

ABSTRACT

Title of Document: THE RELATIONSHIPS BETWEEN HIGH SCHOOL SPORTS PARTICIPATION, HIGH SCHOOL COMPLETION, AND COLLEGE ENROLLMENT FOR AFRICAN-AMERICAN MALES

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The purpose of this study is to explore the direct, indirect, and total effects of high school sports participation on high school completion and college enrollment for African-American males using a large, nationally representative, longitudinal database (ELS:2002). The lens through which this phenomenon is viewed in this study is the sports-impedes-mobility hypothesis (Braddock, 1981). A path analysis procedure for determining underlying causal relationships between variables was presented for six different sports participation models.

The only sports participation variable to have a significant effect on either high school completion or college attendance was that of junior varsity sports participation significantly influencing (totally) high school completion and (indirectly) college attendance for African-American males. The effect was positive.

While the implications of the results of this study are relevant for all who work with this population, school counselors are specifically highlighted.

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HIGH SCHOOL COMPLETION, AND COLLEGE ENROLLMENT FOR AFRICAN-
AMERICAN MALES

By

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Chapter I-Introduction

Statement of Problem

Educational attainment is a fundamental indicator of well-being, and researchers have explored the process for over three decades (Ou & Reynolds, 2008). The factors associated with high school completion and college enrollment, along with the benefits of attaining each have been explored on numerous occasions (Haller & Portes, 1973; Kerckhoff & Campbell, 1977; Temple & Polk, 1986; Trusty, 2002, LaVeist & McDonald, 2002). Educational attainment is associated with better physical health, positive mental health, and greater use of preventive health (Ou & Reynolds, 2008). A college degree, particularly, is increasingly becoming a necessity for social and economic mobility. The baccalaureate may be the most significant education credential in the educational process and a prerequisite to most of the better jobs (LaVeist & McDonald, 2002). The gap in earnings between those who have received their college degree and those who have not has increased tremendously over the years. Given this notion, it is quite disheartening to notice the racial and gender disparities in high school completion and college enrollment.

According to Lee, Daniels, Puig, Newgent, and Nam (2008), a slightly higher number of females complete high school than males, while greater proportions of Whites than African-Americans complete schooling at each level of education. The racial gap in college enrollment between African Americans and Whites has been well documented (Bennett & Xie, 2003). The African-American male population warrants specific attention as a host of education advocates, policy analysts, and public commentators have

been calling attention to the behavioral and educational outcomes of this group, describing their status as a “crisis” (Fultz & Brown, 2008).

African-American males continue to experience educational inequalities and inconsistencies in school systems across the country (Moore, Henfield, & Owens, 2008). “It is clear that the educational plight of African-American males mirrors a troubling pattern found in other social domains of American society (e.g. criminal justice system and workplace)” (Jackson & Moore, 2008, p. 847). Increasingly difficult to find employment, deprived of a decent education, and lacking the appropriate skills necessary to gain social, economic, and political mobility, it is arguable that African-American males often have no other recourse than to resort to illegal means of making a living (Boyd, 2007). To that end, while more African-American males may be completing high school and matriculating to college, this specific group is still, for example, over-represented in the prison system. “By the end of June 2005, more than 2.1 million people were incarcerated in U.S. jails and prisons. Almost 550, 000 of them were African-American men between the ages of 20 and 39, or about 12 percent of African-American men in that age group” (Arias, 2007, p. 1). In America, it is arguable that more money is spent jailing African American males than educating them, as there are more African-American men incarcerated than there are enrolled in four-year colleges and universities. (Boyd, 2007). Clearly, increased attention is warranted for the African-American male community.

Jenkins (2006) would posit that oppressive educational, social, political, economic, and psychological dynamics embedded in the very culture of America must be undone in order to reverse the abominable conditions endured by African American

males. Even after slavery, the oppression and discrimination experienced by African-American males has continued, as the unemployment, poverty, and incarceration rates seem to rise with each decade. African-American males are still earning a fraction of what their White counterparts are earning in the professional arena marketplace. “From reconstruction and the creation of new systems of segregation and often exploitive labor opportunities (sharecropping, crop liens, and peonage) to the Great Depression and the devastating impact that it had on a population that was already a low priority for the country to the persistent discrimination that African Americans encountered in education, housing, the military, employment, and politics, the legacy of African American disenfranchisement was passed down from one generation to the next” (Jenkins, 2006, p. 131).

African-American males are dying in large proportions, as the rate of homicides among African-American men ages 15 to 24 is the highest for any group within the U.S. population, and the suicide rate has surpassed that of their White counterparts (Noguera, 1997). Even in 1992, the incarceration rates for African-American males stood at 3,370 per 100,000, compared to 455 for all Americans (Needham, 1992). According to Smith (2007), approximately one in every three African-American men will be incarcerated in their life time. Such horrid statistics are undoubtedly perpetuated in part by the perceived and real notion that African-American men are not afforded the access to opportunities that are allegedly available to all. African-American males often fall prey such stereotypical descriptors: lazy, violent, uncontrollable, and unintelligent. Such perceptions further exacerbate their maltreatment, both in an out of the education system, and the cycle of their maltreatment and continued frustration with society maintains and

increases the negative statistics across so many societal domains (i.e. education, prison, violence). As it relates to violence, Jenkins (2006) argues that there are two primary issues: rage that leads to acts of violence against other African American men, White men, and in many cases, African American women, and overall crime that is motivated by an inability to penetrate economic opportunity in society. Jonathan Kozol (1992) argues that until we provide equal access, beginning with children in the educational system, America will be building more prisons.

Within education, the psychological, social, physical, and personal burdens that African-American males carry must be considered if the educational disparity is to improve. African-American males bring with them to the classroom many historical and social ills. Specifically, they bring with them “a history of oppression that has effected [their] family unit, a life of poverty or some form of economic struggle, a community of criminality and violence or some form of racial frustration, a generation of enraged and inadequately educated parents and elders, and the beginnings of deep psychological and esteem issues that take root with this first engagement in society (preschool, cartoons, etc.)” (Jenkins, 2006, p. 144). Clearly, there is a lack of understanding in meeting the needs of this population, as more and more African-American children, particularly males, are inappropriately assigned to special education classes, are increasingly alienated from their schools, are dropping out of schools at a high rate, are illiterate, and are ultimately stifled with regard to their educational attainment.

According to Moore, Henfield, and Owens (2008), African-American males are the student group more likely to be identified and classified for special education services. While the meaning of such data is highly debated, the prejudices and biases of

those doing the assigning are posited to influence the observed disparity. Students, of course, are very sensitive to such biases, whether it is covert or overt. Ogbu (2003) states that many African American students perceive the school counselor as a gatekeeper for keeping them out of advanced courses and curricula. In part, such perceived and real maltreatment from the school (via the school personnel and the curriculum itself) could then lead to alienation from school on the part of African-American males. Per Hendre (1998), African-American males become far more alienated from academics than other groups as they move through high school. The high school drop-out rate for African-American males is rather high, with 20% to 30% of urban African-American male youth leaving school prior to graduation (Noguera, 1997). Differences persist between African American and Whites with regard to high school completion and college enrollment, and African-American males continue to be on the lower end of this disparity (Uwah, McMahon, & Furlow, 2008). In 2005, 85% of African-Americans completed high school, while 92% of their White counterparts did (U.S. Department of Commerce, 2005). Further, as of 2000, 26% of African-American males ages 18-24 were enrolled in college, while 36% of Whites in ages 18-24 were enrolled (U.S. Census Bureau, 2000). The trends regarding African-American males' enrollment in college, in particular, continue to be worrisome (Warde, 2008).

While there are numerous factors considered to be associated with such troublesome trends, sports have historically held significance in the lives of African-American males. Sports are often the avenue through which African-American males hope to attain the respect, power, and control that often evades them via traditional means. Such participation is also often welcomed by groups in society who are not as

welcoming the participation of African-American males in other domains (i.e. political, etc.). Realizing this, African-American families, among other factors, contribute to the increased channeling of African-American males into sports (Sailes, 1998). While such participation may occupy time that could otherwise be devoted to less constructive means to gaining mobility, it may also occupy time that could be devoted to educational pursuits, thus potentially rendering the participants educationally inferior to their studious peers. Some researchers (e.g. Eide & Ronan, 2001) state that African-American males' participation in sports can enhance their educational attainment process (e.g. by providing additional networks useful for social mobility, opportunities to develop work-ethic, chances to learn life lessons through sports, etc.). Others (e.g. Spreitzer, 1994) are convinced that sports participation for African-American males is educationally exploitive in nature, in that it detracts time from educational endeavors, particularly due to the high level of commitment to sports this group has given its belief that it is the primary way to success (economic and otherwise).

Sports are clearly a huge part of our society, and have been for decades. Regarding youth, sports participation is still the single most popular school-sponsored extracurricular activity, regardless of race, ethnicity, or gender (Miller, Melnick, Barnes, Farrell, & Sabo, 2005). Involvement in sports is generally accompanied by attachment to influential others (such as coaches and teammates) (Sabo, Miller, Melnick, Farrell, & Barnes, 2005). Further, through sports involvement, adolescents make friends, become more popular, and acquire college-related values and expectations. James (2005) argues that sports can increase the number of opportunities that youth have to connect with others, leading to very positive, meaningful experiences and outcomes, and increasing

their self-awareness in relation to the rest of the world in which they live. While some researchers (e.g. Coleman, 1961) posit that participation in sports detracts from any gains in academic areas, others (e.g. Marsh & Kleitman, 2003; Videon, 2002) contend that there are numerous benefits to participating in sports. For example, Sabo et al. (2005) argue that sports participation may provide adolescents with the social opportunities and utilitarian skills to pursue and achieve culturally defined goals or, more subjectively, the expectation that sports involvement will help them achieve desired goals in school and in later adult life. Sports participation has also been found to be beneficial in terms of increased physical health, decreased adolescent suicide, drop-out rates, academic achievement, and educational attainment. Across race and gender, however, the role of participation in sports is argued to vary.

Sports participation has particular relevance for African-American males, as it has long been deemed a “dramatic means of improving one’s station in life, of gaining economic advantage and prestige that would have been impossible to achieve without” (Rhoden, 2006, p. 42-43). African-Americans represent the majority of the professional basketball and football players, though only approximately twelve percent of the general population (Eitzen, 1999). In 2006, African-Americans comprised 79% and 68% of the National Basketball Association and the National Football Association, respectively (Smith, 2007). To that end, two-thirds of African American males between the ages of 13 and 18 believe that they can earn a living playing professional sports (Eitzen, 1999). Some (e.g. Majors, 1998) would argue that African-American males are only deceived by such endeavors and ultimately lock themselves into their low-status positions in society. Critical in predicting the educational attainment process for African-American males, and

particularly whether or not sports may serve as an aid or detriment in that process, are socioeconomic status, academic achievement, and student educational expectations.

Clearly, sports have become a focus for African-American males because it allows them to define themselves and their masculinities (May, 2004). Given the pervasiveness of sports in youth culture, and the particular draw for African-American males in light of its historical significance, it is imperative that more attention be given to African-American males' high school sports participation, and the educational implications it may have, particularly African-American males' subsequent high school completion and college enrollment. There are implications of such research endeavors for school counselors, as they serve as systemic change agents within schools that can coordinate efforts amongst all stakeholders in the students' educational experience.

The school counselor has the challenging opportunity of facilitating the educational/vocational development of African-American males, who are often subject to very negative life circumstances that serve as barriers to such development. Specifically, the results of this study will help to guide their work with students, parents, and teachers.

Purpose of the Study

The purpose of this study is to explore the direct, indirect, and total effects of high school sports participation on high school completion and college enrollment for African-American males using a large, nationally representative, longitudinal database (ELS:2002). Previous studies (e.g. Spreitzer, 1994; Eide & Ronan, 2001) have produced varied results as to the nature of these relationships between these variables. Such differences may be explained, in part, by the varying degrees in which other factors directly and/or indirectly effect high school completion and college enrollment. Ignoring

the context within which sports participation occurs is problematic, and this study attempts to provide needed clarification in this regard via a path analysis. Socioeconomic status, academic achievement, and student educational expectations have all been deemed related in some way to educational attainment, and therefore are considered in this study as well. Two different hypotheses have emerged from the literature with regard to sports participation in general: 1) Sport-impedes-mobility and 2) Sport-enhances-mobility (Braddock, 1981). For example, Picou, McCarter, and Howell (1985) found that sports participation was only beneficial for White males, as it related to educational attainment (i.e. less than high school, graduation from high school, some college). A small negative effect was found for African American males (i.e. sport-impedes-mobility). Sabo, Melnick, and Vanfossen (1993) and Spreitzer (1994) supported this argument, while Braddock (1981), for example, found that the relationship between sports participation and educational attainment for African American males was significantly positive (i.e. sport-enhances-mobility). Eide and Ronan (2001) supported Braddock's (1981) findings, concluding that sports participation for African American males does have a positive effect on their educational attainment.

Significance of the Study

This study provides possible clarification of the role of high school sports participation in the educational attainment process, namely high school completion and college enrollment for African-American males. While studies (Picou et al., 1985; Sabo et al., 1993; Spreitzer, 1994; Braddock, 1981; Eide et al., 2001; Harris, 2008) have examined the relationship between sports participation and educational outcomes, they have done so while controlling for variables deemed related to educational attainment in

an effort to observe the direct effects of sports participation. While this study also analyzes the direct effects of sports participation on educational attainment, it also examines the indirect effects by considering variables typically controlled for, namely socioeconomic status, academic performance, and student educational expectations. Employing a path analysis, the results shed light on the strength of the relationships of the variables within. Path analysis provides more depth to the understanding of such relationships than do ordinary regression analyses because “it allows us to examine the causal processes underlying the observed relationship and to estimate the relative importance of alternative paths of influence” (Olobatuyi, 2006, p. 11). It is anticipated that the results of this study will have implications for school counselors who work with African-American high school student-athletes. Given a known directional flow of the effect of sports participation on educational attainment, school counselors can coordinate the efforts amongst stakeholders in such a way that African-American males’ participation in sport can be a benefit with regard to their attainment process rather than an exploitative mechanism.

Theoretical Framework

The role of African-American males’ sport participation in their educational process has been debated for years. The lens through which this phenomenon is viewed in this study is the sports-impedes-mobility hypothesis (Braddock, 1981). This view posits that sports participation for African-American males results in negative academic and educational progress; in this study’s case, high school completion and college enrollment.

African-American families have been inclined to push their male children into playing sports and even toward athletic career aspirations, sometimes to the neglect of their academic development and other, perhaps more viable, career options (Edwards, 2000). Two-thirds of African American males between the ages of 13 and 18 believe that they can earn a living playing professional sports, which is more than double the proportion of young White males who hold such beliefs; African American parents are four times more likely than White parents to believe that their sons are destined for careers as professional athletes (Eitzen, 1999). For African-American males, sports have long been deemed a “dramatic means of improving one’s station in life, of gaining economic advantage and prestige that would have been impossible to achieve without sports” (Rhoden, 2006, p. 42-43). Some may see it as a way out of their poor social condition, while others may see it as an opportunity to gain the respect and power that seems to evade the African-American male in American society. As Edwards (1969) noted over thirty years ago, sports are a focus for African-American males because it provides them with a context for articulating their male dominance when historically their participation in other social, political, and economic institutions has been hindered by overt racism and discrimination. While there is merit to the exploration of why African-American males pursue sports with such fervency from early on in their lives, this study focuses primarily on how their participation in sports influences educational attainment (i.e. high school completion and college enrollment), perhaps through their own educational expectations and academic performance. The passion with which many African-American male adolescents pursue sports is the very reason why some (e.g. Coleman, 1961) predict they will suffer in other areas, namely educational endeavors.

