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Beyond Stacking: An Exploration of the Impact of Background on Leadership Recruitment and Positional Segregation in Division-I Womens Basketball

Sonja Robinson

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**BEYOND STACKING: AN EXPLORATION OF THE IMPACT
OF BACKGROUND ON LEADERSHIP RECRUITMENT AND
POSITIONAL SEGREGATION IN DIVISION-I
WOMEN'S BASKETBALL**

by

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DISSERTATION

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Requirements for the Degree of

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Physical Education, Sports and Exercise Sciences

The University of New Mexico
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DEDICATION

I would like to dedicate this dissertation and my continued pursuit of knowledge to my mother, Brenda, forever our biggest fan, who is always prepared to cheer for the next big endeavor—even if we have to explain it first.

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Always first is God, through whom all things can be—and are—accomplished. For ordered steps, provision, and protection, I give thanks.

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I would also like to thank the participants of this study: staff and team members of Division-I Women’s Basketball teams during the 2012-2013 season. Without their input and willingness to share, this study would not have been possible.

Finally, to my big sister, Tonya, and my entire family, thank you for sharing in this journey with me. Your prayers, words, smiles, and constant encouragement have been invaluable.

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ABSTRACT

Sports are often seen as vehicles of social and career mobility, especially at the collegiate levels where full athletics scholarships grant students access to higher education. While sport, on the surface and at its best, espouses the values of equality and merit, studies examining under-representations of minority groups in key roles indicate that more work needs to be done on inclusiveness and equity.

Leadership recruitment studies in sport traditionally evaluate the influence that playing positions have on career mobility (Grusky, 1963). Loy and Elvoug (1970) expanded upon that tradition to develop positional segregation (“stacking”) research, which explores the influence of racial or ethnic characteristics on the playing positions assignments for athletes. In addition to testing for the evidence of traditional interpretations of leadership recruitment and positional segregation, this study explored the potential of adding different predictor variables to models relating playing position to career mobility (for coaches) and race/ethnicity (for athletes). Using intersection theory as a framework for understanding the ways in which race, class, and gender function together in the lived experiences of individuals, this study explored the influence that an

individual's biographical characteristics have on the assignment of playing positions and attainment of coaching positions specific to women's intercollegiate basketball.

Two sets of participants (Division-I Women's Basketball coaches and players) were invited to complete online surveys designed to collect demographic and experiential information related to their involvement in women's basketball. Logistic regression, correlation, and chi-square analyses were used to evaluate the various hypotheses. The results supported the traditional test of leadership recruitment within the coaches' sample. Coaches were more likely to have played a central position during their playing careers than a non-central position; a finding that was especially true for head coaches, whose majority were formerly point guards. The findings also indicated that there was evidence of racial and sex bias for both the presence of minorities and women in coaching and in the valuation of their experiences as players. The race/ethnicity of the individual revealed no influence on his/her attainment of position hierarchy within a coaching staff; however, race/ethnicity was a significant bias for head coaches.

The results from the student-athlete sample did not support the traditional test of positional segregation, in that the race/ethnicity of the individual did not act as a statistically significant predictor of playing position assignment. Moving beyond the basic interpretation of specific playing positions as a measure of centrality, the results of the study confirmed the alternative hypothesis that race and class interacted in ways that affected the level of centrality associated with an individual's role on the team. An exploratory measure of access provided additional insight into the developmental experiences of student-athletes. The analyses revealed that the influence of access on role centrality was greater for minority athletes. The findings of this study suggest that addressing intersecting identities may be more relevant in the analysis of disparity in sport research than addressing race/ethnicity alone.

Keywords: leadership recruitment, positional segregation, race, ethnicity, socioeconomic status, stacking

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CHAPTER 1 - INTRODUCTION

The relationship between contemporary sport and society is—to some extent—romanticized fiction. Highlights of dramatized on-field and on-court interactions play daily across television screens to the backdrop of movie-worthy musical scores. Sport marketers, well skilled in the art of selling the intangibles of the sport product (with an upsell of merchandise on the side), employ countless tricks to increase the hype surrounding the nature of play in American society. Sport enjoys a reputation for being the one true domain in American industry where meritocracy thrives. The plight of the underdog is cheered and ultimately rewarded with success and social mobility. With these elements, sport becomes both the fodder for and the answer of dreams, but eventually, the credits on the movie screens scroll, the music stops, and reality shines bright.

