes. This indicates that almost one-third of all Division-I student-athletes are African-American males; and, according to Lapchick (1991), African Americans only constitute 12% of the American population, yet 75% of the players in the National Basketball Association, and 60% of the players in the National Football League.

The findings here support the idea that contextual factors are important in career development. They also suggest that, when considering African-American males, SES and athletic status are of utmost importance. Further, it seems that, as individuals influential in the lives of young athletes, people should attempt to make an impact early on so those young athletes are able to identify themselves, and their interests, outside of their athletic prowess.

Processes. As with the above-discussed contextual factors, various career processes have been proven to be influential in one's career development. With regard to African-American career development, career aspirations and expectations seem to be amongst the most often studied (i.e., Brown, 1995; Fouad & Bingham, 1995; Worthington et al., 2005; Byars-Winston, 2006). Additional processes examined in the current study included athletic identity, career locus

of control, and career barriers. While all of the processes examined were expected to be influential, educational aspirations, career locus of control, and career barriers were found to be most influential in the current study.

Overall, processes were seen as somewhat influential in individuals' career development. Specifically, educational aspirations and expectations were separated from occupational aspirations and expectations. This is important as Rojewski (2005) reported that SES was positively correlated with career aspirations. This was not seen in the current study, as there was almost no correlational relationship observed between SES and occupational aspirations. In the current study occupational aspirations and expectations were not related to other process variables. In contrast, educational aspirations were related to one's athletic identity, career locus of control, and career maturity – those with higher educational aspirations had lower athletic identity, more internal locus of control, and higher career maturity. As mentioned earlier, there were four individuals from the athlete sample whose educational aspirations did not meet their current level of academic achievement. The overall implications for this finding were discussed above as athletic status seems to be the overarching factor influencing these variables. The findings for aspirations and expectations seen within the current study are of value due to the sample itself. Most other studies exploring aspirations and expectations have done so across racial/ethnic lines. The present findings also allow for more clarification for studies such as Brown's (1995) review that reported conflicting findings regarding whether aspirations and expectations are influential for African Americans. Brown (1995) cited a number of studies whose conclusions were in conflict with one another regarding the importance of educational and occupational aspirations and expectations.

Current results also contrast with Robinson and Swanson's (1997) finding that perceived career barriers lead to a lower GPA. In the current study, career barriers were not found to be related to GPA. Perceived career barriers were seen as related to career maturity where more perceived barriers were correlated with lower maturity levels. As career maturity can be considered an indicator of engagement in career development, this relationship suggests that higher levels of perceived barriers may result in less engagement in career development. It is possible that individuals lacking knowledge of careers also have preconceived notions about barriers they will face within those careers. It is also possible that individuals more developed and mature in their approach to careers have more experience in the working world and have more working knowledge of the actual barriers in the workplace. Higher perceived barriers were also seen in those with a lower level of education, and in those with higher athletic identity. It is possible that individuals early in their collegiate careers are unsure of the specific barriers that they will face later on and thus perceive more barriers initially. This could also be an indication that as individuals stay in school, they gain more efficacy, and thus perceive fewer barriers to their career development; or that individuals who continue to perceive a higher level of barriers choose to not continue with their education and career development. Additionally, individuals with higher athletic identities may perceive that athletics are one of the only ways they can overcome the institutional barriers placed on them as African-American student-athletes. The contribution of perceived barriers to one's career development is again important in the current study as athletics are traditionally seen as a place where African-American males have perceived fewer barriers than other areas of life (see Sellers & Kuperminc, 1997).

An additional finding that is somewhat unique concerns career locus of control. In a study by Luzzo and Ward (1995) a predictive relationship between one's locus of control and

career congruence was found. Specifically, they reported that individuals with an internal locus of control were more likely to seek out a job in college that was congruent with their career interests. While the current study yielded no such relationship between career locus of control and career congruence, it is important to mention that the aims of the current study and that of Luzzo and Ward (1995) were very different. There is an interesting connection between the two studies in that presently, career locus of control was seen as more internal for non-athletes. The combined findings suggests that non-athletes may be more in touch with their future career plans and are in a place to seek out those opportunities. The student-athletes may have a more external locus of control due to a number of factors – time involved in sport, interest and ability to explore things outside of sport, perceived inability to achieve at things other than sport, just to name a few. Another interesting take on the career locus of control findings are mentioned in Sue and Sue (1999). They caution against the idea that an internal locus of control is ‘better’ when considering various cultural backgrounds. Given that the current study’s findings are with a relatively homogeneous sample with regard to ethnic/racial background, it suggests that other factors (i.e., athletic status) may influence the locus of control of those who identify as being from a racial/ethnic minority background.

An internal career locus of control was also seen in those with less scholarship monies, higher SES, higher educational aspirations and expectations, and lower athletic identity. An external locus of control implies that one feels the influential factors come from outside of themselves; in this case with regard to career direction and development. A more external locus of control suggests that an individual feels that the decisions they make have little to no impact on the outcome of the situation in question. Someone with an external locus of control may answer the “What do you want to do when you grow up?” question with “I don’t know,

something will come along.” The impact of this locus of control would be a lack of drive towards a career path, a lack of career salience, and a lower motivation with regard to things seen as impactful on one’s career development.

Given the everyday experience of student-athletes at Division I NCAA institutions with prominent athletic departments, the external locus of control found in the current study is not surprising. Student-athletes are oftentimes scheduled from the time they wake up until the time they finally sleep. This over-scheduling may lead to a sense of externalized control for all areas of one’s life, including their career plans. These findings emphasize the need for those interested in the lives of student-athletes to ensure that the student-athletes feel like agents of their own experience so when the time comes for their choice of careers, they feel as though they can confidently make such decisions.

Career development outcome variables. With regard to career congruence as an outcome variable, there were very few significant findings at any level of analysis. One significant finding was at the level of a correlation – there was a significant negative correlation between non-athletes’ career commitment and career congruence, suggesting that the non-athletes in the present study with higher levels of career commitment had lower levels of career congruence. It may be more that higher levels of congruence yield lower commitment levels. If this is the case, it seems to be in line with previous ideas about younger individuals foreclosing on ideas with regard to careers. Brown (2004) suggested that interests may play less of a role than some family factors in the career choices of African Americans from lower SES backgrounds; which could also explain this finding. This finding does seem to raise more questions than it answers, and suggests that more robust exploration of these ideas is necessary before an adequate answer can be found. It is possible that there is another factor at work here than was explored in the current

study – previous studies have found a relationship between congruence and maturity when one’s current employment is considered (Luzzo, 1995). Given that the current finding was exclusive to non-athletes, it would be prudent to follow-up on such a finding in future studies.

Career commitment was also less influential than expected. The significant findings with regard to commitment are limited to single predictors and simple correlations. The findings support and further the findings of Wu (1995) – who found significance for commitment across educational level, with collegiate females. The current findings also oppose Farmer and Chung (1995) – who found no relationship between educational level and career commitment. One of the significant findings from the current study led to the conclusion that non-athletes are more career committed. This supports the idea that student-athletes are waiting for commitment to a career until their athletic dreams are either realized or diminished. This finding also goes against the Koslowsky (1987) study, which found no correlational relationship between contextual factors and career commitment. The other findings of significance are that higher levels of commitment are associated with lower levels of athletic identity, and higher levels of commitment are associated with higher levels of career maturity. The athletic identity finding is in line with the previous statement regarding the possibility that student-athletes are holding out on career commitment due to athletic dreams. It is also possible that those higher in athletic identity have not explored careers as much, and are thus less committed to a career path. The positive relationship between commitment and maturity is understandable given the fact that both are considered outcome variables in the current study. This positive relationship suggests that commitment and maturity are functions of one another and that someone more committed may be seen as more mature with regard to career development. Conversely, engagement in the

career development process could be expected to further career development. Further discussions of the findings with regard to career maturity are continued below.

Career maturity was seen as the most remarkable outcome measure in the current study. The findings were in line with and in contrast with Naidoo (1993). Naidoo (1993) reported a relationship between maturity and commitment, which was seen here; additionally, Naidoo (1993) reported a relationship with educational level and no relationship with SES – each of which were seen in the current study. The significance of the SES finding in the current study is seen not as a mediated effect, but as a direct effect of SES on career maturity. Higher SES was associated with higher levels of career maturity. It may be that those individuals whose parents achieve at a higher level (leading to higher SES) instill in their children a more realistic and thus more mature attitude with regard to careers. While this finding is not indicative of prediction of career maturity, it is an important finding nonetheless.

In the current study, one's career maturity could be reasonably predicted given their athletic status, perceived career barriers and career locus of control. That is, perceived career barriers and career locus of control mediated the relationship between athletic status and career maturity. Given the defined nature of career maturity, it is easy to understand how and why these factors were so influential. An individual who is able to identify certain barriers and who maintains an internal locus of control with regard to their career is generally seen as more career mature. This connection is especially interesting when considering the relationship with athletic status. Due to the unique nature of the current study, no previous studies have made such a connection with regard to mediation of the relationships mentioned above. The mediation revealed is interesting and suggests the possibility of a model of career development for African-

American males, and a sub-model for African-American male athletes. While this model is beyond the scope of this study, it sets up nicely for future research.