Majors (1998), for example, would argue that African-American males are only deceived by such endeavors to pursue sports careers and ultimately lock themselves into their low-status positions in society. Others (e.g. Braddock, 1981; Eide & Ronan, 2001) posit that sports participation for African-American males proves to increase educational attainment for this group, namely college attendance. Potentially critical in whether or not sports serves as an exploitative mechanism in the educational attainment process is the academic achievement of this group, along with their educational expectations. The mere fact that students are participating in sports could affect their educational expectations and academic achievement, and thus their educational attainment. The type of sport in which the African-American male participates, as well as the level at which he competes may also have an effect on the same. How these factors interact with other variables deemed correlated with educational attainment (i.e. socioeconomic status) could further explain the process of whether or not, or how, high school sports participation can be a worthwhile endeavor for African-American males. The two primary hypotheses that pervade the sports participation literature with regard to African-American males are the sport-impedes-mobility hypothesis and the sport-enhances-mobility hypothesis (Braddock, 1980). The sport-impedes-mobility hypothesis is the framework within which this study sits.

While Braddock (1981) defines the term “mobility” somewhat broadly, for the purposes of this study it will be operationally defined as educational attainment, namely high school completion and college enrollment. While the debate regarding the positive or negative outcomes of African-Americans’ participation in sports (in conjunction with the relative importance of other associated factors) persists, it is certain that educational

attainment is an increasing necessity, and that more and more African-American males are choosing, and are being expected to choose, sports as an avenue to success. The sports-impede-mobility hypothesis provides a lens through which to examine the process of high school sports participation and its effect on educational attainment for African-American males. The purpose of this study is to explore the relationships between high school sports participation, high school completion, and college enrollment for African-American males. The hypothesis for the study is that high school sports participation impedes the educational mobility of African-American males. Given this, the following research questions are explored.

Research Questions:

- 1) What are the direct, indirect, and total effects of high school sports participation, socioeconomic status, student educational expectations, and academic achievement on high school completion and college enrollment for African-American males?
- 2) What are the direct, indirect, and total effects of the type of high school sports participation (i.e. team versus individual), socioeconomic status, student educational expectations, and academic achievement on high school completion and college enrollment for African-American males?
- 3) What are the direct, indirect, and total effects of the level of sports participation (i.e. intramural, junior varsity, varsity), socioeconomic status, student educational expectations, and academic achievement on high school completion and college enrollment for African-American males?

Chapter II – Review of Literature

Educational Attainment

Educational attainment is a fundamental indicator of adult well-being (Ou & Reynolds, 2008). Sample benefits associated with educational attainment are well-documented. Examples include better physical health, positive mental health, and greater use of preventive health care (Heckman, 2000). There are economic benefits as well, as the U.S. Census Bureau (2008) states that those individuals who complete high school earn close to \$10, 000 more annually than those who do not complete high school, while those with some college earn approximately \$13, 000 more annually than those not completing high school, and those completing a bachelor's degree close to three times as much annually as someone who does not complete high school. Given that the importance of educational attainment only increases from year to year, it is vital that the factors predicting such be identified as fully as possible (Ou & Reynolds, 2008).

Socioeconomic Status

Researchers (e.g. Ou & Reynolds, 2008) have explored the process of educational attainment for over three decades. Landmark studies, including the Blau-Duncan Model (Blau & Duncan, 1967) and the Wisconsin Model (Sewell, Haller, & Portes, 1969), considered sociological models, have concluded that there are several reliable predictors of educational attainment, including socioeconomic status. Research has consistently shown that social class has a significant effect on the formation of college plans (Temple, M., & Polk, K. 1986). In a study done by Rowan-Kenyon (2007), it was found that high school graduates who enrolled immediately in college had higher socioeconomic status than those graduates who delayed first enrollment or who did not enroll in college. Ou

and Reynolds (2008) support this notion in their assertion that students with lower socioeconomic status are more likely to drop out of high school than their peers with a higher socioeconomic status, particularly because such status is typically accompanied by other risks. Such risks may include, but are not limited to, a limited pool of potential significant others in the lives of the students, particularly those having and conveying college plans (Haller & Portes, 1973). Lee, Daniels, Puig, Newgent, and Nam (2008) concur with the significance of socioeconomic status by asserting that it is the best predictor of attainment, even among high achieving students. “For example, among students who scored in the highest mathematics test quartile in eighth grade, the likelihood of earning a bachelor’s or higher degree increase with socioeconomic status: from 29% among those from low-socioeconomic status families, to 47% among those in the middle two quartiles, to 74% among those with the highest socioeconomic status” (Lee et al., 2008, p. 308). The Wisconsin Model also added social psychological factors, including academic performance, significant others’ influence, and mental ability as plausible mediating factors to the simpler Blau-Duncan model.

Academic Performance

According to Anderson and Keith (1992), one of the most important predictors of postsecondary educational attainment is high school academic performance. “The most widely used indicator is a standardized test score, deemed an appropriate measure of academic ability because it measures differences in terms of cognitive skills and abilities” (Lee et al., 2008, pp. 309-310). Some researchers (e.g. Ensminger and Slusarcick, 1992) posit that a student’s academic achievement in as early as the first grade can predict whether or not he or she will complete high school. The early academic success of a child

may garner him or her attention from gifted programs, advanced classes, and the college preparatory curriculum that provides exposure to and readiness for postsecondary education. Alexander, Entwisle, and Horsey (1997) found that poor academic achievement was significantly associated with dropping out of school. Further, Temple and Polk (1986) agree that high school success is also a factor that influences the formation of college plans. Rowan-Kenyon (2007) further supports by asserting that academic achievement is also associated with whether or not high school graduates either delayed or did not enroll in college, along with parental involvement in the school, high school support, peer encouragement, and parent's expectation for their postsecondary attainment.

Expectations

A student's educational expectations are also associated with educational attainment (Gewertz, 2007; Ou & Reynolds, 2008; Charles, Roscigno, & Torres (2007). Students who articulate and maintain high educational expectations are likely to graduate from high school and enroll in college (Cook, 2008). Ou and Reynolds (2008) support this notion by stating that those students who drop out of high school typically have lower educational expectations than those who persist and graduate. Venezia, Kirst, and Antonio (2003) suggest that students' educational expectations are a reflection of emphasis that significant adults in the students' lives place on the importance of college attendance.

In Cook's (2008) study, school counselors' influence (i.e. high expectations for students) proved to be critical in the students' development of educational expectations, particularly in the case of African-American males. When African-American male

students were asked about what they perceived the expectations of the school counselors to be, the themes observed were that their counselors either did not take the time to meet with them nor have college preparatory discussion, placed them in classes beneath their ability, and made explicit comments about everything that they could *not* do in life (e.g. be a productive citizen of society), thus communicating their low expectations of them (Cook, 2008). Such low expectations, when only applied to certain groups, is dangerous and potentially disastrous as it can perpetuate the inequitable school experiences of certain groups, perhaps further contributing to the achievement and college matriculation gap.

Protective factors, such as high parental and other family expectations, help to soften the blow of low school counselor expectations on African-American males' expectations (Cook, 2008). When African-American male college students were asked why they believed they were in college, almost all cited the influence of a parent or close family member (Cook, 2008). Specifically, high expectations were communicated to these young men by their parents by, for example, "encouraging and making sure homework was completed...and expressing the importance of a college education that was openly available to African Americans during the early post slavery period (Cook, 2008, p. 82). Alexander, Entwisle, and Horsey (1997) support the notion that parents' educational expectations of their children is crucial in their research that yielded a inverse relationship between parents' educational expectations for their children and their children's probability of dropping out of school. Ou and Reynolds (2008) also state that parents' educational expectations are associated with whether or not a student will persist or drop out of high school. "If parents have high expectations for children's educational

attainment, children would have greater support for school persistence, and parenting practices would encourage such persistence” (Ou & Reynolds, 2008, p. 201). Temple et al. (1986) also posit that studies have shown that individuals who come from families that support and encourage college enrollment are more likely to plan to attend.

Race and Gender

According to Bateman and Kennedy (1997), though, there has been a dearth of research on specific student populations, particularly those that experience a variety of circumstances that place them at risk for school failure and other negative life outcomes. Bateman et al. (1997) further assert that students enduring odious conditions such as poverty and crime represent one of the most daunting tasks to educators and those working at the policy level. In addition to social class variables, which clearly influence the educational attainment process, gender and race are strong predictors of attainment as well.

Regarding gender, females have increasingly enlarged the gap between themselves and males with regard to educational attainment. According to Peter & Horn (2005), the rates at which women have enrolled in undergraduate education over the past two decades have increased faster than those of men. From 1980 to 2001, women increasingly represented the undergraduate populations, rising from 52% to 56%, and projections to 2013 indicate that women will continue to outpace men (Peter et al., 2005). Examining race reveals clear patterns as well.

Although African-Americans have demonstrated a gain in educational outcomes, Trusty (2002) posits that they are still less likely than White Americans to enroll in college immediately after high school. Perhaps more so than any other demographic

category in America, male adolescent African Americans seem to bear a disproportionate burden of negative life experiences—drugs, incarceration, violence, poverty, and premature death (Bateman et al., 1997)—and therefore suffer educationally. Given that education is considered to be the most accessible means for achieving social, political, economic, and cultural liberation in the United States (Hopkins, 1997), this is particularly disheartening.

According to Edwards (2000), at least 25% of African-American males ages 16 to 29 nationally are involved in the court system, one-third of all deaths in this group are homicides, and homicides, accidents, and suicide are the primary causes of death, in that order. “It should be no surprise that African-American males are declining as a proportion of the population in virtually every institutional setting (e.g. higher education, the workforce, the church), save the prison system” (Edwards, 2000, p. 10). Premature death due to violence also plagues the African American male community. Boyd (2008) asserts that an African-American male is six times more likely as a White male to be slain. The combination of the dynamics of the African American male lived experience undoubtedly influences the educational process of this group. The historical oppression and marginalization that African American males have experienced in America is carried into every arena that they enter, including the educational sphere. “From kindergarten through college, many African-American males experience a serious stifling of their achievement, aspirations, and pride” (Lee, 2003, p. vii). Such oppressive dynamics in the experiences of African Americans must be acknowledged and understood if the disparity in educational attainment is to be erased. Clearly there remains a lack of understanding of the unique experience of African American males in US society, as there is, for example,

still an overrepresentation of African American males in special education, increased alienation from academics on the part of African American males, and subsequently, a crisis in the college graduation rates of African American males. Per Moore et al. (2008), approximately 20, 000 African-American male students nationally are inappropriately classified as mentally retarded, which represents a 300% overclassification of this student population. According to the U.S. Census Bureau (2005), 86.7 % of White females graduate from high school, 85.5% of White males do, followed by 81.2% of African-American females, and lastly 80.1% of African-American males. Further, the rate of matriculation to college for African-American males has steadily declined since the 1970s, as compared to Whites (Mincy, 1994), and African American males were last among African Americans and Whites of both sexes, with 54,000 out of 1,347,000 (4%) African American males between the ages of 20 and 24 earning a bachelor's degree in 2005 (U.S. Census Bureau, Current Population Survey, 2005 Annual Social and Economic Supplement).

There are numerous plausible explanations (i.e. variables) that could potentially account for a portion of variance in educational attainment. A variable worthy of consideration is sports participation, as its role in the educational process of adolescents in argued to be substantial.

Sports Participation

Sports, which are abundantly woven into the fabric of our society, permeate the lives of many on several different levels. “Values reflected in sports competition—striving for excellence, fair play, sportsmanship, hard work, and commitment to a goal—are inextricably linked to our nation’s mainstream cultural values” (Jordan, 1999, p. 54).

Sports participation and the benefits thereof have been researched in relation to numerous factors. Understanding the effect of extracurricular activities, including sports, on students' achievement, has been a focus of sociological inquiry for the past three decades (Eitle & Eitle, 2002). In fact, there are four popular theories that have been generated that help to describe the type of effect that sports has on student outcomes. Developmental theory emphasizes the “‘socializing’ or ‘character-building’ effects of sports participation” (Fejgin, 1994, p. 211). The functionalist theory contends that sports participation is positively related to academic progress due, in part, to it connecting students with other academically motivated students and providing a space for students to experience within the boundaries of rules (as with academics) (Eitle, 2005). Thirdly, the zero-sum theory, which is derived from the classic work of James Coleman (1961), posits that devoting time to sports pursuits diverts attention from academic endeavors, and therefore hinders academic success. Lastly, conflict theory highlights the inconsistency with which groups participate in sports, and how it ultimately reflects and reinforces the inequitable statuses of those groups (Fejgin, 1994).

High school students, particularly, are given opportunities to participate competitively in school-sponsored sports. In as early as 1976, researchers (e.g. Otto, 1976) were exploring extracurricular activities, namely sports, and the notion that it serves as a socializing agency fostering achievement and success orientations. Much of the inspiration for the research on this topic came from the work of James Coleman (1961). In Coleman's (1961) seminal work, *The Adolescent Society*, he argued that the adolescent society emphasizes acceptance by peers, with academic achievement one possible avenue toward acceptance (Eitle et al., 2002). He also posits that while a student

is investing time and energy in the area of sports, his or her academic progress or success is being hindered. Viewing the adolescent society as a finite system, Coleman (1961) believed that giving so much time to one area (e.g. sports) resulted in a loss to other areas (e.g. academic, social). Marsh (2003) would agree that this explanation, known as the Zero-Sum Model (Coleman, 1961), in which the varying amount of time devoted to academic, social, or sports pursuits are posited to be in competition with each other, is the most influential theoretical model in sports participation research, though he disagrees with its assertion. The notion that nonacademic endeavors cannot result in positive academic results has been challenged on several occasions. Since 1961, research has claimed otherwise, including benefits in the academic, personal, emotional, and psychological domains as well. For example, in 1977, Otto found that participation in sports has a positive effect on educational aspirations. Jordan (1999) later found that participation in high school sports has a positive relationship to GPA, self-concept, and academic self-confidence for all students. Similarly, Broh (2002) supported the tenet that playing school sports does boost students' achievement in the classroom. Adolescents who consistently participate in school-sponsored sports access a network that affords them interaction that can be useful to their development. The peer group interaction and increased interaction with adults (e.g. coaches) may help to facilitate the development of a positive self-concept, educational aspirations, and a host of other positive traits. Participation in sports also provides another venue for parents to interact more with their child and the school, as they may attend games, converse about their progress (e.g. academically and athletically), and communicate with the coach and other school officials more frequently. Sabo, Miller, Melnick, Farell, and Barnes (2005) would posit

that sports involvement is ostensibly associated with protective factors that have been generally found to reduce suicide risk among young people (e.g. lower rates of illicit drug use, greater social supports, and reduced risks for depression). Further, sports participation generates career goals among contemporary youth (Lee, 1983), namely sports career goals. Other outcomes include, but are not limited to, physical health, social capital, academic achievement, and educational attainment. For some adolescents, participating in sports may simply be a hobby, or something enjoyable to do. For others, their career goals may include professional sports. Other adolescents may choose to participate in sports to escape the harsh realities of their social situation. For whatever reason, adolescents' participation in sports has increasingly become a crucial factor in the educational process of our youth. In 1977, Otto and Alwin posited that participation in sports has a positive effect on educational aspirations and attainment, and further suggested that sports involvement could help develop interpersonal skills that are readily transferable and marketable outside of sports, and/or that sports may serve as an allocation function by raising the visibility of participants and providing them with an early success definition or label, or sports may introduce participants to interpersonal networks, contacts, and information channels that are beneficial in establishing careers. Twenty-five years later, both scholars and non-scholars continued to extol the beneficial effects of sports participation for teaching children life lessons, increasing self-esteem, and building interpersonal and leadership skills (Videon, 2002). Basketball players, for example, must learn how to interact appropriately with his or her teammates in order for the team to function at their optimal level. Additionally, as the basketball player learns success as it relates to hard work, teamwork, and other associated factors, he or she will

be likely to apply such learned behaviors in other settings. Further, the coach can serve as another person of influence for the athlete, serving as a point of educational accountability, and a potential avenue of access to networks outside of sports.