The truth about sport is that its role in society as a social institution is uniquely reciprocal. As a public stage where dominant values are played out and reinforced, sport in the United States is often referred to as a microcosm—or miniature replication—of American society (McDowell, Cunningham, & Singer, 2009). As such, many of the ideologies exhibited through sporting activities are merely extensions of those at work externally. On the other hand, sport has the power to change the ideologies of society at large through the representation and confirmation of shared values esteemed by the venerated winners. Sport was one of the first non-government American industries to integrate, and it did so with much flair with the addition of Jackie Robinson to the Brooklyn Dodgers in 1947. While not denying the beneficial impact of Robinson's integration, Shropshire (1996) warned that some of the motivation for integration was economical. As an illustration of this, the author pointed out that the signing of Jackie Robinson brought a previously untapped market of fans to the stadiums in droves. Ultimately, while integration in sports began many generations ago, it has yet to truly become a successful practice across the leagues.

The true scale of racial integration in sports, or any other organization, is not judged simply as the mere presence of diverse racial and ethnic group members within the organization. As Chappell and Karageorghis (2001) warned, true integration does not

happen until minority groups are represented in proportionate ratios of membership. In addition, for integration to be successful, it must take place in all of the key functionary levels of the organization, specifically in areas of leadership. Studies showing that Blacks are not equally represented in the positions of head coaches, sportscasters, managers, and directors, suggesting that genuine integration of the sports realm has not yet been achieved (Evans, 1997).

While sport, on the surface and at its best, espouses the values of equality and merit, studies examining under-representations of minority groups in key roles indicate that more work needs to be done. In response to the social and civic unrest of the 1960s and 1970s, reports of the under-representation of minorities in sports garnered much attention. As the years have passed, however, attention to this issue has waned in lieu of greater numbers of minorities participating in sports. The increases of minority representation in players lends support to the misconception that all things in sport—including and perhaps most importantly, access and opportunity—are equal.

In general, simple examinations of racial group percentages reveal that rank profiles in major sports do not match proportionately among management and players. For example, Lapchick's (2012) National Basketball Association (NBA) Racial and Gender Report Card showed startling mismatches between players (78% Black), head coaches (47% Black), assistant coaches (41% Black), and CEO's (13% Black). Evans (1997) held that racial discrimination in hiring practices has shifted to a more subtle emphasis on experience and capabilities. His stance implied that part of the issue with disproportionate positions in sport organizations is the lack of skill minorities have for those jobs. Chu and Segrave (1981) found that in basketball, athletes having played the guard position were more likely to become head coaches over athletes in other playing positions. This result proposes that for athletes on sports teams, playing positions carry different degrees of weight in the areas of importance and leadership. The suggestion that different players are ascribed different key functionary playing position roles based on their race is the fundamental idea behind “stacking” or positional segregation studies.

Stacking, Centrality, and Leadership Recruitment

The research tradition dedicated to positional segregation in sports is concerned with the patterns of racial/ethnic participant dispersion that occurs in the allocation of

playing position. The underlying investigation in stacking studies—that minority athletes are underrepresented in central playing positions—dates back to a seminal study conducted by Grusky in 1963. In his study, Grusky related propositions regarding formal organizational structure to the management of major league baseball teams. The author categorized baseball playing positions as high or low interactors based upon three factors: (1) spatial location, (2) nature of task, and (3) rate of interaction with key positions. Grusky's study serves as the original foray into a research tradition similar to that of positional segregation studies, that of leadership recruitment. Leadership recruitment studies relate playing positions to management; Grusky's study in particular looked at the former playing positions of baseball managers, finding that managers were significantly more likely to have played a position of high interaction.