Implications

The current study has far-reaching implications in reaching out to African-American males with regard to career development. The information gathered here should be utilized by athletes and non-athletes as well as their families, career counselors, sport psychology consultants, and counseling psychologists. Due to the population studied, many of the implications are aimed at individuals working in higher education and related career development settings. First, recognition of the contextual factors that have led to an individuals' presentation for career development assistance is paramount. An individuals' background is an important consideration as to their career future. Individuals involved in career counseling as well as others outside of that realm traditionally (i.e., coaches) should ensure that the conversations they have about careers are made with respect to that individuals' background. These individuals should ask about the factors in this study considered 'processes', and should allow that information to assist them in comments about a student or student-athletes' career future. Researchers and clinicians should take note of the differences that exist for individuals who participate in intercollegiate athletics due to the different pressures and expectations on those individuals when compared to their non-athlete peers.

Limitations

Using a design that included multiple regressions increased the complexity of this study; however, such complexity was necessary given the aim of the study. In using such a design, there are inherent difficulties with fully interpreting the findings. The only noted problems within the variables were some of the highly significant correlations between variables in the same

blocks of interest. Another issue raised with multiple regression analysis, is that it is based on correlations, thus causal links between the researched variables is not possible. A final issue with multiple regressions are concerns with assumptions of multicollinearity, normality, linearity, homoscedasticity, and outliers. The current study and measures were examined for these issues, but perfect control of said issues does not exist.

In research, reliance on self-report is a weakness. The potential for falsification of data enters due to random variables within individuals. Some individuals may try to “fake good” by exaggerating their answers to certain items. Other individuals may be trying to finish the survey quickly and thus not pay particular attention to items. Still others may not understand an item or items, or they may not wish to respond to certain items. For instance, on the Athletic Identity Measurement Scale (AIMS; Brewer, Van Raalte, & Linder, 1993), some of the identified non-athletes scored the same and above some of the identified athletes.

Another limitation is that of generalizability. The current study served to expand upon an area of limited research, and thus was focused on a specific population. Because of this focus, the findings are somewhat limited to the population of interest. While focused on a minority sample, the generalizations will not translate to other minority groups. Additionally, all participants are part of a university, and thus have some idea of the implications of career development and awareness. This limits the generalizability of the data to some younger populations and to those not interested in higher education.

Concerns about the measures used for certain variables and the internal consistency of those measures are also limitations of the current study. The multitude of calculations needed to determine SES and the subjective nature of the identification of some job classifications could have skewed analyses involving SES. Additionally, the use of calculations for career congruence

could wash out some interesting data contained within and between participants. The CLCS in the current study was the only measure with concerns around internal consistency. The determined alpha coefficient for the current sample (.42) was significantly lower than has been reported in previous studies (.78, .81; Trice et al., 1989).

Another limitation is that of the sample size. A larger sample was targeted but was difficult to obtain due to unknown factors. Several changes to the original compensation schedule were necessitated by a lack of response to requests for participation in the study. This brings up concerns about the individuals who did eventually respond to requests, and their motivation for participation. While the current study is thought to be one of the largest with regard to African-American males, the *N* of 71 is considered small when attempting to run multiple regressions. It is considered by some standards too small to adequately run regression analyses, but power analyses showed the sample to be sufficient.

There was but one scale of concern with regard to the reliability estimates – the Career Locus of Control Scale (CLCS; Trice et al., 1989). This scale was a significant part of the overall findings in the current study, yet it revealed a problem with internal consistency. This could point to an issue given that the current study was conducted on a single gender, single race/ethnicity group.

A final limitation is one that is presented due to missing or excluded data. For some individuals, parental data was missing due to death of that parent or unknown information about that parent. Some individuals were not far enough along in their studies to have a collegiate GPA, whereas others left that blank for unknown reasons. In cases where the data was missing for an entire measure, or for a large portion of that measure, that individual was not included in the analysis.

Future Directions

This study was designed to understand more about various factors being influential in the career development of African-American males. In future studies, it may be important to ask specifically about the individuals' position in their racial/ethnic identity development, and in their level of identification with their racial/ethnic group. This idea was a suggestion by Fouad and Bingham (1995), and was not done currently as it was seen as beyond the scope of the current study. Another aspect of the racial/ethnic picture of career development that could be influential in a study of this type is cultural mistrust (Terrell & Terrell, 1993). Future study on African-American collegiate males should control for athletic status as it was seen as highly important in this study. A closer examination of the CLCS within a population like the one in the current study may reveal a way to redesign or refine the scale to address internal consistency issues. While some of the proposed family factors were not seen as influential in the current examination, further exploration of those factors and others are important. Delving more into family structure and function may be especially important in a study of African-American males. This level of detail may best be obtained through the use of a mixed-methods design with some parts of the study being quantitative in nature while others get at qualitative aspects of one's career functioning.

Any future data collection within a sample similar to the current sample needs to consider the compensation offered to the participants. The current study – due to unknown factors – was affected by recruitment efforts of the participants. Originally, career development feedback and a drawing were used as compensation. After some time, the compensation was increased, and then increased again. This continual increase led to offering career development feedback along with a guaranteed payout for participation in the study. It was at this point that the bulk of the data

were collected. This is perhaps a testament to this age group and to the value they put on their time. It could also be indicative of this age group's interest in career development research. Some of the participants were happy to contribute and would have done so without compensation whereas others' first comments to the request for participation were asking about the compensation (i.e., "What do I get out of this?"). This is in line with anecdotal reports from other researchers as to the necessary steps to get participants for research when the participants are not required to do so for course credit.

Future researchers are also charged with finding effective ways to recruit a broader sample. Because African-American males are underrepresented on the campuses of traditionally white institutions, sampling and comparison across universities is suggested. This type of sampling would also allow for comparisons across athletic competition level. Eventually, using a mixed-methods approach and reaching out to a variety of institutions of higher learning, an adequate model of African-American career development can be proposed. Further, this model could lead to models specific for the athletic population given their unique setting.

Career development is a complex and sometimes convoluted construct. Given the significant and somewhat varied findings in the current study with regard to career development, it is suggested here that more studies like this be conducted. Studies are needed on specific racial/ethnic groups with regard to career development. Additionally, as suggested in previous research (see Schapeler-Bergen, 2006), single gender career development research is needed. The more quality, career development research is conducted, the better career development professionals can address the needs of their clients and potential clients.

Conclusion. The present study supported some contextual variables and processes influencing outcome measures of career development. It also provided substantial evidence for

looking at athletes with regard to career development. While this evidence is clear at least in African-American males, it could be broadened to include all student-athletes. For some student-athletes, especially some African-American male student-athletes, athletics is seen as the path to success; this study showed that athletics may be the path for some, but it may actually inhibit some others from pursuing complete development. Lastly, this study took the advice of previous researchers and looked at differences within in a sample of African Americans. In this case, differences were seen, which provides support for the idea that future research along these lines would add to theoretical understanding of African-American career development.

APPENDIX A
CONSENT FORMS

**University of Oklahoma
Institutional Review Board
Informed Consent to Participate in a Research Study**

Project Title: An examination of contextual and process variables influencing the career development of African-American male athletes and non-athletes
Principal Investigator: Christopher M. Bader, M.S.
Department: Intercollegiate Athletics

You are being asked to volunteer for this research study. This study is being conducted at the University of Oklahoma. You were selected as a possible participant because you are an African-American male enrolled at the University of Oklahoma.

Please read this form and ask any questions that you may have before agreeing to take part in this study.

Purpose of the Research Study

The purpose of this study is:

- To examine the different factors that contribute to career development in African-American men
- To examine the relationship between athletes and non-athletes with regard to career development

Number of Participants

About 150 people will take part in this study.

Procedures

If you agree to be in this study, you will be asked to do the following:

- Answer brief demographic questions about you and your family
- Fill out questionnaires about various career factors

Length of Participation

There is one (1) session required, and while the actual time of participation is variable based on the individual, it should not exceed one (1) hour.

This study has the following risks:

- No risks are expected, however, some people may find it uncomfortable or anxiety-provoking to discuss issues about their career and future plans.

Benefits of being in the study are

- The main benefits are to the knowledge of the field of career development.
- If you choose, you can benefit directly by receiving feedback on the questionnaires you fill out.

Confidentiality

In published reports, there will be no information included that will make it possible to identify you without your permission. Research records will be stored securely and only approved researchers will have access to the records.

There are organizations that may inspect and/or copy your research records for quality assurance and data analysis. These organizations include the University of North Texas Institutional Review Board and the OU Institutional Review Board.

Compensation

You will be reimbursed for your time and participation in this study. You will be paid \$20 cash for your participation.

Voluntary Nature of the Study

Participation in this study is voluntary. If you withdraw or decline participation, you will not be penalized or lose benefits or services unrelated to the study. If you decide to participate, you may decline to answer any question and may choose to withdraw at any time.

Contacts and Questions

If you have concerns or complaints about the research, the researcher(s) conducting this study can be contacted at:

- (405) 325-8535 (office phone)

Contact the researcher(s) if you have questions or if you have experienced a research-related injury.

If you have any questions about your rights as a research participant, concerns, or complaints about the research and wish to talk to someone other than individuals on the research team or if you cannot reach the research team, you may contact the University of Oklahoma – Norman Campus Institutional Review Board (OU-NC IRB) at 405-325-8110 or irb@ou.edu.

You will be given a copy of this information to keep for your records. If you are not given a copy of this consent form, please request one.

Statement of Consent

I have read the above information. I have asked questions and have received satisfactory answers. I consent to participate in the study.