Eide & Ronan (2001) posit that previous research has generally shown a positive association between students' varsity sports participation and their grades, school progress, and college enrollment. Snyder & Spreitzer (1990) suggested several reasons for why sports may promote academic achievement, including increased interest in school, the need to maintain good grades to stay eligible, boosts to one's self-concept, increased attention from adults like teachers and coaches, membership with others who are academically oriented, and expectations to participate in college sports.

There has been much research to indicate numerous benefits of participation in sports. However, there is a debate over which groups of students benefit, or whether or not such social characteristics are salient (Eitle et al., 2002). For instance, early research suggested that participation in sports produces increased educational aspirations for African Americans (Braddock, 1981), although evidence of an effect of participation on grades or achievement sparse, and others (Sabo, Melnick, & Vanfossen, 1993) later found that while sports participation was positively associated with various educational outcomes for White students, no such effect was present for African American students (Eitle et al., 2002). Edwards (1986) argues that because sports is perceived as a primary avenue for social mobility in the African American community African American males may suffer greater academic costs because of a presumed greater (on average) commitment to participating in sports, relative to Whites and females. Hanson and Kraus (1999), conversely, argue that sports participation may result in greater academic gains

for disadvantaged groups such as African Americans, the poor, or women, because it provides a unique opportunity for success for those with limited resources. Further, Honora (2003) writes of African Americans who are vulnerable to the development of an emotional detachment from school; for students such as these, involvement in sports and other extracurricular activities affords them a way of identifying with their school community. Regarding educational attainment, Sabo et al. (1993) found that White male and female high school athletes were more likely to attend 4-year institutions than were African American male and female athletes. Whites received the most educational mobility, while African Americans derived no postsecondary advantages as a result of their previous sports participation (Sabo et al., 1993). Whatever the reasoning, it is vital to consider differences between ethnic groups, as sports participation can have different meanings and produce varying outcomes depending on the group (Snyder & Spreitzer, 1990).

Differences across gender, as it relates to sports, have evolved in quite an interesting manner over the years as well. At one point, Parsons (1942) characterized the adolescent society as “irresponsible” and concerned predominately with sports for males and physical attractiveness for females. About thirty years ago, however, title IX was passed, affording women more opportunities in the world of sports. Since the legislation passed, we have experienced a serious growth in participation of females in school-sponsored sports. Girls quickly seized these expanding opportunities, as the level of participation grew from 294,015 girls one year (1971) before the enactment of Title IX to 2, 675, 874 in 1999 (Videon, 2002). Interestingly, the research that has been done on the relationship between sports participation in high school and academic achievement

for females has been very mixed. Studies that focused on young women or gender differences in the effects of sports participation have found mixed results indicating that the relationship between sports participation and academic achievement is negative for females (Melnick, Sabo, & Vanfossen, 1992), positive but smaller than for males (Hanks & Eckland, 1976), or positive but only for certain academic areas (Eitle, 2005).

Regarding educational attainment, Sabo et al. (1993) found that White female high school athletes were more likely to attend college than were African American females. Further, White males experienced the greatest social mobility gains through their participation in sports, followed by White females, African American males, and lastly African American females, who found their mobility somewhat impeded by former sports participation when compared to their non-athletic peers (Sabo et al., 1993).

African American Males' High School Sports Participation

Historical Background

This study explores the relationships between high school sports participation, high school completion, and college enrollment for African-American males. As sports have been a major part of mainstream America for years, African American males have also been involved in sports competition for decades. Their participation dates back before the Civil War (1860), though not always formally acknowledged. Professionally, there have been many African American male athletes to make headlines in the world of sports. Jack Johnson, for example, became the first African American heavyweight boxing champion of the world in 1908 [Tom Molineaux, however, was the first to fight for the heavyweight title; he lost in a fight against Tom Cribb, which took place approximately 100 years before Johnson won]. Johnson “had knocked down an important

wall of segregation; he had defeated notions of African American sports inferiority (at least as far as boxing was concerned); he had challenged the widely held belief that, amazing as it seems now, African Americans lacked the physical wherewithal to compete with whites” (Harris, 1998, p. 5). Then there was Jesse Owens, who won 4 gold medals for track in the 1936 Olympics. Joe Louis, another African American boxer, also held the heavyweight title for 12 years. Such accomplishments served as somewhat of an impetus to more discussion about the benefits of sports participation for African Americans (Harris, 1998). While the image of African Americans (in the eyes of Whites, particularly) changed with regard to their participation in individual sports, segregation remained in team sports, both collegiate and professionally (Harris, 1998). It was not until during and after World War II that there were thoughts of desegregating sports. Unfortunately, though, this was not due to genuine concern over the moral consequences of segregation, but rather that players were needed due to a shortage of White players on professional football and baseball teams due to their participation in the war (Coakley, 1986). Nonetheless, the color line was later broken, notably with Jackie Robinson’s signing of a contract with baseball’s Brooklyn Dodgers in 1945, and later entry into major league baseball in 1947, becoming the first African American to play in traditionally White major league baseball in the twentieth century (Harris, 1998). A couple of Robinson’s teammates from UCLA were also signed with a team in the National Football league. While Robinson was playing for a minor league team in 1946, two other African-American players signed professional contracts in basketball as well. Also included, to name a few more of the many, on the list of the many African American male athletes that secured a place in history (late 1940s through 1970s) as a

significant entrant to professional sports are Larry Doby, Roy Campanella, Jim Brown, Bill Russell, Curt Flood, Tommie Smith and John Carlos, Muhammad Ali, and Arthur Ashe. The many contemporary African American athletes serving as role models, the African-American family, and other forces, have an effect on the increased channeling of African-American male children into sports (Sailes, 1998). These children's participation in sport, the type of sport they play, along with the level at which they compete can potentially further influence the expectations of others, namely parents, teachers, school counselors, and coaches, particularly at the high school level. Such expectations may directly and indirectly have an effect on their career aspirations and educational attainment process (Lee, 1983; Goldberg & Chandler, 1995; Honora, 2003). The question is whether or not the effect is positive or negative for these young African American males. Specifically, whether or not participation in team or individual sports, along with the varying levels of participation (i.e. intramural, junior varsity, and varsity), has differential effects on high school completion and college enrollment are questions warranting attention.

Effect on Educational Attainment

Majors (1998) would generally posit that sports could ultimately lock African American males into their low-status positions in society. Others also dismiss the idea that sports are an easy route to social mobility for African Americans (Harris, 1998). Harris and Hunt (1992), for example, posit that sports participation is considered to have positive effects for White males only. Harris (1998) reminds his readers of the irony in that while Joe Louis and Jesse Owens are both credited with opening the doors to sports and other institutions for African Americans, improving race relations (even African

American newspapers said Owens was “good for the race”), and demonstrating the path from rags to riches for African Americans (through sports), neither retired with substantial wealth or income and both had trouble with the IRS. Many researchers (e.g. Sailes, 1986) would argue that African American male athletes today, while “making it” to the professional ranks, are being exploited along the way, particularly by being denied equitable access to a sufficient educational experience, thus producing no skills to be desired by the professional community outside of the sports community. Critics of sports participation for African American males would also argue that the increased channeling of African American males into sports is a perpetuation of the myth of race, that being that African American males are only useful as athletes, as well as entertainers and criminals. Furthermore, Harris and Hunt (1982) purport that such a pattern also perpetuates the stereotype of African Americans as natural athletes who are ill-equipped for other forms of achievement. Agreeing, Gaston (1984) states that organized sports contribute to the destruction of African American males. Sailes (1986) asserts that only one-third of professional football players (i.e. NFL) have a bachelor’s degree, and even fewer in the National Basketball Association have graduated. Per Hodge, Harrison Jr., Burden Jr., and Dixson (2008), the message to African-American youth should be that dreams of sports careers must not come at the exclusion of potentially more attainable educational and professional goals.

Further apparent evidence of the negative impact of sports participation on African American males (particularly adolescents) is offered by Picou, McCarter, and Howell (1985). They conducted a secondary analysis, using data collected in the Southern Youth Study (SYS), which covered six states in the deep south. The Southern

Youth Study provides data from high school students who were sophomores in 1966, and seniors in 1968, four years after their graduation (1972), and 11 years beyond high school (1979). The data provided for their analysis included 964 participants (366 White males, 258 White females, 159 African American males, and 181 African American females). The study sought to gain clarity on the mixed empirical findings in previous studies on the consequences of interscholastic sports, as it relates to educational, occupational, and income attainments. Using multiple regression techniques, Picou et al. (1985) found that sports participation had significant positive effects on the educational attainment (i.e. ranging from less than high school to Ph.D.) of White males only, while the educational attainment of African American females was adversely affected, a small positive effect on educational attainment was found for White females, and a small negative effect on African American males. While the study used regional data, which is often considered as a limitation in terms of generalizeability, Sabo, Melnick, and Vanfossen (1993) later added to the argument via their results in another longitudinal analysis eight years later.

They used panel data from the High School and Beyond Survey, which provided a “highly stratified, multistaged probability sample of 14, 366 respondents who were high school sophomores in 1980, and who were subsequently resurveyed as seniors in 1982, and again 2 years (1984) and 4 years (1986) beyond high school” (Sabo et al., 1993, p. 45). Focusing on the race and gender differences of the effect of high school sports participation on postsecondary educational and occupational mobility, the authors embarked upon this study to further clarify the effects of sports participation. Particularly, they acknowledge that generalizations about sport-induced mobility are hampered by the absence of studies using longitudinal data and by a failure to adequately scrutinize racial

and ethnic variations (Sabo et al., 1993). Using multiple regression analysis, they endeavored to explore the direct effect that sports participation had on educational attainment by controlling for parental socioeconomic status, educational expectations, high school grades, senior standardized test scores, and whether or not the students have graduated from high school, all of which have been considered as predictors of mobility in previous research. They found that no African American males were more likely to even attend college, and that “White males, who are at the top of both the racial/ethnic and gender hierarchies in the larger society, experience the greatest social mobility gains through their participation in sports” (Sabo et al., 1993, p. 51). Spreitzer (1994) confirmed and extended such results via a longitudinal analysis one year later using the same data set.

Using data from the High School and Beyond Survey, the objective was to analyze the relationship between sports participation and overall adult development (including college attendance). Controlling for variables such as parent social class, academic performance, cognitive ability, and self-esteem, Spreitzer (1994), too, found that the association between sports participation and educational attainment (e.g. college attendance) is strongest among White males. Miller et al. (2005) argue that while better grades were reported for African Americans, they were more short-lived than for Whites, for whom high school sports participation was associated with higher rates of college enrollment. Such views represent what Braddock (1980) calls the “sports-impedes-mobility” thesis. In 1981, Braddock posited that the view of sports participation as an impediment for African-American youth was the dominant perspective, and such an argument persists. However, there is also a sector of the research on African American

males' sports participation that would represent the "sport-enhances-mobility" thesis. Supporters of this thesis would posit that there are transfer effects for all that an athlete acquires in the realm of sports.

Spreitzer (1994) suggests that sports builds character, improves self-discipline and self-esteem, and teaches participants the value of teamwork, all of which fits into the developmental theory. Training for athletics requires consistent practice, the following of rules and fair play, a commitment to working with a team toward one goal, and the perseverance to endure adversity and reflect on weaknesses while maximizing strengths (Braddock, Royster, & Winfield, 1991). While an athlete must be disciplined, smart, committed, skilled, and have a great work-ethic, the difficulty lies in transferring such traits as expressed and applied to sports endeavors to the academic realm as well (Sailes, 1986). This, perhaps, is where the disconnection between sports participation and positive academic outcomes occurs for some African American male athletes. The overwhelming attention that African American males receive as it relates to sports can serve as a distraction from educational goals. African American male athletes could arguably be using the educational system to participate in sports, as opposed to using sports to aid in receiving a solid education. Even though the relationship between sports involvement and academic performance among students continues to generate considerable debate, researchers (e.g. Braddock, Royster, Winfield, and Hawkins, 1991) agree that there is consistently a positive association between sports participation and educational attainment. In a study, Braddock (1981) explored the relationship between sports participation and educational attainment (i.e. college attendance and college graduation), among other variables, for both African American and White males. The study used data

taken from the National Longitudinal Survey of the High School Class of 1972 (NLS), which was sponsored by the National Center for Educational Statistics and conducted by the Educational Testing Service (ETS) and the Research Triangle Institute (RTI). Administered by ETS, a 69-minute test battery was given to 16, 683 seniors in over 1,000 schools in 1972, with the first, second, and third follow-up surveys given by RTI between October 1973 and April 1974, Fall 1974, and Fall 1976, respectively (Braddock, 1981). A total of 1369 African American males were used as a subsample for the analysis, along with 1731 White males. Both socioeconomic status and academic aptitude were controlled for to determine the direct effect of participation in sports on various outcomes, including college attendance. Braddock (1981) found that the relationship between sports participation and college attendance was positive and significant for both African-American and White males. Eide and Ronan (2001) echo such sentiments in their findings from a study, also from the High School and beyond data set.

The goal of their study was to determine whether or not participation in high school sports was an investment (e.g. college attendance) or a consumption good (e.g. no later observed benefits). Eide & Ronan (2001) suggest that participation in sports is an investment in human capital or current consumption without investment mechanism will be determined by whether or not participants have high levels of both human capital and consumption in the future or appear the same as and/or worse off than those that do not participate, respectively. Using the nationally representative sample collected by the National Center for Education Statistics, Eide and Ronan (2001) initially provided Ordinary Least Squares (OLS) estimates of the effect of sports participation on the various dependent variables, controlling for high school type, community residence,

region of the country, high school program, family income, and parental education. These estimates revealed that sports participation significantly reduces the probability of African-American males dropping out of high school and has a significant positive effect on African American males' attending college.. They also implemented an instrumental variable (IV) approach, where they controlled for students' height, hoping that it would account for some of the endogeneity of participation in varsity sports. Their belief was that height would be correlated with sports participation, as it is usually needed (or at least beneficial) in most sports. While such results would hinge on the validity of such a belief, the IV results also revealed that sports participation positively affects the college attendance rates of African American males.