In 1962, Blalock related propositions about occupational discrimination to professional baseball. His analysis sought to understand the nature of positive and negative advantages of integration, using professional baseball as an example. The theoretical propositions that resulted from Blalock's observation of baseball became the foundation for the centrality theory of positional relations. In 1970, Loy and Elvogue combined the works of Grusky (1963) and Blalock (1962) in their paper, which introduced the concept of centrality as a method of analyzing the rate and nature of interaction among members of a group. The authors generalized the propositions proposed by Blalock into the following theoretical statement: "discrimination is positively related to centrality," (p. 7). Their study proposed that racial segregation patterns in the playing positions of American professional sport shared a positive relationship with the theory of centrality. The results supported the hypothesis in showing that Black players were underrepresented in baseball and football positions that were categorized as central based on interaction rates and spatial locations. In a similar fashion, occupational segregation investigations in sport often evaluate the racial/ethnic distributions of members in leadership positions. These investigations (such as Lapchick's Racial and Gender Report Cards) reveal the underrepresentation of minorities in coaching, management, and administrative positions of sport organizations.

This study expanded upon existing research in the areas of leadership recruitment, occupational segregation, and positional segregation (stacking) by looking at relative

participation patterns in Division-I Women's Basketball. To begin, a leadership recruitment analysis of current women's basketball coaches was conducted to relate their former playing position with their position within the coaching staff. Using racial identity as an additional variable in the investigation of leadership recruitment patterns, the study also analyzed the presence of occupational segregation in the coaching ranks. Evidence of leadership recruitment patterns between former playing position and current staff position supported the additional analysis of the stacking of players. An analysis of positional segregation was conducted, seeking to evaluate the relationship between racial identities and playing positions of Division-I Women's Basketball players. This cross-sectional investigation evaluated the centrality of positions in the highly interactive sport of basketball, adding a variable of socioeconomic status (SES) with the aim of revealing interaction effects on the dependent variables. Additionally, a predictor variable representing access was evaluated and a proposed valuation of centrality was introduced.

Overall, stacking studies reveal significant disproportionate racial and ethnic distributions of playing positions but differ in their interpretations and explanations of the results. Many authors have suggested that evidence of stacking arises from the discrimination of minority players via the assumptions and stereotypes of their intelligence, leadership, and skill (Coakley, 2007a). In contrast, as alternative explanations to discrimination for stacking results in sports, other authors have proposed biology/genetics (Entine, 1999; 2001), role-modeling/self-selection (McPherson, 1975), and socioeconomic indicators (Kahn, 2000; Medoff, 1986). As the majority of the stacking research that has been conducted over the past forty years has focused on the professional ranks, there has been a dearth of research on stacking in both intercollegiate and women's sports.

Purpose of the Study

The purpose of this study was to explore the relationships between demographic, experiential, and contextual factors with centrality for coaches and players involved in Division-I Women's basketball.

Assumptions

This study was based on the following assumptions:

- The survey instruments were valid measures of the investigated constructs.

- Participants provided honest and accurate answers to the survey questions.
- Participant responses were given independently of bias or influence of social desirability.

Key Definitions

The following definitions of key variables and terms are provided to familiarize the reader with the concepts, as they will be used frequently throughout the document.

- Access: circumstances that allow individuals to take advantage of opportunities for social or career mobility.
- Central Position/ High-Interactor: positions considered highest on the centrality scale; based on Loy and Elvogue's (1970) work with playing positions in sport and their spatial proximity to team interaction.
- Centrality Theory: theory presented by Loy and Elvogue (1970) as an expansion of Grusky's (1963) three aspects of position interaction; posits that the more central a position is in its spatial location, the greater its importance and interaction with other key positions on the team.
- Disparate Impact: legal theory in employment law for measuring the effects of discrimination in policy; outcomes of a policy that appears neutral on its face, but results in adverse impact on members from constitutionally protected classes (Bennett-Alexander & Hartman, 2009).
- Disparate Treatment: implication of intentional differences in the treatment of "similarly situated" individuals on the basis of their membership in a protected class (Bennett-Alexander & Hartman, 2009 p. 817).
- NCAA Division-I, -II, -III: three competition levels of member institutions under the oversight of the National Collegiate Athletic Association; Division-I is considered to be the most competitive as it is the only one which grants full scholarships to the majority of its participants. (NCAA, n.d.-a)
- Ethnicity: refers to the characteristics used in a system of classifying groups of people based on their shared heritages or cultures.
- Leadership Recruitment: refers to the research tradition that evaluates the assignment of former athletes to positions in sport management based on the centrality of their former playing positions.