Signature

Date

INFORMED CONSENT FORM

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits, and risks of the study and how it will be conducted.

Title of Study: An Examination of Contextual and Process Variables Influencing the Career Development of African-American Male Athletes and Non-Athletes.

Principal Investigator: Christopher M. Bader, M.S., a graduate student in the University of North Texas (UNT) Department of Psychology.

Purpose of the Study: You are being asked to participate in a research study which involves answering questions about different factors that are thought to contribute to the way people make decisions about their careers.

Study Procedures: You will be asked to answer a number of questions using a paper-and-pencil survey in a single session, and while the actual time of participation is variable based on the individual; your participation should not exceed 60 minutes. Additionally, your decision to participate or to withdrawal from the study will have no effect on your standing as a member of your class or team and will not impact your grades or playing time.

Foreseeable Risks: There are no foreseeable risks involved in this study.

Benefits to the Participants or Others: We expect the project to benefit you by educating you on your own ideas around career development and career decision making. Additionally, if you would like further individualized feedback, you may request a meeting with the principal investigator to go over your specific results.

Compensation for Participants: Participants, if they wish, will be paid \$20 for their time and participation. Completion of the study does not determine receipt of compensation.

Procedures for Maintaining Confidentiality of Research Records: Any forms with identifying information on them will be destroyed upon completion of the study. Signed informed consent forms must be retained and will be kept in a locked file cabinet separate from any of the data from the study. Once the data from the study is input into a statistical software program, the forms will be kept – separate from the signed informed consent forms – in a locked file cabinet. The signed informed consent forms and data forms will be kept for a specified period of time as per data storage regulations, after which time, they will be destroyed. Additionally, the confidentiality of your individual information will be maintained in any publications or presentations regarding this study.

Questions about the Study: If you have any questions about the study, you may contact Dr. Vicki Campbell, UNT Department of Psychology, at 940-565-2671

Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research participants.

Research Participants' Rights: Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- Chris Bader has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You have been told you will receive a copy of this form.

Printed Name of Participant

Signature of Participant

Date

For the Principal Investigator: I certify that I have reviewed the contents of this form with the participant signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understood the explanation.

Signature of Principal Investigator

Date

APPENDIX B
SUPPLEMENTAL TABLES

Table B.1

Frequencies of Contextual Variables

Variable	Athletes		Non-Athletes	
	<i>n</i>	%	<i>n</i>	%
Age (<i>N</i> = 71)				
17	1	1.4	0	0.0
18	5	7.0	1	1.4
19	9	12.7	7	9.9
20	9	12.7	13	18.3
21	8	11.3	5	7.0
22	7	9.9	1	1.4
23	1	1.4	0	0.0
24	2	2.8	0	0.0
25	0	0.0	0	0.0
26	0	0.0	1	1.4
27	0	0.0	1	1.4
Educational Level (<i>N</i> = 66)				
Freshman	12	18.2	6	9.1
Sophomore	9	13.6	3	4.5
Junior	10	15.2	12	18.2
Senior	11	16.7	3	4.5
Scholarship (<i>N</i> = 66)				
Full	31	47.0	6	9.1
Partial	3	4.5	13	19.7
None	5	7.6	8	12.1

Note: Scholarship = scholarship status/level. The percentages reflect those based on the overall *N* for the particular variable.

Table B.2

Means and Ranges of Contextual Variables

Variable	<i>M</i>	<i>SD</i>	Possible Range	Actual Range
Age	20.31	1.75	--	17-27
Educational Level	2.48	1.11	1-4	1-4
GPA	2.91	.44	0-4	1.97-3.73
Scholarship	1.63	.80	1-3	1-3
SES	39.96	20.59	0-90.45	0-84.72

Note: GPA = grade point average; Scholarship = scholarship status; SES = socioeconomic status.

Table B.3

Means, Standard Deviations, and Ranges for Processes

Variable	<i>M</i>	<i>SD</i>	Possible Range	Actual Range
Educational Aspirations	6.42	1.43	1-8	2-8
Occupational Aspirations	65.06	16.80	0-90.45	26.67-88.49
AIMS	31.98	11.31	7-49	7-49
CLCS	7.69	2.48	0-18	1-13
CBI	287.31	67.34	0-490	88-469

Note: AIMS = Athletic Identity Measurement Scale; CLCS = Career Locus of Control Scale; CBI = Career Barriers Inventory.

Table B.4

Means, Standard Deviations, and Ranges for Outcome Variables

Variable	<i>M</i>	<i>SD</i>	Possible Range	Actual Range
CMI	31.44	6.19	0-50	17-42
Career Commitment	9.73	2.08	3-12	3-12
Career Congruence	.09	.13	0.12-1.00	0-.51

Note: CMI = Career Maturity Inventory; Career Commitment = Career Commitment Scale; Career Congruence = K-P Index discrepancy between actual and ideal career indications.

Table B.5

Correlations for Variables and Scales' Alpha Coefficients: Overall Sample

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Athletic Status	--	.03	.01	.23	.46***	.14	.34* *	.15	-.76***	-.44***	.46***	-.14	-.04	.38***
2. Age		--	.76***	-.18	.14	-.31*	-.01	.11	-.09	.09	.06	-.05	.20	.05
3. Educational Level			--	-.09	.08	-.11	.16	.19	-.11	.02	.05	-.29*	.14	-.11
4. GPA				--	.06	.22	.22	.27	-.23	-.17	.20	-.09	-.19	.15
5. Scholarship					--	.11	.20	.04	-.37**	-.42***	.42***	-.01	.19	.22
6. SES						--	.10	-.04	-.13	-.25*	.26*	-.09	.01	.12
7. Ed. Aspirations							--	.35**	-.32	-.36**	.27*	-.02	.01	.18
8. Occ. Aspirations								--	-.13	-.04	.19	-.03	-.05	.03
9. AIMS									--	.41***	-.46***	.23*	-.03	-.35**
10. CLCS										--	.55***	-.05	-.08	-.13
11. CMI											--	.78	-.24*	-.10
12. CBI												--	.97	.10
13. Congruence													--	-.29*
14. Commitment														--

Note: GPA = grade point average; Scholarship = scholarship status; SES = socioeconomic status; AIMS = Athletic Identity Measurement Scale; CLCS = Career Locus of Control Scale; CMI = Career Maturity Inventory; CBI = Career Barriers Inventory; Commitment = Career Commitment Scale; Congruence = Career Congruence, K-P Index discrepancy between the career decision making system and the ideal career indicated. * = $p < .05$, ** = $p < .01$, *** = $p < .001$, Cronbach's alpha coefficients are reported on the first diagonal when appropriate for the variable. Values have been rounded to two decimal places.

Table B.6

Correlations for Variables: Athlete Sample

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	--	.85***	-.29	.19	-.41*	.07	-.13	-.01	.20	<.01	-.21	-.01	.11
2. Educational Level		--	-.24	.23	-.23	.13	-.05	-.07	.09	.06	-.34*	.09	-.16
3. GPA			--	.09	.11	.10	.20	-.18	-.22	.12	-.02	-.21	.11
4. Scholarship				--	.11	-.04	-.01	-.29	-.31	.38*	<-.01	.32	.11
5. SES					--	-.01	-.11	-.15	-.19	.22	-.05	.21	-.01
6. Ed. Aspirations						--	.16	-.23	-.26	.15	.16	-.14	.07
7. Occ. Aspirations							--	.13	-.03	.17	.02	-.29	-.17
8. AIMS								--	-.01	-.29	.15	.04	-.17
9. CLCS									--	-.42**	-.29	-.12	.02
10. CMI										--	-.16	.05	.22
11. CBI											--	.01	-.01
12. Congruence												--	-.24
13. Commitment													--

Note: GPA = grade point average; Scholarship = scholarship status; SES = socioeconomic status; AIMS = Athletic Identity Measurement Scale; CLCS = Career Locus of Control Scale; CMI = Career Maturity Inventory; CBI = Career Barriers Inventory; Commitment = Career Commitment Scale; Congruence = Career Congruence, K-P Index discrepancy between the career decision making system and the ideal career indicated. * = $p < .05$, ** = $p < .01$, *** = $p < .001$, Values have been rounded to two decimal places.

Table B.7

Correlations for Variables: Non-Athlete Sample

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	--	.57**	-.06	.01	-.23	-.17	.29	-.17	< -.01	.14	.21	.27	.12
2. Educational Level		--	.21	-.24	.07	.26	.49*	-.27	-.16	.00	-.18	.21	-.03
3. GPA			--	-.22	.28	.29	.28	.01	.20	.05	-.14	-.16	.02
4. Scholarship				--	.03	.18	-.07	.19	-.21	-.05	.18	.19	-.04
5. SES					--	.17	-.04	.05	-.26	.26	-.09	-.13	.19
6. Ed. Aspirations						--	.47*	.04	-.25	.11	-.21	.23	.06
7. Occ. Aspirations							--	-.12	.12	.12	-.03	.13	.14
8. AIMS								--	.30	-.05	.27	-.18	< -.01
9. CLCS									--	-.48**	.25	-.10	.10
10. CMI										--	-.30	-.32	.48**
11. CBI											--	.19	-.22
12. Congruence												--	-.40*
13. Commitment													--

Note: GPA = grade point average; Scholarship = scholarship status; SES = socioeconomic status; AIMS = Athletic Identity Measurement Scale; CLCS = Career Locus of Control Scale; CMI = Career Maturity Inventory; CBI = Career Barriers Inventory; Commitment = Career Commitment Scale; Congruence = Career Congruence, K-P Index discrepancy between the career decision making system and the ideal career indicated. * = $p < .05$, ** = $p < .01$, *** = $p < .001$, Values have been rounded to two decimal places.