The idea that sports are a critical component to the worlds in which African-American male youth live is consistent across both the impedes-mobility and enhances-mobility hypotheses. However, whether or not sports is hurtful to this group in terms of developing other necessary skills to gain social, political, and educational mobility is where the views differ (Harris & Hunt, 1982). This study aims to further clarify the effect that African American males' sports participation at the high school level has on high school completion and college enrollment. It examines, using a large set of data, the relationships among such variables for African American males. While there have been studies studying the impact of race, Sabo, Melnick, and Vanfossen (1993) maintain that generalizations about sport-induced educational and occupational mobility are hampered by the absence of studies using longitudinal data; this study uses the Educational Longitudinal Study of 2002 for its analysis. Further, while studies have controlled for certain factors deemed related to educational attainment in an effort to determine the

direct effect that sports has on it, this study provides more understanding to the nature of the relationships between all such variables, namely sports participation, socioeconomic status, academic performance, student educational expectations, and educational attainment (i.e. high school graduation and college enrollment). The sport-impedes mobility hypothesis provides a context through which to further understand the role that sports may serve in the lives of African-American male youth with regard to educational attainment, and it guides this study.

Summary

The need for this study is readily apparent, given the mixed findings of previous studies. Further, while the effects of sports participation on student outcomes is an oft studied topic, most cited previous studies that have explored these specific phenomena (i.e. the effects on high school graduation and college enrollment, specifically) are dated, and therefore a new and fresh look at these dynamics is warranted. This is accomplished by way of a longitudinal analysis. Clarification on how high school sports participation is related to high school completion and college enrollment for African American males is needed, particularly via a longitudinal analysis. Much of what appears in scholarly literature regarding the effects of sports participation on student outcomes is cross-sectional in nature, which fails to address issues over a period of time (Spreitzer, 1994). The ELS: 2002 data allows for observation at multiple time periods, accounting for preexisting variables that may threaten internal validity in cross-sectional studies. Using path analytic techniques to analyze the direct and indirect effect sports participation on high school completion and college enrollment provides more depth to the understanding

of such relationships, particularly with regard to other possible associated variables. The use of the ELS: 2002/2006 data provides needed current relevance.

The persisting gap that exists between African American males and their White counterparts as it relates to high school completion and college enrollment continues to warrant the continued attention given to the educational attainment process of African American males. In 2005, only 16% of African American males 25 years of age and older earned at least a bachelor's degree or higher, while 29.4% of White males 25 years of age and older earned at least a bachelor's degree or higher, 26.8% of White females 25 years of age and older earned at least a bachelor's degree or higher, and 18.8% of African American females 25 years of age or older earned at least a bachelor's degree or higher (U.S. Census Bureau, Current Population Survey, 2005 Annual Social and Economic Supplement). The role that high school sports participation plays, particularly as it relates to one's high school completion and college enrollment, is especially in need of further exploration. While previous research (e.g. Marsh, 1993; Otto & Alwin, 1977) explore a variety of educational mobility outcomes (e.g. academic achievement, educational and occupational aspirations, income, etc.) of sports participation, this study focuses specifically on the process of African American males completing high school and enrolling in college.

The sports-impedes-mobility hypothesis provides the context through which the study can be conceptualized. The results of the study will have implications for school counselors, who can intervene in the lives of African-American males in such a way that inhibits the exploitive potential of sports in their lives. Cox and Lee (2007) state that school counselors can be systemic change agents within the educational system, helping

to eliminate institutional barriers and cultural insensitivities that may negatively affect student learning. It is crucial that attention be given to African-American males' high school sports participation, as an overwhelming number of African-American males continue to be drawn to sports. Further, it is imperative that there be an urgency with which schools facilitate the linking of African-American male adolescents' sports participation with a solid educational agenda as well.

This study focuses on the following research questions:

- 1) What are the direct, indirect, and total effects of high school sports participation, socioeconomic status, student educational expectations, and academic achievement on high school completion and college enrollment for African-American males?
- 2) What are the direct, indirect, and total effects of the type of high school sports participation (i.e. team versus individual), socioeconomic status, student educational expectations, and academic achievement on high school completion and college enrollment for African-American males?
- 3) What are the direct, indirect, and total effects of the level of sports participation (i.e. intramural, junior varsity, varsity), socioeconomic status, student educational expectations, and academic achievement on high school completion and college enrollment for African-American males?

Chapter III - Methodology

Participants

The participants and data used for this study are taken from the Educational Longitudinal Study of 2002 (ELS: 2002/2006). ELS:2002/2006 was sponsored by the National Center for Education Statistics of the Institute of Education Sciences (U.S. Department of Education). The researchers who completed this study surveyed over 15,000 students (who were in tenth grade at the time) and parents, along with their teachers, librarians, and principals during the base year (2002). Approximately 750 schools, which are public, Catholic, and other private schools, are represented in the surveys. The schools were selected first, and then the students were randomly selected within each school. There were also follow-up studies conducted in 2004 (students were in the 12th grade) and the most recent, 2006. This study uses data from the first (2002) and third (2006) waves, tracking the participants of concern across the four years. As suggested by the ELS: 2002/2006 data file documentation, the “G10COHRT” flag variable is used, which specifically restricts analyses to the 10th grade cohort (2002). The “G10COHRT” and “G12COHRT” flags were placed into the ELS:2002 dataset to allow researchers to appropriately identify to which population the second follow-up (2006) respondents belong (i.e. 10th grade cohort, 12th grade cohort, or both). The resulting sample size after employing the necessary flags (i.e. G10COHRT, only African-American males, and only those cases that included all data) is 155. To account for the effects of the multistaged sampling design used by ELS: 2002, the standard errors were computed by a software program (i.e. AM). According to Gregorich, in Hahs-Vaughn, (2006), if there is no accommodation for clustering, an underestimation of standard errors

is likely. Unlike SPSS, the AM program accounts for clustering in samples, automatically providing accurate standard errors for complex samples like ELS:2002 by using a Taylor-series approximation. While it does not provide the extensive array of statistical analyses, it provides these appropriate standard errors which are then used to calculate t statistics to determine tests of significance.

The data from the base year in 2002 are used to obtain student demographic information, such as race, gender, socioeconomic status, academic achievement, and student educational expectations. The level of sports participation is also determined from the data included in the first wave (2002). Data from the third wave (2006) is used to determine whether or not a student completed high school and enrolled in college within the past two years.

Research design and procedures

The demographic information, namely race, gender, socioeconomic status, academic achievement, and student educational expectations are taken from the first wave (2002) of data. The additional variables, namely the level and type of sports, are also taken from this wave. Race is represented by a composite variable (BYRACE) that asked the respondents to identify whether or not they are American Indian/Alaska native (non-Hispanic), Asian or Hawaii/Pacific Islander (non-Hispanic), Black or African-American (non-Hispanic), Hispanic (no race specified), Hispanic (race specified), Multiracial (non-Hispanic), and White (non-Hispanic). Sex is represented by a composite variable (BYSEX) that asks the respondents to identify whether or not they are male or female. Socioeconomic status is represented by a variable (BYSES1QU) that separated participants into four quartiles (1= LOW, 2, 3, 4 = High). The “BYSES1QU” variable is a

quartile coding of the composite variable, “BYSES1.” “BYSES1” is derived from parents’ education, occupation, and household income. Educational expectations are indicated by how far in school a student expects to go. The composite variable (BYSTEXP) in ELS: 2002 asked students how far in school they think they will get (i.e. less than high school graduation, high school graduation or GED only, attend or complete a 2-year school course in a community or vocational school, attend college but not complete a 4-year degree, graduate from college, obtain a master’s or equivalent degree, obtain a Ph.D. or M.D. or other advanced degree). Academic achievement is indicated by a standardized test score measuring math and reading (also scored into four quartiles—1 = Low, 2, 3, 4 =High). The composite variable “BYTXCQU” is a quartile coding of the composite variable, BYTXCSTD, which is the average of reading and math standardized scores in 10th grade.

Participation in a school-sponsored sport during the first wave of the ELS: 2002/2006 data must be recorded in order for students to be considered as participants. The students’ participation is determined by their participation in at least one sports activity recorded in ELS: 2002 (i.e. baseball, basketball, football, soccer, other team sports, and individual sports). Further, team and individual sports participation, as well as level of participation (i.e. intramural, junior varsity, varsity) are also noted to explore differential effects on high school completion and college enrollment.

Whether or not a student completed high school and enrolled in a college/university is measured during the third wave (2006). The variable “F2A01” represents whether or not a student did or did not receive a diploma, certificate, or GED.

The variable “F2B07” represents whether or not a student has ever attended postsecondary school.

Only those cases that include African-American male respondents are selected, as this was a within-group study. Further, only those cases that contained all data are included.

Data Analysis

After descriptive analyses were used to describe the 10th grade athletes and non-athletes, path analyses are employed to examine the main questions of concern in this study, which are the relationships between high school sports participation and high school completion, and college enrollment, and college graduation for African-American males. Path analysis techniques allow for the examination of direct, indirect, and total effects between exogenous and endogenous variables. According to Stage, Carter, and Nora (2004), path analysis “is a variation of multiple-regression analysis and is useful for analyzing a number of issues involved in causal analysis.” Using the AMOS statistical package, goodness of fit indices are produced, in addition to path coefficients representing the direct, indirect, and total effects of high school sports participation on high school completion and college enrollment. Bayesian estimation is employed to accommodate the categorical and dichotomous variables and provide accurate estimates.

Chapter IV – Results

Demographic Data

Table 1 shows the demographics for the 155 African-American males tracked from 2002 to 2006 for the purposes of this study. Numbers and percentages are shown to indicate how the 155 African-American males are grouped according to socioeconomic status, academic achievement, student's educational expectations, others' educational expectations, and sports participation tendencies. Table 2 shows how many of the students, sports participants and not, completed high school and enrolled in college. Tables 3-8 show the correlations amongst the variables included in the study.

This study investigated, via path analyses, the direct, indirect, and total effects of high school sports participation in 10th grade on high school completion and college graduation for African-American males. Models for each type and level of sports participation were developed.

Prior to addressing the specific research questions formulated based on the hypothesized relationships among variables, however, a goodness of fit of the models was determined to ensure that the data fit each model constructed. In addition to the goodness of fit (GFI), adjusted goodness of fit (AGFI), and Root Mean-Square Residual (RMR) indices, significance for each individual path coefficient was also determined. Upon review of the non-significant paths, they were removed, along with variables involved in such non-significant relationships (e.g. participation in any sport, participation in team sport). Tables 9-14 show each of the path coefficients in the hypothesized models, along with the hypothesized models' goodness of fit indices. Figure 1 provides a graphic representation of the hypothesized model. After removing

variables (for which the probability level was less than .05), either due to non-significant paths or an attempt to obtain a better goodness of fit, from each of the models, the GFI, AGFI, RMR, and RMSEA indices represented a good fit, as table 27 shows. Interpreted like correlation coefficients (Lee, Harry, Puig, Newgent, and Nam, 2008), the closeness of the GFI and AGFI indices to 1 conveys a good fit of the data to the model. According to Olobatuyi (2006), RMR/RMSEA scores less than .08 are adequate, and scores less than .05 are good.

Table 1. Demographics for student population for the African-American male sample in 2002 (when in 10th grade)

Variable	Number N = 155	Percent 100
SES		
Quartile 1 (Low)	48	31
Quartile 2	55	35.5
Quartile 3	29	18.7
Quartile 4 (High)	23	14.8
Academic Achievement		
Quartile 1 (Low)	73	47.1
Quartile 2	43	27.7
Quartile 3	30	19.4
Quartile 4 (High)	9	5.8
Student Educational Expectations		
Don't Know	19	12.3
< HS Graduation	2	1.3
HS graduation or GED only	21	13.5
2-yrs of college	9	5.8
Attend 4-yr College, degree incomplete	15	9.7
Graduate from College	43	27.7
Master's Degree	24	15.5
Ph.D./other advanced degree	22	14.2
High School Sports Participation		
Did participate in at least one sport	107	69
Did NOT participate in at least one sport	48	31
Did participate in at least one team sport	107	69
Did NOT participate in at least one team sport	48	31
Did participate in at least one individual sport	12	7.7
Did NOT participate in at least one individual sport	143	92.3
Did participate in at least one intramural sport	84	54.2
Did NOT participate in at least one intramural sport	71	45.8
Did participate in at least one JV sport	60	38.7
Did NOT participate in at least one JV sport	95	61.3
Did participate in at least one varsity sport	52	33.5
Did NOT participate in at least one varsity sport	103	66.5

Table 2. Demographics for student population for the African-American male sample in 2006

Variable	Number N = 155		Number N = 155	
	High School Completion		College Attendance	
	Yes	No	Yes	No
Any Sports Participation				
Yes	85	22	56	51
No	35	13	25	23
Team Sports Participation				
Yes	85	35	56	51
No	22	13	25	23
Individual Sports Participation				
Yes	11	1	5	7
No	109	34	76	67
Intramural Sports Participation				
Yes	65	19	42	42
No	55	16	39	32
Junior Varsity Sports Participation				
Yes	52	8	35	25
No	68	27	46	49
Varsity Sports Participation				
Yes	43	9	27	27
No	77	26	54	49

Table 3. Any Sports Participation – Correlation table

		Student Exp	Acad Ach	SES	PartAnySport	HSCompletion	CollAttendance
StudentExp	Pearson Correlation	1.000	.368**	.262**	.135	.210**	.309**
	Sig. (2-tailed)		.000	.001	.095	.009	.000
	N	155.000	155	155	155	155	155
AcadAch	Pearson Correlation	.368**	1.000	.385**	.049	.304**	.278**
	Sig. (2-tailed)	.000		.000	.547	.000	.000
	N	155	155.000	155	155	155	155
SES	Pearson Correlation	.262**	.385**	1.000	.113	.316**	.350**
	Sig. (2-tailed)	.001	.000		.160	.000	.000
	N	155	155	155.000	155	155	155
PartAnySport	Pearson Correlation	.135	.049	.113	1.000	.072	.002
	Sig. (2-tailed)	.095	.547	.160		.372	.977
	N	155	155	155	155.000	155	155
HSCompletion	Pearson Correlation	.210**	.304**	.316**	.072	1.000	.380**
	Sig. (2-tailed)	.009	.000	.000	.372		.000
	N	155	155	155	155	155.000	155
CollAttendance	Pearson Correlation	.309**	.278**	.350**	.002	.380**	1.000
	Sig. (2-tailed)	.000	.000	.000	.977	.000	
	N	155	155	155	155	155	155.000

** Correlation is significant at the 0.01 level (2-tailed)

Table 4. Team Sports Participation - Correlation table

		StudentExp	AcadAch	SES	HS Completion	Coll Attendance	Team
StudentExp	Pearson Correlation	1.000	.368**	.262**	.210**	.309**	.135
	Sig. (2-tailed)		.000	.001	.009	.000	.095
	N	155.000	155	155	155	155	155
AcadAch	Pearson Correlation	.368**	1.000	.385**	.304**	.278**	.049
	Sig. (2-tailed)	.000		.000	.000	.000	.547
	N	155	155.000	155	155	155	155
SES	Pearson Correlation	.262**	.385**	1.000	.316**	.350**	.113
	Sig. (2-tailed)	.001	.000		.000	.000	.160
	N	155	155	155.000	155	155	155
HS Completion	Pearson Correlation	.210**	.304**	.316**	1.000	.380**	.072
	Sig. (2-tailed)	.009	.000	.000		.000	.372
	N	155	155	155	155.000	155	155
Coll Attendance	Pearson Correlation	.309**	.278**	.350**	.380**	1.000	.002
	Sig. (2-tailed)	.000	.000	.000	.000		.977
	N	155	155	155	155	155.000	155
Team	Pearson Correlation	.135	.049	.113	.072	.002	1.000
	Sig. (2-tailed)	.095	.547	.160	.372	.977	
	N	155	155	155	155	155	155.000