- Non-Central/ Periphery/ Marginal Position/ Low Interactor: playing positions that rate low on the centrality scale because they are spatially situated away from the main action and/or rarely interact with other key positions.
- Occupational Segregation: discriminatory practices that result in inequality of employment and promotion opportunities because of disparate treatment of members of protected classes.
- Positional Segregation/ “Stacking”: refers to the research tradition dedicated to evaluating the disproportionate assignment of individuals from different racial/ethnic groups to positions of varying degrees of centrality.
- Race: refers to characteristics used to classify groups of people on the basis of perceived genetic differences; while biologists and scientists have since debunked the biological theories behind racial classifications, the categories are still socially ingrained in the United States.
- Socioeconomic Status (SES): refers to a combination of income, education, and occupational measures used to determine the social and class standing of individuals.
- Student-Athlete Advisory Committee (SAAC): committee made up of student-athlete representatives that is tasked with providing input about the student-athlete experience and the impact of policies, regulations, and rules implemented by the NCAA (NCAA, n.d.-b).

Conceptual Framework

The conceptual framework of a study defines the proposed relationship between the abstract concepts under investigation. The framework identifies the context within which the research questions exist and reveals how the relationships will be explored. This study, based in the epistemological assumptions of critical race and intersection theories, explored the impact of race, class, and gender on the leadership recruitment and position assignment of traditionally under-represented minorities in Division-I Women’s Basketball. Figure 1.1 presents a map depicting the relationships between the theoretical concepts and the focus areas of this study, which are further explored in the next section.

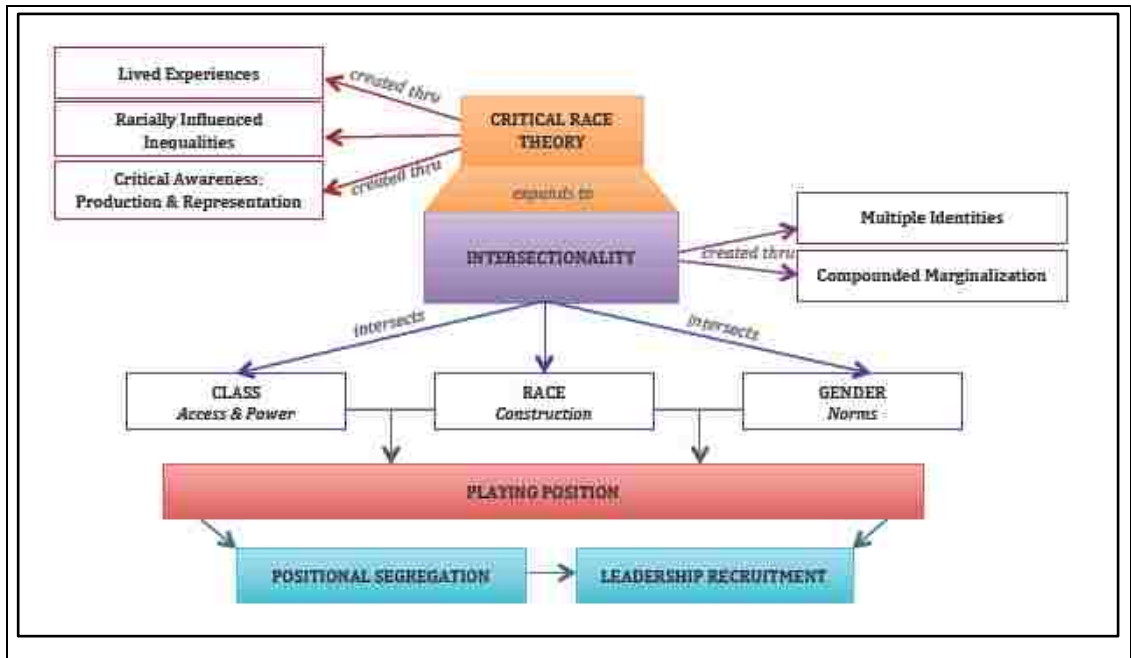


Figure 1.1. Map of the Conceptual Framework.

Critical race and intersection theory.