Table B.8

Summary of Multiple Regression Analysis: Contextual Variables Predicting Career Commitment (N = 58)

Variable	<i>R</i>	Adjusted <i>R</i> ²	<i>F</i>	Sig. <i>F</i>	<i>r</i>	β	Sig. <i>t</i>
Contextual Block	.51	.20	4.63	<.01**			
Athletic Status					.38**	.38	<.01**
SES					.12	.17	.21
Educational Level					-.11	-.45	.02*
Age					.05	.27	.17

Note: For *r*, * = $p < .05$, ** = $p < .01$, *** = $p < .001$. Values have been rounded to two decimal places. β values are for the entire model.

Table B.9

Summary of Multiple Regression Analysis: Contextual Variables Predicting Career Congruence (N = 53)

Variable	<i>R</i>	Adjusted <i>R</i> ²	<i>F</i>	Sig. <i>F</i>	<i>r</i>	β	Sig. <i>t</i>
Contextual Block	.39	.08	2.17	.09			
Athletic Status					-.04	-.01	.94
SES					.01	.10	.49
Educational Level					.14	-.22	.28
Age					.20	.55	.01*

Note: For *r*, * = $p < .05$, ** = $p < .01$, *** = $p < .001$. Values have been rounded to two decimal places. β values are for the entire model.

Table B.10

Summary of Multiple Regression Analysis: Contextual Variables Predicting Career Maturity (N = 58)

Variable	<i>R</i>	Adjusted <i>R</i> ²	<i>F</i>	Sig. <i>F</i>	<i>r</i>	β	Sig. <i>t</i>
Contextual Block	.52	.22	5.09	.001**			
Athletic Status					.46***	.42	.001**
SES					.26*	.28	.04*
Educational Level					.05	-.13	.46
Age					.06	.20	.30

Note: For *r*, * = $p < .05$, ** = $p < .01$, *** = $p < .001$. Values have been rounded to two decimal places. β values are for the entire model.

Table B.11

Summary of Multiple Regression Analysis: Contextual Variables Predicting Educational Aspirations (N = 56)

Variable	<i>R</i>	Adjusted <i>R</i> ²	<i>F</i>	Sig. <i>F</i>	<i>r</i>	β	Sig. <i>t</i>
Contextual Block	.43	.12	2.94	.03*			
Athletic Status					.34**	.39	<.01**
SES					.10	.01	.92
Educational Level					.16	.19	.35
Age					-.01	-.09	.67

Note: For *r*, * = $p < .05$, ** = $p < .01$, *** = $p < .001$. Values have been rounded to two decimal places. β values are for the entire model.

Table B.12

Summary of Multiple Regression Analysis: Contextual Variables Predicting Occupational Aspirations (N = 52)

Variable	<i>R</i>	Adjusted <i>R</i> ²	<i>F</i>	Sig. <i>F</i>	<i>r</i>	β	Sig. <i>t</i>
Contextual Block	.30	.02	1.22	.31			
Athletic Status					.15	.14	.33
SES					-.04	-.11	.47
Educational Level					.19	.37	.08
Age					.11	-.21	.33

Note: For *r*, * = $p < .05$, ** = $p < .01$, *** = $p < .001$. Values have been rounded to two decimal places. β values are for the entire model.

Table B.13

Summary of Multiple Regression Analysis: Contextual Variables Predicting Career Barriers (N = 58)

Variable	<i>R</i>	Adjusted <i>R</i> ²	<i>F</i>	Sig. <i>F</i>	<i>r</i>	β	Sig. <i>t</i>
Contextual Block	.41	.11	2.79	.04*			
Athletic Status					-.14	-.18	.17
SES					-.09	-.04	.76
Educational Level					-.29	-.51	.01*
Age					-.05	.30	.15

Note: For *r*, * = $p < .05$, ** = $p < .01$, *** = $p < .001$. Values have been rounded to two decimal places. β values are for the entire model.

Table B.14

Summary of Multiple Regression Analysis: Contextual Variables Predicting Athletic Identity (N = 58)

Variable	<i>R</i>	Adjusted <i>R</i> ²	<i>F</i>	Sig. <i>F</i>	<i>r</i>	β	Sig. <i>t</i>
Contextual Block	.76	.54	18.26	<.001***			
Athletic Status					-.76***	-.73	<.001***
SES					-.13	-.05	.61
Educational Level					-.11	-.06	.67
Age					-.09	-.09	.54

Note: For *r*, * = $p < .05$, ** = $p < .01$, *** = $p < .001$. Values have been rounded to two decimal places. β values are for the entire model.

Table B.15

Summary of Multiple Regression Analysis: Contextual Variables Predicting Career Locus of Control (N = 58)

Variable	<i>R</i>	Adjusted <i>R</i> ²	<i>F</i>	Sig. <i>F</i>	<i>r</i>	β	Sig. <i>t</i>
Contextual Block	.50	.20	4.56	<.01**			
Athletic Status					-.44***	-.45	.001**
SES					-.25*	-.17	.22
Educational Level					.02	.03	.87
Age					.09	-.01	.98

Note: For *r*, * = $p < .05$, ** = $p < .01$, *** = $p < .001$. Values have been rounded to two decimal places. β values are for the entire model.

Table B.16

Summary of Multiple Regression Analysis: Processes Predicting Career Congruence (N = 59)

Variable	<i>R</i>	Adjusted <i>R</i> ²	<i>F</i>	Sig. <i>F</i>	<i>r</i>	β	Sig. <i>t</i>
Processes	.24	-.03	.64	.67			
Educational Aspirations					.01	.10	.52
Occupational Aspirations					-.05	-.10	.48
Career Barriers					.10	.16	.24
Athletic Identity					-.03	-.15	.31
Career Locus of Control					-.08	-.02	.92

Note: For *r*, * = $p < .05$, ** = $p < .01$, *** = $p < .001$. Values have been rounded to two decimal places. β values are for the entire model.

Table B.17

Summary of Multiple Regression Analysis: Processes Predicting Career Commitment (N = 59)

Variable	<i>R</i>	Adjusted <i>R</i> ²	<i>F</i>	Sig. <i>F</i>	<i>r</i>	β	Sig. <i>t</i>
Processes	.37	.06	1.68	.16			
Educational Aspirations					.18	-.05	.76
Occupational Aspirations					.03	.02	.87
Career Barriers					-.12	-.18	.17
Athletic Identity					-.35**	-.26	.07
Career Locus of Control					-.13	-.04	.77

Note: For *r*, * = $p < .05$, ** = $p < .01$, *** = $p < .001$. Values have been rounded to two decimal places. β values are for the entire model.

Table B.18

Summary of Multiple Regression Analysis: Processes Predicting Career Maturity (N = 59)

Variable	<i>R</i>	Adjusted <i>R</i> ²	<i>F</i>	Sig. <i>F</i>	<i>r</i>	β	Sig. <i>t</i>
Processes	.67	.40	8.85	<.001***			
Educational Aspirations					.27*	<-.01	.97
Occupational Aspirations					.19	.18	.10
Career Barriers					-.24*	-.37	.001**
Athletic Identity					-.46***	-.06	.59
Career Locus of Control					-.55***	-.46	<.001***

Note: For *r*, * = $p < .05$, ** = $p < .01$, *** = $p < .001$. Values have been rounded to two decimal places. β values are for the entire model.

Table B.19

Summary of Hierarchical Regression Analysis Predicting Career Commitment (N = 50)

Variable	<i>R</i>	Adjusted <i>R</i> ²	<i>F</i>	Sig. <i>F</i>	Change in <i>R</i> ²	Change in <i>F</i>	Sig. <i>F</i> Change	<i>r</i>	β	Sig. <i>t</i>
Contextual Block	.49	.17	3.63	.01*	.24	3.63	.01*			
Athletic Status								.38**	.16	.47
SES								.12	.21	.16
Educational Level								-.11	-.53	.02*
Age								.05	.26	.24
Processes	.55	.15	2.01	.06	.07	0.78	.57			
Educational Aspirations								.18	-.04	.79
Occupational Aspirations								.03	.11	.48
Career Barriers								-.12	-.20	.19
Athletic Identity								-.35**	-.19	.38
Career Locus of Control								-.13	< -.01	.98

Note: For *r*, * = $p < .05$, ** = $p < .01$, *** = $p < .001$. Values have been rounded to two decimal places. β values are for the entire model.

Table B.20

Summary of Hierarchical Regression Analysis Predicting Career Congruence (N = 50)

Variable	<i>R</i>	Adjusted <i>R</i> ²	<i>F</i>	Sig. <i>F</i>	Change in <i>R</i> ²	Change in <i>F</i>	Sig. <i>F</i> Change	<i>r</i>	β	Sig. <i>t</i>
Contextual Block	.38	.07	1.88	.13	.14	1.88	.13			
Athletic Status								-.04	-.20	.41
SES								.01	.13	.43
Educational Level								.14	-.17	.47
Age								.20	.49	.04
Processes	.18	<.01	1.00	.46	.04	.40	.85			
Educational Aspirations								.01	.01	.97
Occupational Aspirations								-.05	-.07	.65
Career Barriers								.10	.05	.75
Athletic Identity								-.03	-.19	.41
Career Locus of Control								-.08	-.14	.43

Note: For *r*, * = $p < .05$, ** = $p < .01$, *** = $p < .001$. Values have been rounded to two decimal places. β values are for the entire model.