** . Correlation is significant at the 0.01 level (2-tailed).

Table 5. Individual Sports Participation – Correlation table

		StudentExp	AcadAch	SES	HS Completion	Coll Attendance	Individual
StudentExp	Pearson Correlation	1.000	.368**	.262**	.210**	.309**	.164*
	Sig. (2-tailed)		.000	.001	.009	.000	.041
	N	155.000	155	155	155	155	155
AcadAch	Pearson Correlation	.368**	1.000	.385**	.304**	.278**	.076
	Sig. (2-tailed)	.000		.000	.000	.000	.348
	N	155	155.000	155	155	155	155
SES	Pearson Correlation	.262**	.385**	1.000	.316**	.350**	.092
	Sig. (2-tailed)	.001	.000		.000	.000	.257
	N	155	155	155.000	155	155	155
HS Completion	Pearson Correlation	.210**	.304**	.316**	1.000	.380**	.099
	Sig. (2-tailed)	.009	.000	.000		.000	.222
	N	155	155	155	155.000	155	155
Coll Attendance	Pearson Correlation	.309**	.278**	.350**	.380**	1.000	-.061
	Sig. (2-tailed)	.000	.000	.000	.000		.448
	N	155	155	155	155	155.000	155
Individual	Pearson Correlation	.164*	.076	.092	.099	-.061	1.000
	Sig. (2-tailed)	.041	.348	.257	.222	.448	
	N	155	155	155	155	155	155.000

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 6. Intramural Sports Participation – Correlation table

		StudentExp	AcadAch	SES	HS Completion	Coll Attendance	Intramural
StudentExp	Pearson Correlation	1.000	.368**	.262**	.210**	.309**	.060
	Sig. (2-tailed)		.000	.001	.009	.000	.459
	N	155.000	155	155	155	155	155
AcadAch	Pearson Correlation	.368**	1.000	.385**	.304**	.278**	-.131
	Sig. (2-tailed)	.000		.000	.000	.000	.104
	N	155	155.000	155	155	155	155
SES	Pearson Correlation	.262**	.385**	1.000	.316**	.350**	.042
	Sig. (2-tailed)	.001	.000		.000	.000	.601
	N	155	155	155.000	155	155	155
HS Completion	Pearson Correlation	.210**	.304**	.316**	1.000	.380**	.000
	Sig. (2-tailed)	.009	.000	.000		.000	.990
	N	155	155	155	155.000	155	155
Coll Attendance	Pearson Correlation	.309**	.278**	.350**	.380**	1.000	-.049
	Sig. (2-tailed)	.000	.000	.000	.000		.543
	N	155	155	155	155	155.000	155
Intramural	Pearson Correlation	.060	-.131	.042	.000	-.049	1.000
	Sig. (2-tailed)	.459	.104	.601	.990	.543	
	N	155	155	155	155	155	155.000

** . Correlation is significant at the 0.01 level (2-tailed).

Table 7. Junior Varsity Sports Participation – Correlation Table

		StudentExp	AcadAch	SES	HS Completion	Coll Attendance	JVSPORT
StudentExp	Pearson Correlation	1.000	.368**	.262**	.210**	.309**	.217**
	Sig. (2-tailed)		.000	.001	.009	.000	.007
	N	155.000	155	155	155	155	155
AcadAch	Pearson Correlation	.368**	1.000	.385**	.304**	.278**	.081
	Sig. (2-tailed)	.000		.000	.000	.000	.319
	N	155	155.000	155	155	155	155
SES	Pearson Correlation	.262**	.385**	1.000	.316**	.350**	.059
	Sig. (2-tailed)	.001	.000		.000	.000	.470
	N	155	155	155.000	155	155	155
HS Completion	Pearson Correlation	.210**	.304**	.316**	1.000	.380**	.176*
	Sig. (2-tailed)	.009	.000	.000		.000	.029
	N	155	155	155	155.000	155	155
Coll Attendance	Pearson Correlation	.309**	.278**	.350**	.380**	1.000	.097
	Sig. (2-tailed)	.000	.000	.000	.000		.232
	N	155	155	155	155	155.000	155
JVSPORT	Pearson Correlation	.217**	.081	.059	.176*	.097	1.000
	Sig. (2-tailed)	.007	.319	.470	.029	.232	
	N	155	155	155	155	155	155.000

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 8. Varsity Sports Participation – Correlation table

		StudentExp	AcadAch	SES	HS Completion	Coll Attendance	Varsity
StudentExp	Pearson Correlation	1.000	.368**	.262**	.210**	.309**	.125
	Sig. (2-tailed)		.000	.001	.009	.000	.121
	N	155.000	155	155	155	155	155
AcadAch	Pearson Correlation	.368**	1.000	.385**	.304**	.278**	.079
	Sig. (2-tailed)	.000		.000	.000	.000	.329
	N	155	155.000	155	155	155	155
SES	Pearson Correlation	.262**	.385**	1.000	.316**	.350**	.079
	Sig. (2-tailed)	.001	.000		.000	.000	.329
	N	155	155	155.000	155	155	155
HS Completion	Pearson Correlation	.210**	.304**	.316**	1.000	.380**	.090
	Sig. (2-tailed)	.009	.000	.000		.000	.268
	N	155	155	155	155.000	155	155
Coll Attendance	Pearson Correlation	.309**	.278**	.350**	.380**	1.000	-.005
	Sig. (2-tailed)	.000	.000	.000	.000		.953
	N	155	155	155	155	155.000	155
Varsity	Pearson Correlation	.125	.079	.079	.090	-.005	1.000
	Sig. (2-tailed)	.121	.329	.329	.268	.953	
	N	155	155	155	155	155	155.000

** . Correlation is significant at the 0.01 level (2-tailed).

Table 9. Regression Weights for “Played Any Sport” Model

Chi-Square: 304

Squared Multiple Correlation: H.S. Completion (.145) College Attendance (.244)

RMR = .297 GFI = .694 AGFI = .327 RMSEA = .244

Path	Standardized Regression Weights	Unstandardized Regression Weights	Standard Error
Played Any Sport → Student Exp	-.080	-.417	.485
SES → Student Exp	.251	.591*	.169
Student Exp → Acad Ach	.289	.111*	.029
SES → Acad Ach	.313	.283*	.077
Played Any Sport → Acad Ach	-.026	-.052	.163
Acad Ach → HS Completion	.188	.084*	.038
Student Exp → HS Completion	.079	.014	.015
Played Any Sport → HS Completion	.027	.025	.074
SES → HS Completion	.220	.089*	.033
SES → College Attendance	.204	.099*	.038
Acad Ach → College Attendance	.052	.028	.043
Played Any Sport → College Attendance	-.068	-.073	.082
Student Exp → College Attendance	.189	.039*	.016
HS Completion → College Attendance	.265	.316*	.090

* p < .05

Table 10. Regression Weights for “Played Team Sport” Model

Chi-Square: 304

Squared Multiple Correlation: H.S. Completion (.145) College Attendance (.244)

RMR = .297 GFI = .694 AGFI = .327 RMSEA = .244

Path	Standardized Regression Weights	Unstandardized Regression Weights	Standard Error
Played Team Sport → Student Exp	-.080	-.417	.485
SES → Student Exp	.251	.591*	.169
Student Exp → Acad Ach	.289	.111*	.028
SES → Acad Ach	.313	.283*	.067
Played Team Sport → Acad Ach	-.026	-.052	.163
Acad Ach → HS Completion	.188	.084*	.038
Student Exp → HS Completion	.079	.014	.015
Played Team Sport → HS Completion	.027	.025	.074
SES → HS Completion	.220	.089*	.033
SES → College Attendance	.204	.099*	.038
Acad Ach → College Attendance	.052	.028	.043
Played Team Sport → College Attendance	-.068	-.073	.082
Student Exp → College Attendance	.189	.039*	.016
HS Completion → College Attendance	.265	.316*	.090

* p < .05

Table 11. Regression Weights for “Played Individual Sport” Model

Chi-Square: 352.7

Squared Multiple Correlation: H.S. Completion (.146) College Attendance (.258)

RMR = .356 GFI = .655 AGFI = .240 RMSEA = .264

Path	Standardized Regression Weights	Unstandardized Regression Weights	Standard Error
Played Individual Sport → Student Exp	.108	.277*	.130
SES → Student Exp	.236	.553*	.168
Student Exp → Acad Ach	.286	.110*	.028
SES → Acad Ach	.311	.281*	.067
Played Individual Sport → Acad Ach	.000	.002	.352
Acad Ach → HS Completion	.187	.084*	.038
Student Exp → HS Completion	.074	.013	.015
Played Individual Sport → HS Completion	.052	.082	.118
SES → HS Completion	.220	.089*	.033
SES → College Attendance	.204	.099*	.038
Acad Ach → College Attendance	.053	.029	.043
Played Individual Sport → College Attendance	-.144	-.270*	.158
Student Exp → College Attendance	.203	.042*	.016
HS Completion → College Attendance	.271	.323*	.090

* p < .05

Table 12. Regression Weights for “Played Intramural Sport” Model

Chi-Square: 339.1

Squared Multiple Correlation: H.S. Completion (.143) College Attendance (.241)

RMR = .344 GFI = .663 AGFI = .259 RMSEA = .243

Path	Standardized Regression Weights	Unstandardized Regression Weights	Standard Error
Played Intramural Sport → Student Exp	-.054	-.261	.385
SES → Student Exp	.247	.575*	.169
Student Exp → Acad Ach	.294	.113*	.028
SES → Acad Ach	.315	.285*	.065
Played Intramural Sport → Acad Ach	-.162	-.304*	.154
Acad Ach → HS Completion	.189	.085*	.039
Student Exp → HS Completion	.081	.014	.015
Played Intramural Sport → HS Completion	.010	.008	.064
SES → HS Completion	.222	.090*	.033
SES → College Attendance	.204	.099*	.038
Acad Ach → College Attendance	.042	.022	.044
Played Intramural Sport → College Attendance	-.063	-.064	.072
Student Exp → College Attendance	.189	.039*	.039
HS Completion → College Attendance	.263	.314*	.314

* p < .05

Table 13. Regression Weights for “Played Junior Varsity Sport” Model

Chi-Square = 343

Squared Multiple Correlation: H.S. Completion (.161) College Attendance (.238)

RMR = .337 GFI = .663 AGFI = .258 RMSEA = .260

Path	Standardized Regression Weights	Unstandardized Regression Weights	Standard Error
Played JV Sport → Student Exp	.095	.471	.394
SES → Student Exp	.239	.560*	.168
Student Exp → Acad Ach	.286	.110*	.029
SES → Acad Ach	.310	.281*	.066
Played JV Sport → Acad Ach	.000	.000	.177
Acad Ach → HS Completion	.188	.084*	.038
Student Exp → HS Completion	.053	.009	.015
Played JV Sport → HS Completion	.136	.117*	.066
SES → HS Completion	.222	.090*	.033
SES → College Attendance	.198	.096*	.038
Acad Ach → College Attendance	.055	.029	.043
Played JV Sport → College Attendance	-.005	-.006	.082
Student Exp → College Attendance	.183	.037*	.016
HS Completion → College Attendance	.263	.314*	.092

* p < .05

Table 14. Regression Weights for “Played Varsity Sport” Model

Chi-Square = 321.6

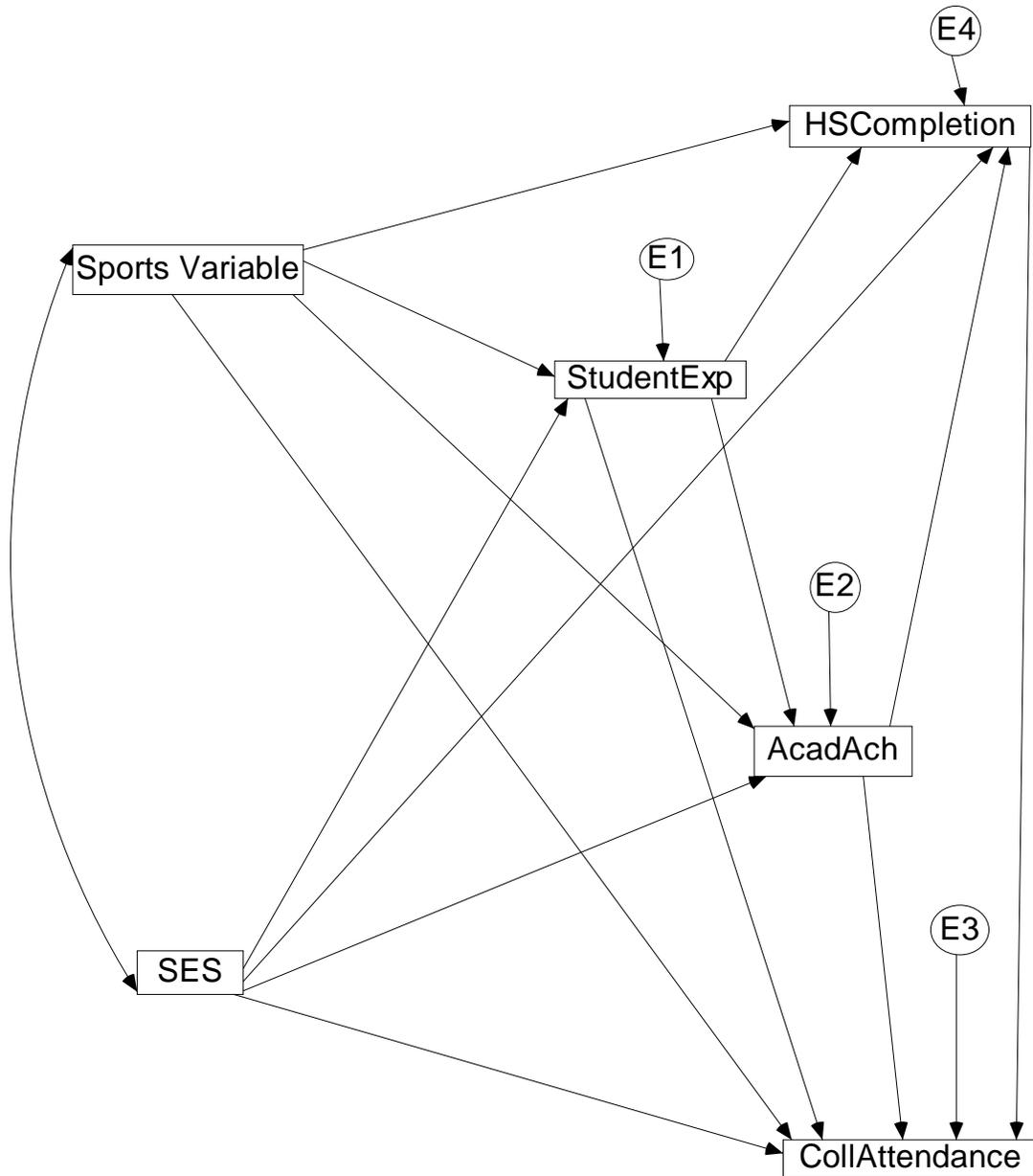
Squared Multiple Correlation: H.S. Completion (.146) College Attendance (.243)

RMR = .318 GFI = .678 AGFI = .251 RMSEA = .192

Path	Standardized Regression Weights	Unstandardized Regression Weights	Standard Error
Played Varsity Sport → Student Exp	-.005	-.027	.434
SES → Student Exp	.245	.572*	.169
Student Exp → Acad Ach	.284	.109*	.028
SES → Acad Ach	.309	.280*	.066
Played Varsity Sport → Acad Ach	.019	.037	.169
Acad Ach → HS Completion	.186	.084	.038
Student Exp → HS Completion	.077	.013	.015
Played Varsity Sport → HS Completion	.048	.042	.071
SES → HS Completion	.220	.089*	.033
SES → College Attendance	.200	.097*	.038
Acad Ach → College Attendance	.056	.030	.043
Played Varsity Sport → College Attendance	-.072	-.077	.084
Student Exp → College Attendance	.189	.039*	.016
HS Completion → College Attendance	.266	.318*	.091

* p < .05

Figure 1. Hypothesized Path Model for the Determinants of High School Completion and College Attendance



Research Question 1

What are the direct, indirect, and total effects of high school sports participation, socioeconomic status, student educational expectations, and academic achievement, on high school completion and college enrollment for African-American males?