Table B.21

Summary of Hierarchical Multiple Regression Analysis Predicting Career Maturity (N = 50)

Variable	<i>R</i>	Adjusted <i>R</i> ²	<i>F</i>	Sig. <i>F</i>	Change in <i>R</i> ²	Change in <i>F</i>	Sig. <i>F</i> Change	<i>r</i>	β	Sig. <i>t</i>
Contextual Block	.51	.20	4.05	.007**	.26	4.05	.007**			
Athletic Status								.46***	.08	.66
SES								.26*	.22	.08
Educational Level								.05	-.12	.49
Age								.06	.31	.10
Processes	.72	.41	4.79	<.001***	.25	4.24	.003**			
Educational Aspirations								.27*	-.03	.84
Occupational Aspirations								.19	.21	.09
Career Barriers								-.24*	-.36	.01**
Athletic Identity								-.46***	.07	.71
Career Locus of Control								-.55***	-.47	.001**

Note: For *r*, * = $p < .05$, ** = $p < .01$, *** = $p < .001$. Values have been rounded to two decimal places. β values are for the entire model.

APPENDIX C
SUPPLEMENTAL FIGURES

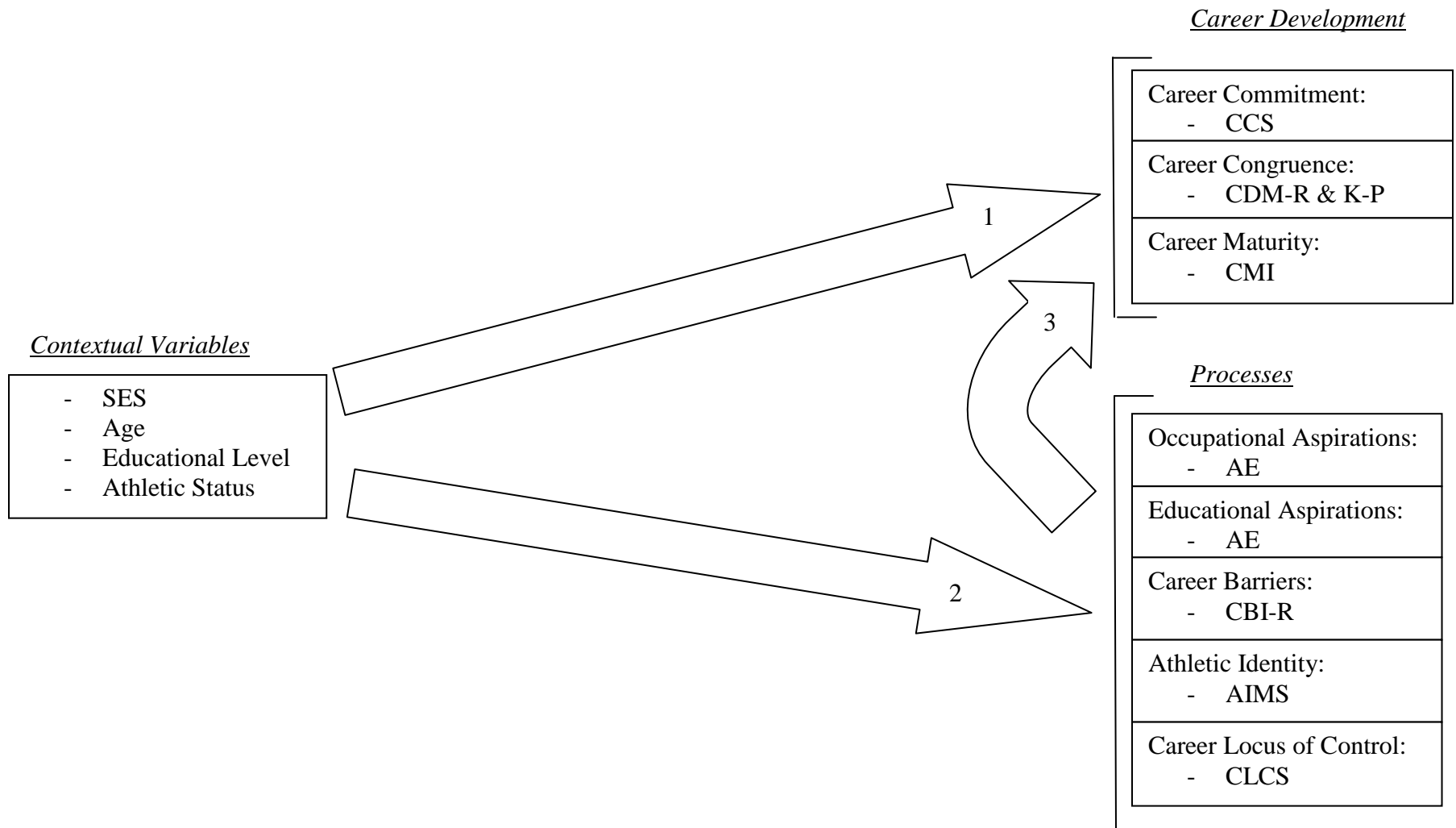


Figure C.1. Analysis picture indicating proposed hypotheses. Hypothesis 1 is represented with Arrow 1, Hypothesis 2 is represented with Arrow 2, and Hypothesis 3 is represented with Arrow 3.

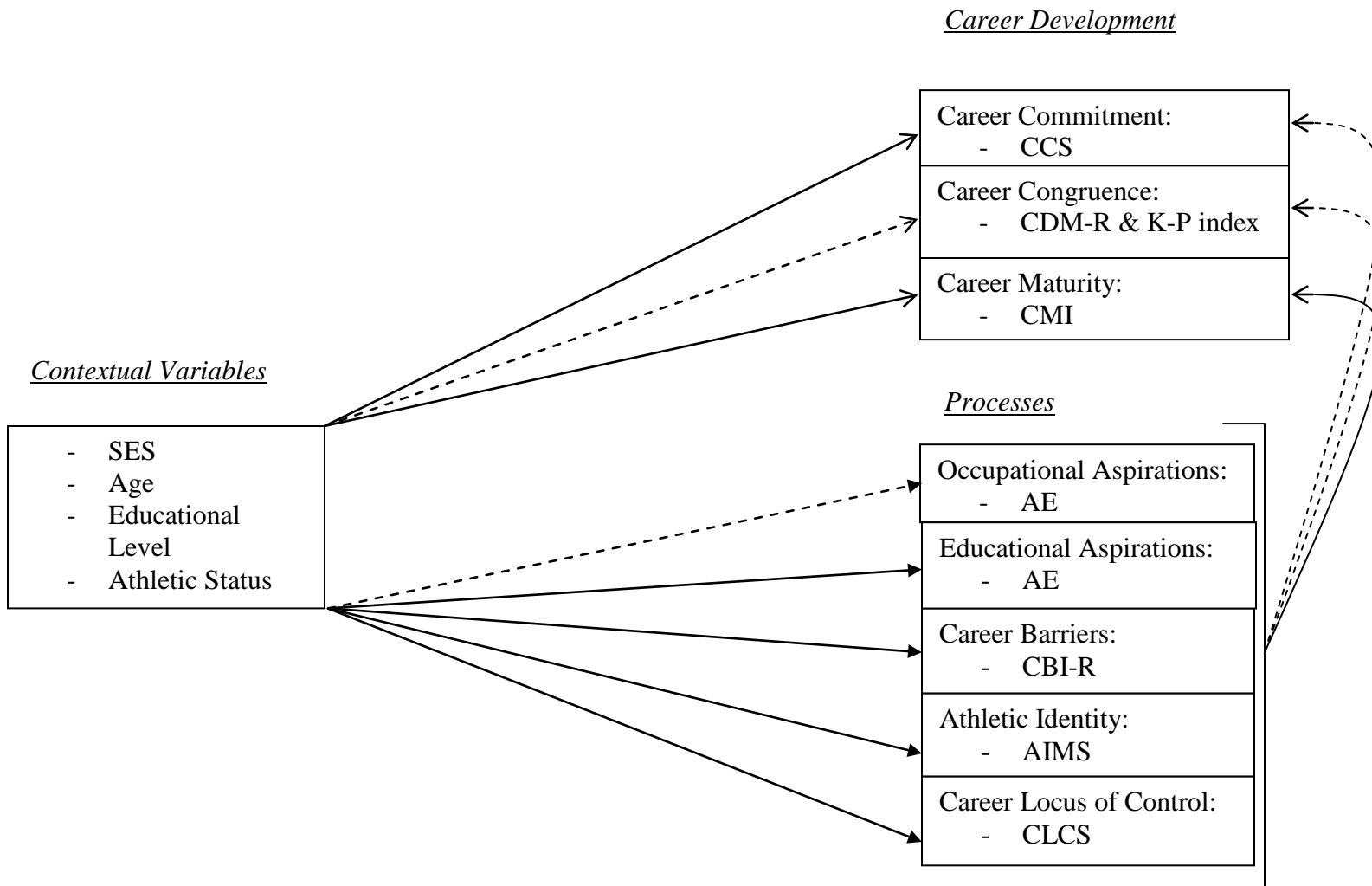


Figure C.2. Analysis picture showing relevant findings from individual multiple regressions. Solid lines represent significant relationships. Dashed lines represent non-significant relationships.

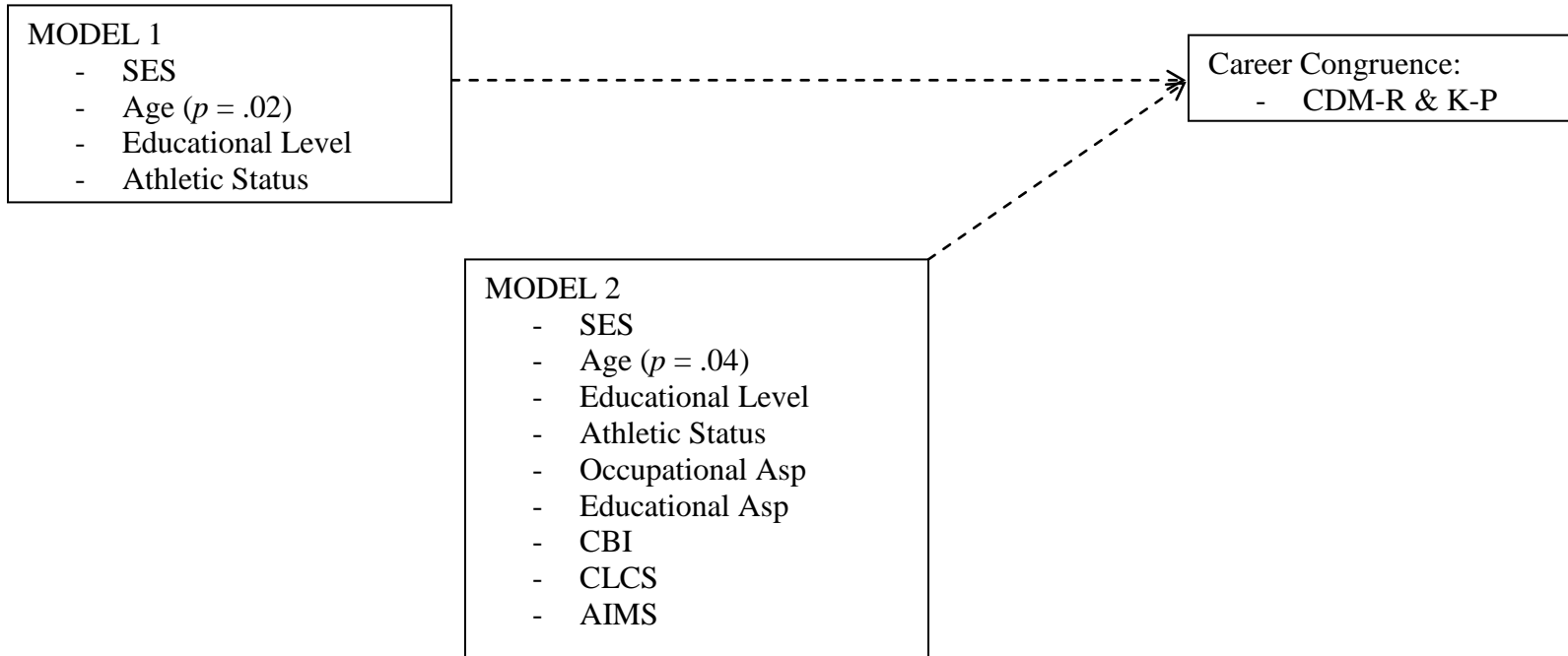


Figure C.3. Analysis picture with respect to hierarchical regression for Career Congruence. Significant relationships between the models are delineated with solid lines and non-significant relationships with dashed lines. Significant predictors are delineated with the significance level next to the individual variable.

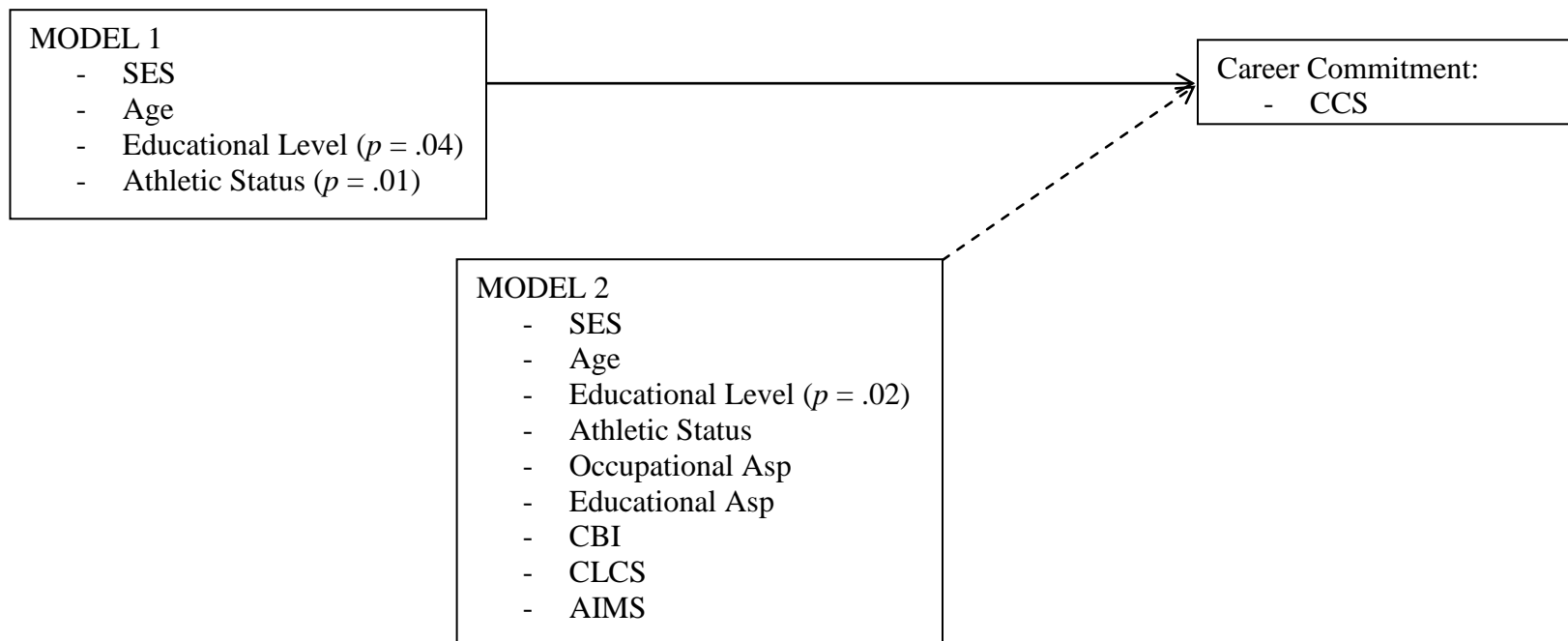


Figure C.4. Analysis picture with respect to hierarchical regression for Career Commitment. Significant relationships between the models are delineated with solid lines and non-significant relationships with dashed lines. Significant predictors are delineated with the significance level next to the individual variable.

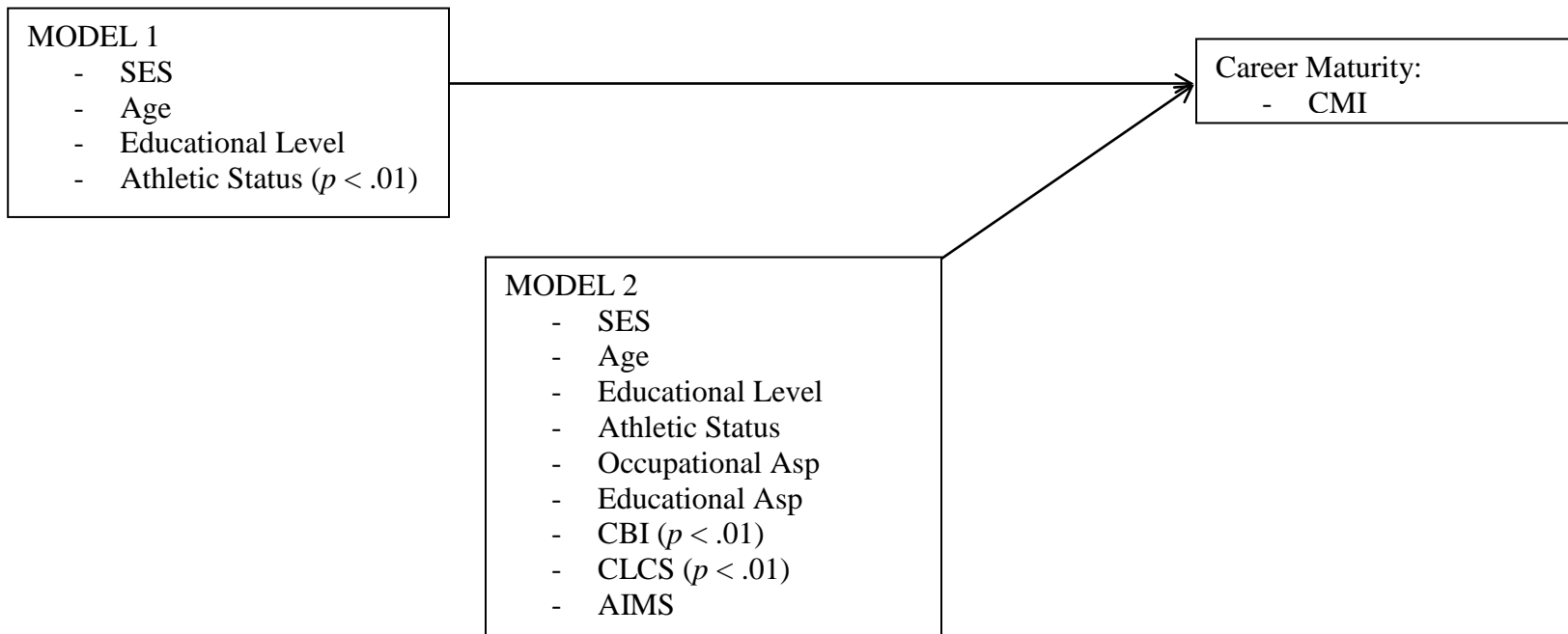


Figure C.5. Analysis picture with respect to hierarchical regression for Career Maturity. Significant relationships between the models are delineated with solid lines and non-significant relationships with dashed lines. Significant predictors are delineated with the significance level next to the individual variable.