A path analysis was applied to examine the relationship between participation in any high school sport, background variables, and high school completion and college enrollment for African-American males. One variable (i.e. participation in any sport) was removed from the final model due to, in part, non-significant relationships with all of the other variables involved, and generally to gain better goodness of fit indices. The relationships among the remaining variables in the model are presented in Figure 2. The numbers represented on the lines between variables are standardized regression weights (i.e. path coefficients). According to Stage, Carter, and Nora (2004), standardized regression coefficients facilitate the discernment of the relative importance of the different variables in the model. The .21, for example, on the path between socioeconomic status (SES) and college attendance signifies that for every 1.0 standard deviation increase in SES, there is a .21 standard deviation increase in college attendance. Olobatuyi (2006) suggests a negative standardized regression weight would indicate an inverse effect. Tables 15 and 16 summarize the standardized direct, indirect, and total effects of each of the predictor variables on high school graduation and college attendance, respectively. Regarding effect size, all of the variables in the model accounted for approximately 14% and 23% of the variance in high school completion and college enrollment, respectively.

Table 15. Standardized Direct, Indirect, and Total Effects (on HS Completion)
Model 1: Any Sport
Squared Multiple Correlation: .139
Chi-Square: 3.9

Predictor	Direct Effects	Indirect Effects	Total Effects
Socioeconomic Status	.234**	.082*	.316**
Student Expectations	.000	.061*	.061*
Academic Achievement	.213*	.000	.213*

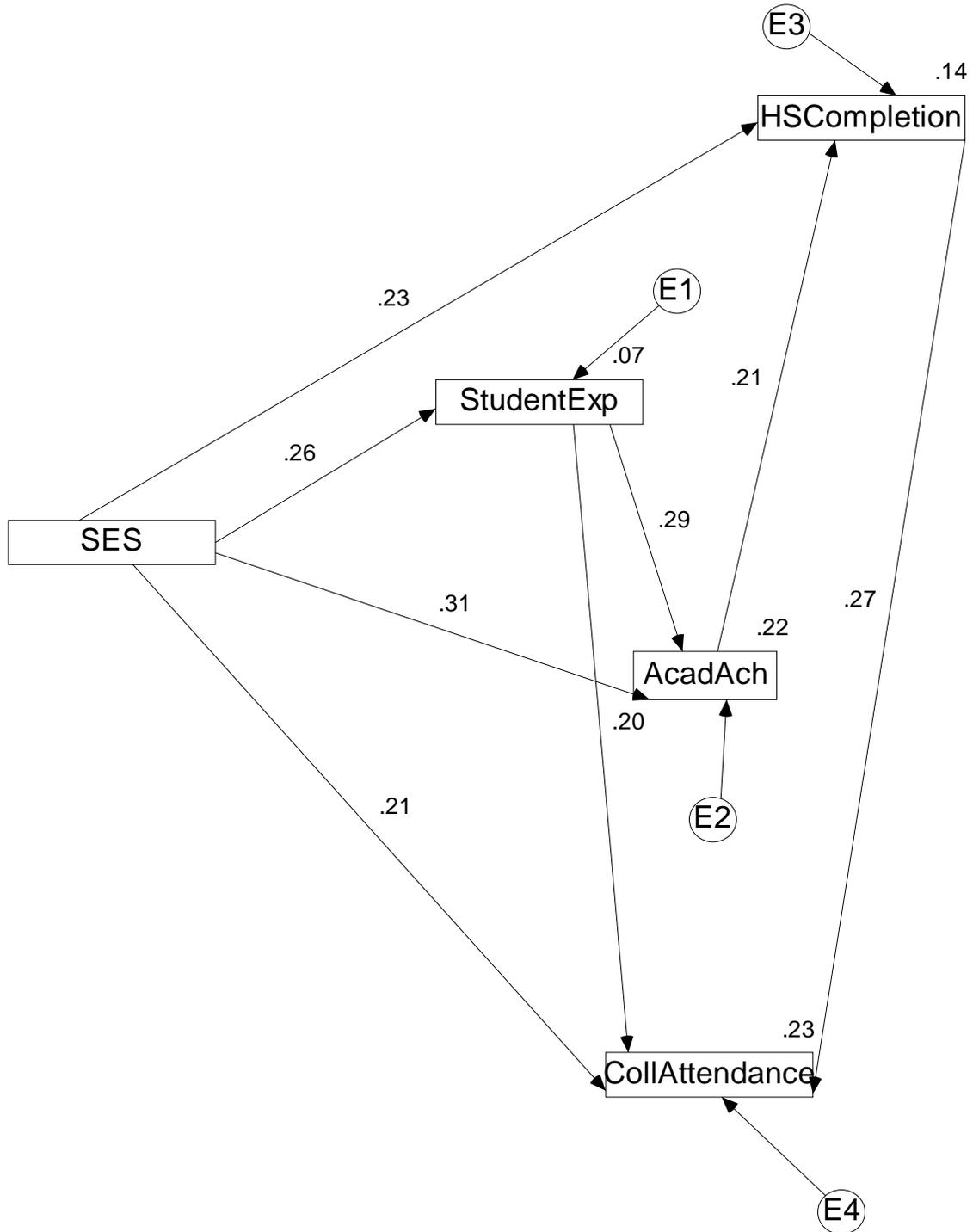
*p < .05 **p < .01

Table 16. Standardized Direct, Indirect, and Total Effects (on College Attendance)
Model 1: Any Sport
Squared Multiple Correlation: .232
Chi-Square: 3.9

Predictor	Direct Effects	Indirect Effects	Total Effects
Socioeconomic Status	.213**	.136**	.349**
Student Expectations	.197**	.017*	.214**
Academic Achievement	.000	.058*	.058*
HS Completion	.272**	.000	.272**

*p < .05 *p < .01

Figure 2. Any Sport - Path Model of the Determinants of High School Completion and College Enrollment



Research Question 2

What are the direct, indirect, and total effects of the type of high school sports participation (i.e. team versus individual), socioeconomic status, student educational expectations, and academic achievement on high school completion and college enrollment for African-American males?

Again, path analyses were applied to examine the relationships between participation in team and individual sports, background variables, and high school completion and college enrollment for African-American males. One variable (i.e. participation in team sports) was removed from the final model due to, in part, non-significant relationships with all of the other variables, and generally to obtain a better goodness of fit. The relationships among the remaining variables in the model are presented in Figures 3 and 4. Tables 17-20 summarize the direct, indirect, and total effects of each of the predictor variables, and particularly participation in individual sports, on high school completion and college attendance. Regarding effect size, all of the variables in the team sports model accounted for approximately 14% and 23% of the variance in high school completion and college enrollment, respectively, while the variables in the individual sports model accounted for 14% and 23% respectively as well.

Table 17. Standardized Direct, Indirect, and Total Effects (on HS Completion)
Model 2: Team Sports
Squared Multiple Correlation: .139
Chi-Square: 3.9

Predictor	Direct Effects	Indirect Effects	Total Effects
Socioeconomic Status	.234**	.082*	.316**
Student Expectations	.000	.061*	.061*
Academic Achievement	.213*	.000	.213*

*p < .05 *p < .01

Table 18. Standardized Direct, Indirect, and Total Effects (on College Attendance)
Model 2: Team Sports
Squared Multiple Correlation: .232
Chi-Square: 3.9

Predictor	Direct Effects	Indirect Effects	Total Effects
Socioeconomic Status	.213**	.136**	.349**
Student Expectations	.197**	.017*	.214**
Academic Achievement	.000	.058*	.058*
HS Completion	.272**	.000	.272**

*p < .05 *p < .01

Table 19. Standardized Direct, Indirect, and Total Effects (on HS Completion)
Model 3: Individual Sports
Squared Multiple Correlation: .139
Chi-Square: 4.3

Predictor	Direct Effects	Indirect Effects	Total Effects
Individual Sports Participation	.000	.008	.008
Socioeconomic Status	.234**	.081*	.315**
Student Expectations	.000	.061*	.061*
Academic Achievement	.213**	.000	.213*

*p < .05 *p < .01

Table 20. Standardized Direct, Indirect, and Total Effects (on College Attendance)
Model 3: Individual Sports
Squared Multiple Correlation: .256
Chi-Square: 4.3

Predictor	Direct Effects	Indirect Effects	Total Effects
Individual Sports Participation	-.145	.032	-.113
Socioeconomic Status	.218**	.141**	.359**
Student Expectations	.218**	.017*	.235**
Academic Achievement	.000	.060*	.060*
HS Completion	.280**	.000	.280**

*p < .05 *p < .01

Figure 3. Team Sports - Path Model of the Determinants of High School Completion and College Enrollment

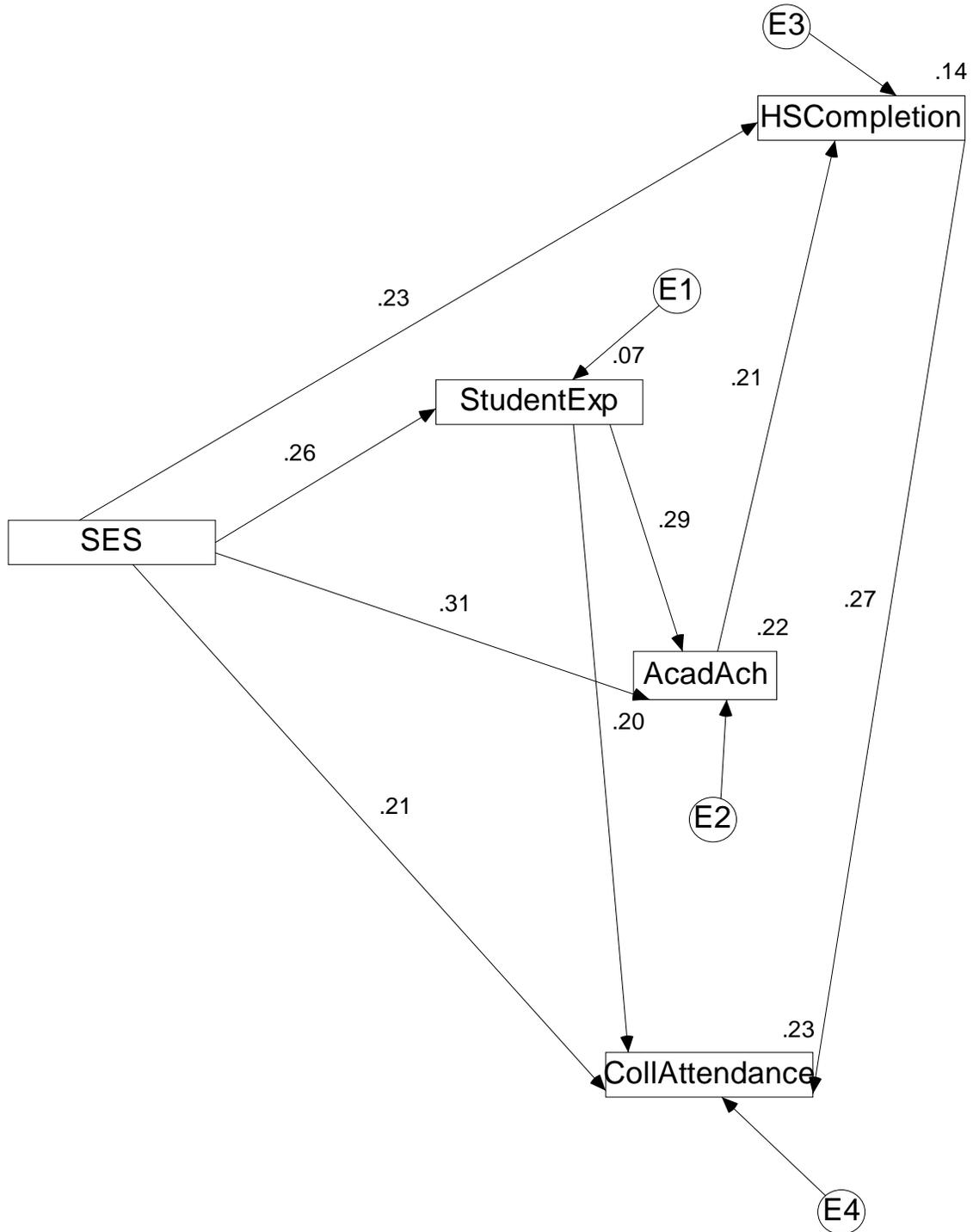
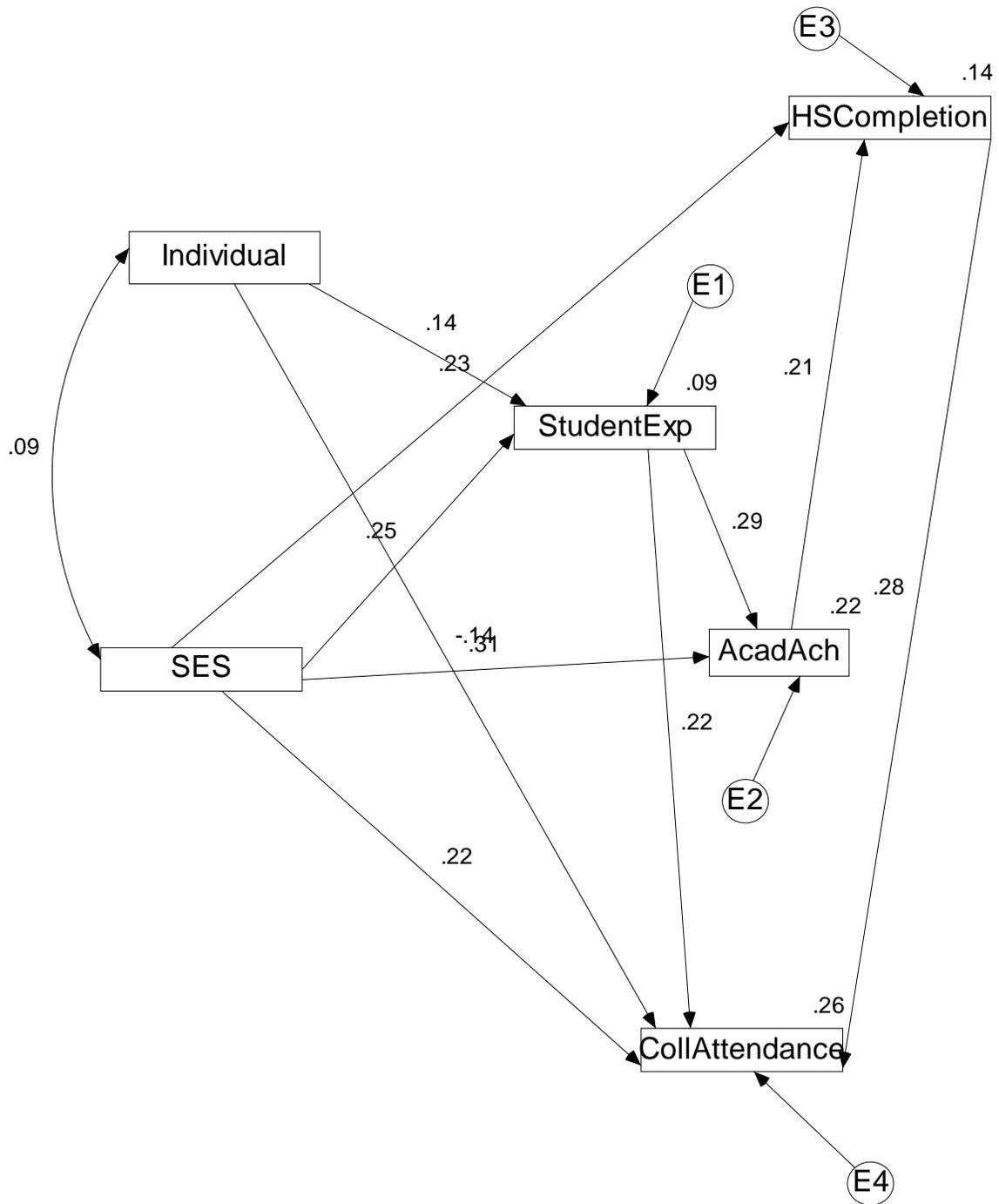


Figure 4. Individual Sports - Path Model of the Determinants of High School Completion and College Enrollment



Research Question 3

What are the direct, indirect, and total effects of the level of sports participation (i.e. intramural, junior varsity, varsity), socioeconomic status, student educational expectations, and academic achievement, on high school completion and college enrollment for African-American males?