REFERENCES

- Adams, G.R., Shea, J.A., & Fitch, S.A. (1979). Toward the development of an objective assessment of ego-identity status. *Journal of Youth and Adolescence*, 8, 223-237.
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Betz, N.E., Klein, K.L., & Taylor, K.M. (1996). Evaluation of a short form of the Career Decision-Making Self-Efficacy Scale. *Journal of Career Assessment*, 4, 47-57.
- Brewer, B. W., & Cornelius, A. E. (2001). Norms and factorial invariance of the Athletic Identity Measurement Scale. *Academic Athletic Journal*, 15, 103-113.
- Brewer, B.W., Van Raalte, J.L., & Linder, D.E. (1993). Athletic identity: Hercules' muscle or Achilles' heel? *International Journal of Sport Psychology*, 24, 237-254.
- Brown, M. T. (1995). The career development of African Americans: Theoretical and empirical issues. In F. T. L. Leong (Ed.), *Career development and vocational behavior of racial and ethnic minorities* (pp. 7-36). Mahwah, NJ: Lawrence Erlbaum.
- Brown, M.T. (2004) The career development and influence of family of origin: Considerations of race/ethnicity group membership and class. *Counseling Psychologist*, 32, 587-595.
- Brown, C., Glastetter-Fender, C., & Shelton, M. (2000). Psychosocial identity and career control in college student-athletes. *Journal of Vocational Behavior*, 56, 53-62.
- Brown, C., & Hartley, D.L. (1998). Athletic identity and career maturity of male college student athletes. *International Journal of Sport Psychology*, 29, 17-26.
- Byars-Winston, A.M. (2006). Racial ideology in predicting social cognitive career variables for Black undergraduates. *Journal of Vocational Behavior*, 69, 134-148.

- Carson, A.D., & Dawis, R.V. (2000) Determining the appropriateness of career choice assessment. In D.A. Luzzo (Ed.) *Career counseling of college students: An empirical guide to strategies that work* (pp. 95-120) . Washington, DC, US: American Psychological Association.
- Carter, R.T. (1995). *The influence of race and racial identity in psychotherapy*. New York, NY: John Wiley.
- Constantine, M.G., & Flores, L.Y. (2006). Psychological distress, perceived family conflict, and career development issues in college students of color. *Journal of Career Assessment, 14*, 354-369.
- Cook, T. D., Church, M. B., Ajanaku, S., Shadish, W. R., Kim, J., & Cohen, R. (1996). The development of occupational aspirations and expectations among inner-city boys. *Child Development, 67*, 3368-3385.
- Crites, J. O. (1973). *Theory and research handbook for the Career Maturity Inventory*. Monterey, CA: CTB/McGraw Hill.
- Crites, J.O. (1978). *The Career Maturity Inventory* (2nd ed.). Monterey, CA: CTB/McGraw-Hill.
- Crites, J.O., & Savickas, M.L. (1996). Revision of the Career Maturity Inventory. *Journal of Career Assessment, 4*, 131-138.
- Dillard, J.M., & Campbell, N.J. (1981). Influences of Puerto Rican, Black, and Anglo parents' career behavior on their adolescent children's career development. *Vocational Guidance Quarterly, 30*, 139-148.
- Elliot, W. III (2009). Children's college aspirations and expectations: The potential role of children's development accounts (CDAS). *Children and Youth Services Review, 31*, 274-283.

- Eysenck, H.J. (1998). *Intelligence: A new look*. New Brunswick, NJ: Transaction Press.
- Farmer, H.S. (1985). Model of career and achievement motivation for women and men. *Journal of Counseling Psychology*, 32, 363-390.
- Farmer, H.S., & Chung, Y.B. (1995). Variables related to career commitment, mastery motivation, and level of career aspiration among college students. *Journal of Career Development*, 21, 265-278.
- Flores, L.Y., & Ali, S.R. (2004). When will we start fertilizing the brown spots? An urgent call to vocational psychologists. *Counseling Psychologist*, 32, 578-586.
- Flores, L.Y., Berkel, L.A., Nilsson, J.E., Ojeda, L., Jordan, S.E., Lynn, G.L., & Leal, V.M. (2006). Racial/Ethnic minority vocational research: A content and trend analysis across 36 years. *Career Development Quarterly*, 55, 2-21.
- Fouad, N.A., & Bingham, R.P. (1995). Career counseling with racial and ethnic minorities. In W.B. Walsh, & S.H. Osipow (Eds.) *Handbook of vocational psychology: Theory, research, and practice* (2nd ed., pp. 331-365). Hillsdale, NJ, England: Lawrence Erlbaum Associates, Inc.
- Gottfredson, L.S. (1981). Circumscription and compromise: A developmental theory of occupational aspirations [Monograph]. *Journal of Counseling Psychology*, 28, 545-579.
- Gottfredson, L.S. (1996). Gottfredson's theory of circumscription and compromise. In D. Brown, L. Brooks, & Associates (Eds.), *Career choice and development* (3rd ed., pp. 179-232). San Francisco, CA: Jossey-Bass.
- Gottfredson, L.S. (2002). Gottfredson's theory of circumscription, compromise, and self-creation. In D. Brown (Ed.), *Career choice and development* (4th ed., pp. 85-148). San Francisco, CA: Jossey-Bass.

- Gurin, P. (1981). Labor market experiences and expectancies. *Sex Roles, 7*, 1079-1092.
- Harrington, T.R. & O'Shea, A.J. (2000). *The Harrington-O'Shea career decision-making system-revised*. Circle Pines, MN: American Guidance Service.
- Harrington, T.F. & Schafer, W.D. (1996). A comparison of self-reported abilities and occupational ability patterns across occupations. *Measurement & Evaluation in Counseling & Development, 28*, 180-190.
- Helwig, A.A. (2008). From childhood to adulthood: A 15-year longitudinal career development study. *Career Development Quarterly, 57*, 38-50.
- Holland, J. L. (1959). A theory of vocational choice. *Journal of Vocational Psychology, 6*, 35-45.
- Holland, J.L. (1973). Applying an occupational classification to a representative sample of work histories. *Journal of Applied Psychology, 58*, 34-41.
- Koestenblatt, M.P. (1999). Career salience in students with learning disabilities and their non-disabled peers at an urban community college: A comparative study. *Dissertation Abstracts International: Section B. The Sciences and Engineering, 59*(11-B), 6086.
- Koslowsky, M. (1987). Career commitment as a predictor of behavioral outcomes. *Journal of Social Psychology, 127*, 435-444.
- Kornspan, A.S., & Etzel, E.F. (2001). The relationship of demographic and psychological variables to career maturity of junior college student-athletes. *Journal of College Student Development, 42*, 122-132.
- Krumboltz, J.D., Mitchell, A.M., Jones, G.B. (1976). A social learning theory of career selection. *The Counseling Psychologist, 6*, 71-81.
- Kwak, J.C., & Pulvino, C.J. (1982). A mathematical model for comparing Holland's personality and environmental codes. *Journal of Vocational Behavior, 21*, 231-241.

- Lapchick, R.E. (1991). *Five minutes to midnight*. USA: Madison Books.
- Lease, S.H. (2004). Effect of locus of control, work knowledge, and mentoring on career decision-making difficulties: Testing the role of race and academic institution. *Journal of Career Assessment*, 12, 239-254.
- Lent, R.W. (2005). A social cognitive view of career development and counseling. In S.D. Brown & R.W. Lent (Eds.) *Career development and counseling: Putting theory and research to work*. Hoboken, NJ: John Wiley & Sons.
- Lent, R.W., Brown, S.D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, 45, 79-122.
- Luzzo, D.A. (1992). Ethnic group and social class differences in college students' career development. *Career Development Quarterly*, 41, 161-173.
- Luzzo, D.A. (1995). The relationship between career aspiration-current occupation congruence and the career maturity of undergraduates. *Journal of Employment Counseling*, 32, 132-140.
- Luzzo, D.A., McWhirter, E.H., & Hutcheson, K.G. (1997). Evaluating career decision-making factors associated with employment among first-year college students. *Journal of College Student Development*, 38, 166-172.
- Luzzo, D.A., & Ward, B.E. (1995). The relative contributions of self-efficacy and locus of control to the prediction of vocational congruence. *Journal of Career Development*, 21, 307-317.