Path analyses were again applied to examine the relationships between participation in intramural, junior varsity (JV), and varsity sports, background variables, and high school completion and college enrollment for African-American males. The relationships among the variables included in the model are presented in Figures 5, 6, and 7. Tables 21-26 summarize the direct, indirect, and total effects of each of the predictor variables, and particularly participation in intramural, junior varsity, and varsity sports, on high school completion and college attendance. Regarding effect size, all of the variables in the intramural sports model accounted for approximately 14% and 23% of the variance in high school completion and college enrollment, respectively. The variables in the junior varsity sports model accounted for 16% and 24% of the variance in high school completion and college enrollment, respectively. Lastly, the variables in the varsity sports model accounted for 14% and 23% of the variance in high school completion and college enrollment, respectively.

Table 21. Standardized Direct, Indirect, and Total Effects (on HS Completion)
Model 4: Intramural Sports
Squared Multiple Correlation: .139
Chi-Square: 4.8

Predictor	Direct Effects	Indirect Effects	Total Effects
Intramural Sports Participation	.000	-.035	-.035
Socioeconomic Status	.234**	.083*	.317**
Student Expectations	.000	.063*	.063*
Academic Achievement	.214**	.000	.214*

*p < .05 *p < .01

Table 22. Standardized Direct, Indirect, and Total Effects (on College Attendance)
Model 4: Intramural Sports
Squared Multiple Correlation: .233
Chi-Square: 4.8

Predictor	Direct Effects	Indirect Effects	Total Effects
Intramural Sports Participation	.000	-.009	-.009
Socioeconomic Status	.213**	.136**	.350**
Student Expectations	.197**	.017*	.215**
Academic Achievement	.000	.058*	.058*
HS Completion	.272**	.000	.272**

*p < .05 *p < .01

Table 23. Standardized Direct, Indirect, and Total Effects (on HS Completion)
Model 5: JV Sports
Squared Multiple Correlation: .160
Chi-Square: 3.8

Predictor	Direct Effects	Indirect Effects	Total Effects
JV Sports Participation	.146	.011	.157*
Socioeconomic Status	.229**	.077*	.307**
Student Expectations	.000	.058*	.058*
Academic Achievement	.203*	.000	.203*

*p < .05 *p < .01

Table 24. Standardized Direct, Indirect, and Total Effects (on College Attendance)
Model 5: JV Sports
Squared Multiple Correlation: .235
Chi-Square: 3.8

Predictor	Direct Effects	Indirect Effects	Total Effects
JV Sports Participation	.000	.078**	.078**
Socioeconomic Status	.213**	.131**	.344**
Student Expectations	.197*	.016*	.213**
Academic Achievement	.000	.055*	.055*
HS Completion	.272**	.000	.272**

*p < .05 *p < .01

Table 25. Standardized Direct, Indirect, and Total Effects (on HS Completion)
Model 6: Varsity Sports
Squared Multiple Correlation: .141
Chi-Square: 4.8

Predictor	Direct Effects	Indirect Effects	Total Effects
Varsity Sports Participation	.055	.006	.061
Socioeconomic Status	.231**	.080*	.311**
Student Expectations	.000	.060*	.060*
Academic Achievement	.210*	.000	.210*

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

Table 26. Standardized Direct, Indirect, and Total Effects (on College Attendance)
Model 6: Varsity Sports
Squared Multiple Correlation: .233
Chi-Square: 3.8

Predictor	Direct Effects	Indirect Effects	Total Effects
Varsity Sports Participation	.000	.038	.038
Socioeconomic Status	.213*	.133**	.346**
Student Expectations	.197*	.016*	.214**
Academic Achievement	.000	.057*	.057*
HS Completion	.272*	.000	.272**

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

Figure 5. Intramural Sports - Path Model of the Determinants of High School Completion and College Enrollment

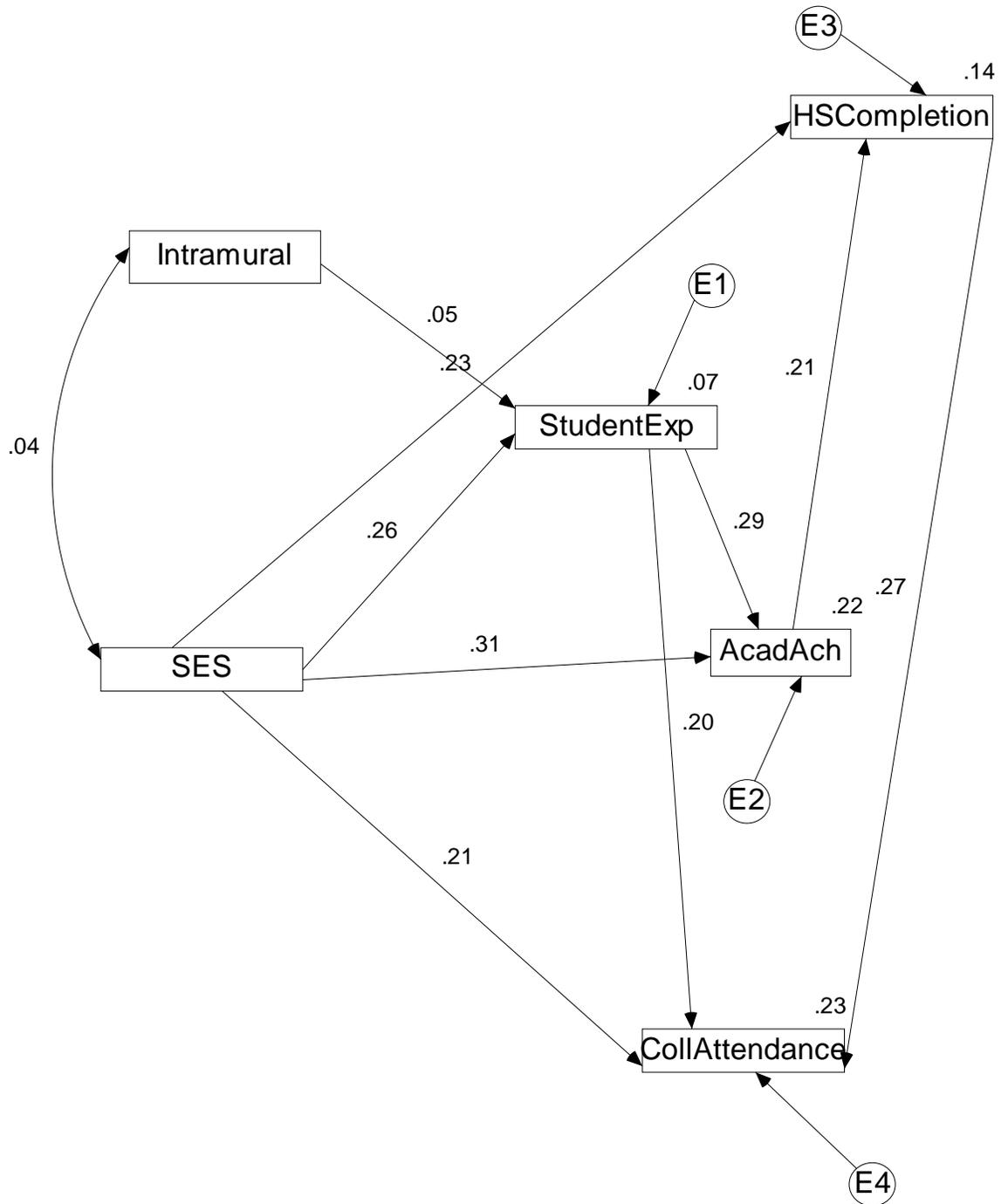


Figure 6. JV Sports - Path Model of the Determinants of High School Completion and College Enrollment

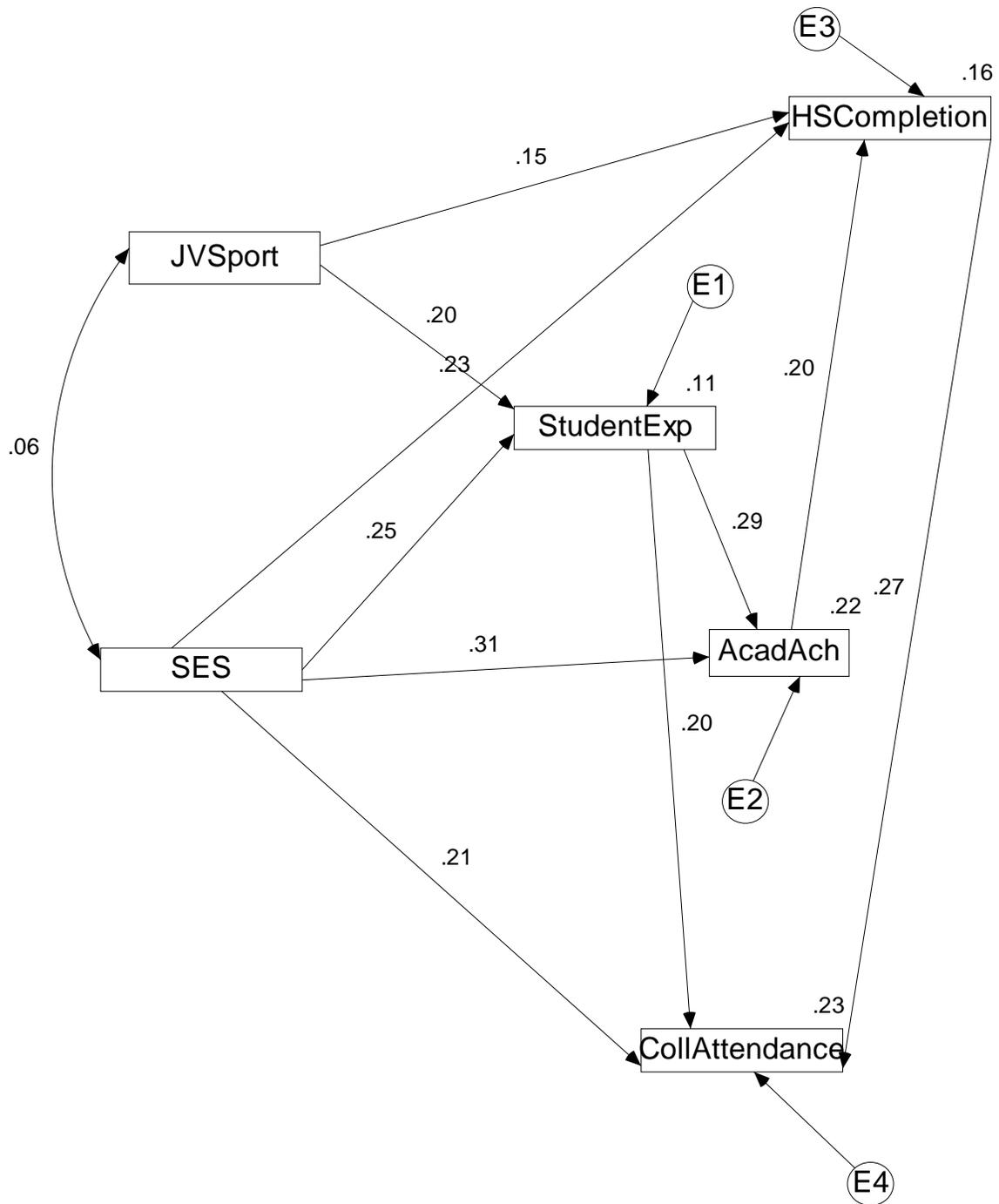


Figure 7. Varsity Sports - Path Model of the Determinants of High School Completion and College Enrollment

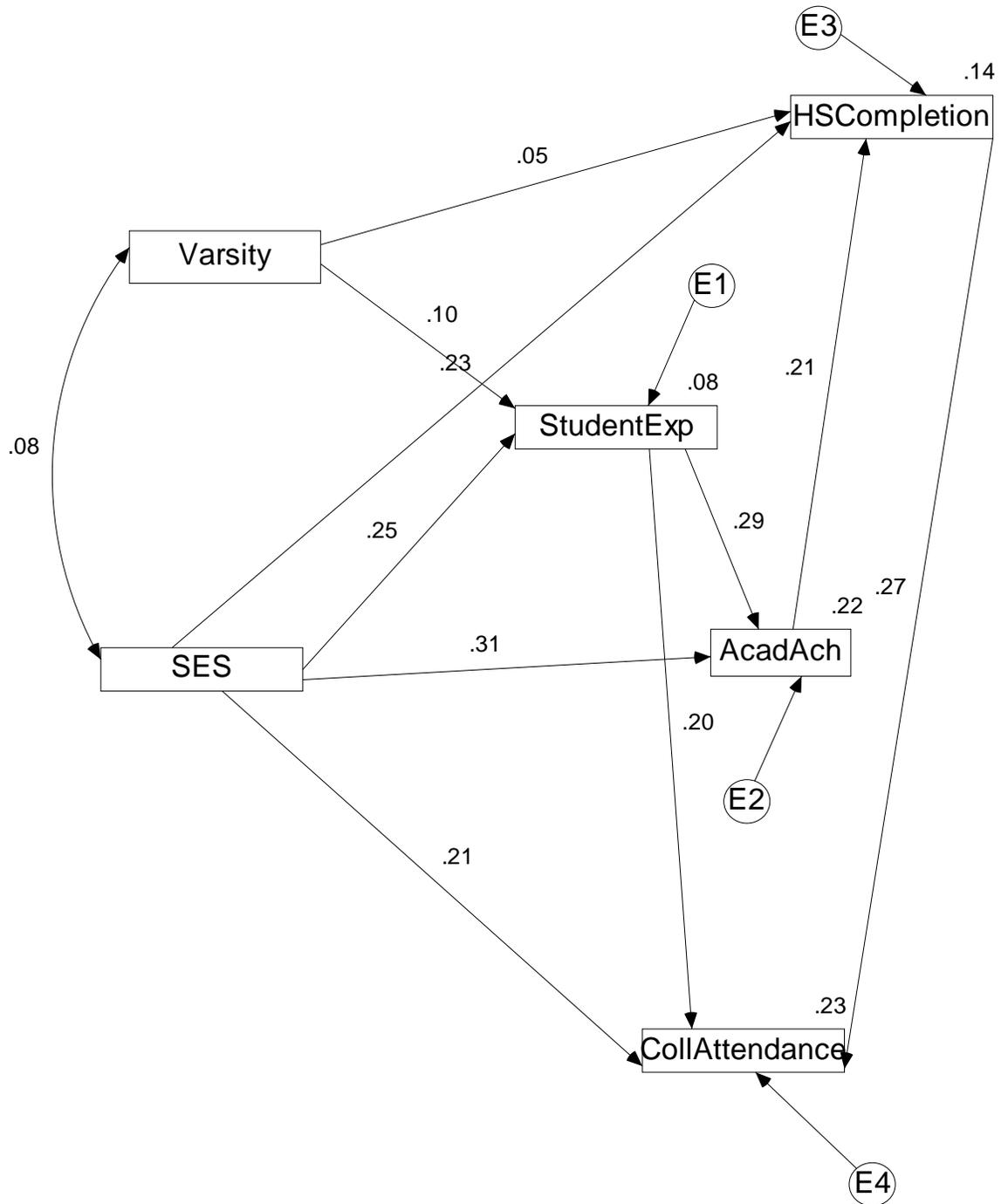


Table 27. Goodness of fit indices for final sports participation models.

Sport Participation Model	GFI	AGFI	RMR	RMSEA
Any Sport	.996	.971	.020	.000
Team	.996	.971	.020	.000
Individual	.996	.978	.017	.000
Intramural	.984	.931	.024	.058
JV	.998	.990	.011	.000
Varsity	.995	.972	.016	.000

Chapter V – Discussion

Summary

The purpose of this study was to determine the direct, indirect, and total effects of various types and levels of sports participation, educational expectations, and academic performance, on high school completion and college enrollment for African-American males. A path analysis procedure for determining underlying causal relationships between variables was presented for six different sports participation models. This was a secondary analysis, as the data from the Educational Longitudinal Study of 2002 was explored. After descriptive analyses were employed to describe the population (N=155), path analyses were performed to address the following three research questions:

- 1) What are the direct, indirect, and total effects of high school sports participation, socioeconomic status, student educational expectations, and academic achievement on high school completion and college enrollment for African-American males?
- 2) What are the direct, indirect, and total effects of high school sports participation (i.e. team versus individual), socioeconomic status, student educational expectations, and academic achievement on high school completion and college enrollment for African-American males?
- 3) What are the direct, indirect, and total effects of the level of sports participation (i.e. intramural, junior varsity, varsity), socioeconomic status, student educational expectations, and academic achievement on high school completion and college enrollment for African-American males?

It was hypothesized that sports participation (of every type and level) would negatively influence high school completion and college enrollment through student educational expectations and academic achievement. Due to desire to obtain an adequate goodness of fit for each model along with parsimony, certain paths and variables (i.e. any sports participation, team sports participation) were dropped from the initial hypothesized models. The model was adequate (in terms of it fitting the data) after they were removed.

The direct, indirect, and total effect of socioeconomic status on high school completion and college enrollment was positive and significant for African-American males across all sports participation models. The indirect and total effect of student educational expectations on high school completion was positive and significant, while the direct, indirect, and total effect of student educational expectations on college enrollment was positive and significant. The direct and total effect of academic achievement on high school completion was positive and significant for African-American males, while the indirect and total effect of academic achievement on college enrollment was positive and significant. The direct and total effect of high school completion on college enrollment also proved to be positive and significant.

The only sports participation variable to have a significant effect on either high school completion or college attendance was that of junior varsity sports participation significantly influencing (totally) high school completion and (indirectly) college attendance for African-American males. The effect was positive.

Discussion

The results of this study suggest that African-American males' participation in high school sports, except for junior varsity sports participation, does not significantly help or

hinder their educational attainment, particularly with regard to high school completion and college enrollment. The sports-impedes-mobility hypothesis (Braddock, 1981), as mentioned in other sports participation studies, was not significantly supported. A number of reasons may account for this. Perhaps, for example, sports as an argued exploitative mechanism is simply lying dormant until later in life (i.e. college) where the disparity is more pronounced? Perhaps race and gender serve to neutralize the positive results that others (e.g. Marsh, 1993, Broh, 2002) posit sports to have on K-12 educational attainment?

The path analyses did serve to further clarify previous sports participation and educational attainment research (Picou et al., 1985, Sabo et al., 1993, Eide and Ronan, 2001), many of which controlled for certain variables to determine direct effects. By detailing the effects of sports participation by type and level, it added depth to the results of previous studies (e.g. Spreitzer, 1994) that only looked at varsity sports as a sports participation indicator. Using path analysis, the indirect effects (where applicable, namely junior varsity sports), for example, were more readily visible and understood. Participation in junior varsity sports proved to be the only sports participation variable to have a significant effect on educational attainment, namely high school completion and college enrollment. This result supports previous research (e.g. Braddock, 1981; Eide and Ronan, 2001) reflective of the sports-enhances-mobility hypothesis.

Given that junior varsity sports participation had a positive effect on student educational expectations and high school completion, in particular, one may argue that early on there is a benefit, but as an athlete gains more elite status, that may change. While the varsity sports' model does not confirm this with any significant results, future

research is warranted at the higher education level to determine if the students' high school sports participation (and perhaps beyond) benefited them with regard to their educational attainment.

Further, the direct and indirect effects of other relevant factors in the educational attainment process are more easily understood. For example, the socioeconomic status of the African-American males in this study, as consistent with previous studies (e.g. Ou and Reynolds, 2008; Rowan-Kenyon, 2007) does have a positive and significant effect on both high school completion and college enrollment. It is further understood that socioeconomic status also has an indirect effect on high school completion and college enrollment through student expectations, academic achievement, and high school completion. Given the national achievement gap, and college enrollment disparities that exist already between Whites and African-Americans, the gap is only further exacerbated when African-American males are impoverished. Academic achievement, another consistent factor noted in previous studies on educational attainment (e.g. Alexander et al., 1997), was found to be positively and significantly related to high school completion (directly) and college attendance (indirectly). The hypothesized path model, which is based on previous research (e.g. Ensminger and Slusarcick, 1992; Rowan-Kenyon, 2007) and posited that academic achievement would have a significant effect on both, is supported. Also confirming prior research (e.g. Cook, 2008), student educational expectations prove to have a positive and significant direct and indirect effect on college attendance. While it did not have a significant direct effect on high school completion, it did have a positive and significant indirect effect on it through academic achievement.

Implications

The school counselor has the very challenging opportunity of managing the educational/vocational path of African-American males, who are often subject to very negative circumstances that serve as barriers to such development. The results of this study suggest that while school counselors need to pay close attention to the educational attainment process of all African-American males, particular attention is warranted for those African-American male athletes from socioeconomically disadvantaged backgrounds. Consistent with previous research (e.g. Edwards, 1969; Majors, 1998; Rhoden, 2006) this particular group tends to be drawn to sports in an effort to escape their current social condition. For a group that can often feel powerless and locked out of social, political, and economic opportunities, sports provides a place to release suppressed anger and aggression, and feel powerful (Majors, 1992). School counselors must be diligent in coordinating efforts to ensure that this group, and African-American male athletes across the socioeconomic spectrum, closely knit their athletic endeavors to strong educational plans. There must be consistent advocacy efforts to create opportunities for success for them in addition to whatever success they are achieving in the sports arena. African-American male athletes must feel empowered to succeed educationally as well as athletically. "Empowerment can be defined as a process of increasing personal, interpersonal, or political power so that individuals, families, and communities can take action to improve their situations" (Holcomb-McCoy, 2007, p. 40). Such facilitated success opportunities could involve mentoring programs with rites of passage ceremonies, summer enrichment programs, honors and Advanced Placement class exposure, and volunteering opportunities. Further, advocacy efforts in, for example,

parent/teacher conferences, and conversations with coaches can provide the needed voice for students when they are at a crossroads of choosing academic or athletic pursuits and possibly neglecting the other. “Advocacy is defined as action taken by counselors to facilitate the removal of external and institutional barriers for students’ well being” (Holcomb-McCoy, 2007, p.40). According to Lee and Hipolito-Delgado (2007), it involves the process of arguing for a cause, either for one’s self or for another. Such programmatic efforts will help to address the expectations, for example, of African-American male students of their own prospective educational attainment. Given the consistent significant relationship between student educational expectations and educational attainment, such intervention will certainly be worthwhile.

School counselors must first educate themselves about the context from which the students come, and increase their level of awareness of their own background and how their biases will influence their work with this population. With this foundation, the school counselor can then lead efforts to ensure that students’ participation in sports are linked with a solid educational agenda. This, unfortunately, is not always the case, as athletes (particularly the high-profile, heavily recruited athletes) may experience greater leniency as it relates to academics so as not to preclude them from progressing in their athletic endeavors. The pressure in this regard can be great upon the shoulders of school counselors, as coaches, parents, college recruiters, and even the school counselor’s knowledge of the possible disadvantaged backgrounds can tempt one to participate in the process of “passing” the student athlete through school in an effort to “help” him capitalize on athletic opportunities. Working with parents, teachers, and coaches, in particular, school counselors can help to ensure that African-American males’

participation in sports does significantly relate to their educational attainment. The potential for sports as a mobilizing mechanism for African-American males is great given that they continue to be drawn to them.

School counselors must also be knowledgeable about NCAA eligibility requirements so that they can appropriately advise students and families about the necessary prerequisites to be met to be a student-athlete in college if that is their desire.

Future research in this area should explore what about the junior varsity sports participation relates, directly and indirectly, to educational attainment. What, for example, about the students who self-select for this level of sports differs from those who participate in team and/or varsity sports? Further, given that sports functions within a complex system of which students are a part, future studies should explore more of that system to gain additional understanding of the dynamics surrounding African-American males' draw to, and possible benefit/hindrance from sports. School-level variables such as whether or not a school is in a high poverty area, or if the school is more known for its sports teams than its academic prowess are worth attention. Future research may also include examining the factors associated with resilience for those African-American males who may have been from backgrounds that do not typically lead to positive educational attainment outcomes but have excelled and attained. Also, it would be particularly useful to know how African-American athletes compare with non-athletes with regard to certain college preparatory requirements, such as strength of curriculum and grade point average, given that on the surface it does not appear to have an significant effect on the completion of high school or college enrollment. That data would

lend itself well to explaining what may be observed with regard to retention of African-American male athletes at colleges and universities.

Limitations

The AMOS (Analysis of Moment Structures) program, employed in this study, is a structural equation modeling program that facilitates study of causal relationships between variables via path analysis. However, it does not take into account weights provided by large nationally representative datasets such as the Educational Longitudinal study of 2002. Panel weights are provided by ELS: 2002 because a group of students were followed over a period of time, and they help to account for unequal probabilities of selection, as well as to adjust for the effects of nonresponse. Thus, they allow for the generalization of the results to the national population. Unweighted estimates, which are provided in this study, may not be representative of the population. While the results of this study may only be applicable to the sample under review, the results of this study should not be ignored as they still confirm previous findings regarding the educational attainment process, and they pose new questions to be explored in future research. Future research might consider, for example, using a program that can incorporate panel weights so that the results could be applicable beyond that of the sample.

Another limitation, as is the case with many sports participation studies, is the selectivity factor (i.e. the common factors associated with who is choosing to participate in sports). While it is very difficult to account for this, future research should include more extensive controls for the selectivity factor—for example, perhaps the data can be disaggregated by school type (public/private, urban/suburban/rural, etc.). Further, the college completion rates should also be considered in future studies, so as to observe the

path of high school sports participation toward the ultimate credential of necessity in today's society, a bachelor's degree.

Conclusion

This study investigated the relationship between various sports participation variables and socioeconomic status, academic achievement, student educational expectations, and high school completion and college enrollment. Two of the sports variables (i.e. any sport and team sport) were removed from the models due to their lack of significance with any of the considered variables in this study and/or the reduced goodness of fit of the models with their inclusion. The adjusted models obtained adequate goodness of fit indices, while the originals had not. Overall, however, the findings produced by the path analyses did support the findings of earlier studies, in that socioeconomic status, educational expectations, and academic achievement proved to be critical in the educational attainment process of African-American males, while the sports participation effect was minimal. Needed clarification, though, was provided by this study due to the path analyses. Whereas many studies involving sports participation and educational attainment control for variables during the regression analyses, path analyses facilitated the understanding of both direct and indirect effects of sports participation and other variables on educational attainment.

Appendix

*The following codes represent the questions asked of the students in the Educational Longitudinal Survey of 2002/2006:

G10COHRT – Sophomore cohort member in 2001-2002

Sex (BYSEX) – Composite variable indicating gender of student (male or female)

Race (BYRACE) – Composite variable indicating student's race/ethnicity [American Indian/Alaska native (non-Hispanic), Asian or Hawaii/Pacific Islander (non-Hispanic), Black or African-American (non-Hispanic), Hispanic (no race specified), Hispanic (race specified, Multiracial (non-Hispanic, and White (non-Hispanic)].

BYSES1Q – Composite socioeconomic status variable. Based on five equally weighted, standardized, components: father's/guardian's education, mother's/guardian's education, family income, father's/guardian's occupation, and mother's/guardian's occupation.

BYSTEXP – Composite variable indicating how far in school a student expects to get (less than high school graduation, high school graduation or GED only, attend or complete a 2-year course in a community or vocational school, attend college but not complete a 4-year degree, graduate from college, obtain a master's degree or equivalent, obtain a Ph.D., M.D. or other advanced degree).

BYTXCSTD – Standardized test composite score (Math/Reading): average of the math and reading standardized scores.

BYS39A – Played intramural baseball

BYS39C – Played intramural basketball

BYS39D – Played intramural football

BYS39E – Played intramural soccer

BYS39F – Played other intramural sport

BYS39G – Played an individual intramural sport

BYS40AC – Played junior varsity baseball

BYS40AD – Played varsity baseball

BYS40CC- Played junior varsity basketball

BYS40CD – Played varsity basketball

BYS40DC – Played junior varsity football

BYS40DD – Played varsity football

BYS40EC – Played junior varsity soccer

BYS40ED – Played varsity soccer

BYS40FC – Played on other junior varsity team

BYS40FD – Played on other junior varsity team

BYS40GC – Played junior varsity individual sport

BYS40GD – Played varsity individual sport

F2A01 – Whether or not student has received diploma, certificate, GED, or equivalent

F2B07 – Whether or not student has ever attended postsecondary school (college, university, vocational-technical or trade school)

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