- Magerkorth, R.E. (2000). Vocational congruence and perceived career barriers: Effects on college student's career development. *Dissertation Abstracts International: Section A. Humanities and Social Sciences*, 60(8-A), 2884.
- Martens, M.P., & Lee, F.K. (1998). Promoting life-career development in the student-athlete: How can career centers help? *Journal of Career Development*, 25, 123-134.
- McDivitt, P.J. (2002). Career Maturity Inventory (CMI) reviewed by P.J. McDivitt. In J.T. Kates & E.A. Whitfield (Eds.), *A counselor's guide to career assessment instruments* (4th ed.). Tulsa, OK: National Career Development Association.
- McNair, D., & Brown, D. (1983). Predicting the occupational aspirations, occupational expectations, and career maturity of Black and White male and female 10th graders. *Vocational Guidance Quarterly*, 32, 29-36.
- Murphy, G.M., Petitpas, A.J., & Brewer, B.W. (1996). Identity foreclosure, athletic identity, and career maturity in intercollegiate athletes. *Sport Psychologist*, 10, 239-246.
- Naidoo, A.V. (1993). *Factors affecting the career maturity of African-American university students: A causal model*. Muncie, IN: Ball State University.
- Naidoo, A.V. (1998). *Career maturity: A review of four decades of research*. Bellville, South Africa: University of the Western Cape
- Naidoo, A.V., Bowman, S.L., Gerstein, L.H. (1998). Demographics, causality, work salience, and the career maturity of African-American students: A causal model. *Journal of Vocational Behavior*, 53, 15-27.
- National Collegiate Athletic Association (2006). *Estimated probability of competing in athletics beyond the high school and interscholastic level*. Available from the NCAA web site: www.ncaa.org.

- Nurmi, J. E. (1991). How do adolescents see their future? A review of the development of future orientation and planning. *Developmental Review, 11*, 1-59.
- Pelham, J.P., & Fretz, B.R. (1982). Racial differences and attributes of career choice unrealism. *Vocational Guidance Quarterly, 31*, 36-42.
- Petitpas, A.J. (1978). Identity foreclosure: A unique challenge. *Personnel and Guidance Journal, 56*, 558-561.
- Picou, J.S. (1978). Race, athletic achievement, and educational aspiration. *Sociological Quarterly, 19*, 429-438.
- Pizzolato, J.E. (2006). Achieving college student possible selves: Navigating the space between commitment and achievement of long-term identity goals. *Cultural Diversity and Ethnic Minority Psychology, 12*, 57-69.
- Pope-Davis, D.B., & Hargrove, B.K. (2001). Future directions in career counseling theory, research, and practice with African Americans. In W.B. Walsh, R.P. Bingham, M.T. Brown, C.M. Mahwah (Eds.), *Career counseling for African Americans* (pp. 177-192). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Robinson, K.J., & Swanson, J.L. (1997). Perceived barriers and academic performance of African-American college students. In J.L. Swanson (Chair), *Perceived barriers to education and career – theoretical and measurement issues*. Symposium conducted at the annual meeting of the American Psychological Association, Chicago, IL.
- Rojewski, J.W. (1994). Predicting career maturity attitudes in rural economically disadvantaged youth. *Journal of Career Development, 21*, 49-61.

- Rojewski, J. W. (1995). Impact of at-risk behavior on the occupational aspirations and expectations of male and female adolescents in rural settings. *Journal of Career Development, 22*(1), 33-48.
- Rojewski, J.W., (2005). Occupational aspirations: Constructs, meanings, and application. In S.D. Brown & R.W. Lent (Eds.), *Career development and counseling: Putting theory and research to work*. Hoboken, NJ: John Wiley & Sons.
- Romo, H.D., & Falbo, T. (1996). *Latino high school graduation: Defying the odds*. Austin, TX: University of Texas Press.
- Rotter, J.B. (1954). *Social learning and clinical psychology*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Rotter, J.B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General & Applied, 80*, 1-28.
- Savickas, M.L. (1984). Career maturity: The construct and its measurement. *Vocational Guidance Quarterly, 32*, 222-231.
- Scarr, S. (1997). Behavior-genetic and socialization theories of intelligence: Truce and reconciliation. In R.J. Sternberg & E.L. Grigorenko (Eds.), *Intelligence, heredity, and environment* (pp. 3-41).
- Schapeler, R.J. (2004). *Family influence on young adult career development*. Unpublished master's thesis. University of North Texas.
- Sellers, R.M., & Kuperminc, G.P. (1997). Goal discrepancy in African-American male student-athletes' unrealistic expectations for careers in professional sports. *Journal of Black Psychology, 23*, 6-23.
- Seginer, R., & Halabi-Kheir, H. (1998). Adolescent passage to adulthood: Future orientation in

- the context of culture, age, and gender. *International Journal of Intercultural Relations*, 22, 309-328.
- Simon, M.D. (2006). Black student-athletes graduating at higher rates. *Black Enterprise Magazine*, October, 49.
- Slaney, R.B., & Brown, M.T. (1983). Effects of race and socioeconomic status on career choice variables among college men. *Journal of Vocational Behavior*, 23, 257-269.
- Smallman, E., & Sowa, C.J. (1996). Career maturity levels of male intercollegiate varsity athletes. *Career Development Quarterly*, 44, 270-278.
- Spokane, A.R. (1991). *Career intervention*. Englewood Cliffs, NJ: Prentice-Hall.
- Steinberg, L., Dornbusch, S. M., & Brown, B. B. (1992). Ethnic differences in adolescent achievement: An ecological perspective. *American Psychologist*, 47, 723-729.
- Stevens, G., & Cho, J.H. (1985). Socioeconomic indexes and the new 1980 census occupational classification scheme. *Social Science Research*, 14, 142-168.
- Sue, D.W., & Sue, D. (1999). *Counseling the culturally different: Theory and practice* (3rd ed.). New York, NY: John Wiley & Sons.
- Super, D.E. (1954). Career patterns as a basis for vocational counseling. *Journal of Counseling Psychology*, 1, 12-20.
- Super, D.E. (1955). The dimensions and measurement of vocational maturity. *Teachers College Record*, 57, 151-163.
- Swanson, J.L. (1994). *The Career Barriers Inventory (Short Form)*. Unpublished manuscript, Southern Illinois University at Carbondale.
- Swanson, J.L. & D'Achiardi, C. (2005). Beyond interests, needs/values, and abilities: Assessing

- other important career constructs over the life span. In S.D. Brown & R.W. Lent (Eds.), *Career development and counseling: Putting theory and research to work*. Hoboken, NJ: John Wiley & Sons.
- Swanson, J.L., Daniels, K.K., & Tokar, D.M. (1996). Measuring perceptions of career-related barriers: The Career Barriers Inventory. *Journal of Career Assessment*, 4, 219-244.
- Swanson, J.L., & Tokar, D.M. (1991). Development and initial validation of the Career Barriers Inventory. *Journal of Vocational Behavior*, 39, 344-361.
- Tabachnick, B.G., & Fidell, L.S. (2001). *Using multivariate statistics* (4th ed.). Needham Heights, MA: Allyn & Bacon.
- Terrell, F., & Terrell, S.L. (1993). Level of cultural mistrust as a function of educational and occupational expectations among black students. *Adolescence*, 28, 573-578.
- Trice, A.D., Haire, J.R., & Elliot, K.A. (1989). A career locus of control scale for undergraduate students. *Perceptual and Motor Skills*, 69, 555-561.
- U.S. Census Bureau. (2000). *Profiles of general demographic characteristics for the United States: 1990*. Available from U.S. Census Bureau web site: www.census.gov.
- U.S. Census Bureau. (2003). *Percent of people 25 years old and over who have completed high school or college, by race, Hispanic origin and sex: Selected years 1940-2002*. Available from U.S. Census Bureau web site: www.census.gov.
- Westbrook, B.W., Sanford, E.E., Donnelly, M.H. (1990). The relationship between career maturity test scores and appropriateness of career choices: A replication. *Journal of Vocational Behavior*, 36, 20-32.
- Whiston, S.C., & Keller, B.K. (2004). The influences of the family of origin on career development: A review and analysis. *Counseling Psychologist*, 32, 493-568.

- Wiechman, S.A., & Williams, J.M. (1997). Relation of athletic identity to injury and mood disturbance. *Journal of Sport Behavior*, 20, 199-210.
- Worthington, R.L., Flores, L.Y., & Navarro, R.L. (2005). Career development in context: Research with people of color. In S.D. Brown & R.W. Lent (Eds.), *Career development in counseling: Putting theory and research to work*. Hoboken, NJ: John Wiley & Sons.
- Wu, M. R. (1995). College women's career commitment in relation to their ego identity status. *Dissertation Abstracts International: Section A. Humanities and Social Sciences*, 55(12-A), 3752.
- Yowell, C. M. (2000). Possible selves and future orientation: Exploring hopes and fears of Latino boys and girls. *Journal of Early Adolescence*, 20, 245-280.
- Zanardelli, G. (2002). Predicting the career commitment of college students via their attachment and separation relationships. *Dissertation Abstracts International: Section B. The Sciences and Engineering*, 63(2-B), 1093.