Critical race theory (CRT) recognizes that there are racially influenced inequalities evident in many social institutions. The theory calls for scholars to have a critical awareness of the production and representation of race, whiteness, and privilege (Long & Hylton, 2002). Critical race theory has its foundations in legal scholarship; it is concerned with the institutionalization of racism and the creation of policy to negate its effects (Bell, 1995). Critical race theorists “seek to empower and include traditionally excluded views and see all-inclusiveness as the ideal because of our belief in collective wisdom,” (Bell, 1995, p. 901). One critique of critical race theory is its focus on the Black-White paradigm of race relations (Alexander, 2006). Intersectionality theory answers this critique by expanding the concerns held by critical race theorists for the marginalization of Blacks to similar experiences shared by other marginalized groups. This study aspired to move beyond the usual Black-White dynamic in sport by comparing patterns of discrimination between groups using intersectionality to reflect the similar, yet distinct, ways that marginalized groups experience compounded effects of race, class, and gender.

Intersection theory is a paradigm that seeks to develop an understanding of the ways in which class, race, and gender function together to produce the lived experiences

of individuals in society. The basis of the theory is the understanding that the three areas (race, gender, and class) are simultaneously in effect in people's lives, and as such, cannot be fully analyzed separately (Acker, 2006). Most of the work conducted in intersectionality research deals with the examination of discriminatory systems that are compounded by the interaction of multiple levels. Often the effect of these simultaneous and multilevel discriminatory practices is that they reinforce hegemonic relationships in society and reify the social construct of race. Proponents of intersection theory posit that full understanding of a racialized individual's experience relies on the understanding that all of the experienced forms of oppression that the individual encounters shape—and are shaped by—the others.

Crenshaw penned some of the earliest writings about intersection theory in her observations about the shortcomings of critical race theory where Black women interacted with the law (Crenshaw, 1989, 1991). In her development of a perspective based on the Black feminist standpoint, Crenshaw remarked that the traditional theories of critical race and feminism left out the concerns of the Black female. Critical race theory, she suggested, benefited the Black male, while feminism supported the plight of the White female. Crenshaw's description of a new theoretical consideration, aimed at telling the stories and valuing the experiences of the Black female, warned that those two aspects of her existence—race and gender—could not be isolated one from the other. She wrote, "Neither Black liberationist politics nor feminist theory can ignore the intersectional experiences of those whom the movements claim as their respective constituents," (Crenshaw, 1989, p. 166). In later work, Crenshaw also warned that intervention policy would not be effective if it was solely based on one-dimensional experiences (Crenshaw, 1991). Also inherent in any discussion of race and gender is the discussion of class, especially given that most marginalized groups experience less access to wealth and social mobility. It is often the effects of these compounded oppressions that throughout history have worked to limit the opportunities of members of minority and marginalized groups (Grant & Sleeter, 1986). With intersectionality as the theoretical framework, this study used the relevant variables of race and class to determine their combined impact on positional segregation and access to social and career mobility opportunities in women's sports.

Society and race.

The socialization of race and ethnicity in American society is complex. While race relations throughout American history have been sites of contention, they are so deeply ingrained within American institutions that they cannot be ignored. The following section will discuss the history and development of racial classifications in this country, and the relationships that those classifications have with the constructs of power and access. As sport is one of the institutions that aids in the reproduction of dominant racial ideologies, it is important to discuss how those ideologies are formed.

The biology of race.

Race and ethnicity are two terms that are often used interchangeably in conversation by scholars and laypersons alike. While both terms refer to classifications of people, race is a classifying agent based on what are believed to be genetic differences (Coakley, 2007b; Malcolm, 1997). Ethnicity, on the other hand, uses shared cultural heritages to create levels of stratification in human populations. The existence of racial distinctions is problematic because even though scientists have debunked the concept of naturally or biologically distinct sub-populations related to skin color (Herbes-Sommers, 2003), many people still believe that biological explanations for racial categories are valid.

The origin of race as a biological construct has a controversial history. In the seventeenth century, Europeans used the term race to create classifications of different colonized people. At this time, race was loosely used to identify people based on their religion, national origin, or social status—not biology (Coakley, 2007b). The shift to race being used as a biological classification came about when Europeans sought justification for their colonization efforts around the world. In the United States (and globally), the same use of biological racial groups was employed for the justification of slavery (Coakley, 2007b; Herbes-Sommers, 2003).

The concept of biological racial stratification has persisted to the point where it is now taken for granted in contemporary society. Even though scientists note that there is no genetic marker that defines race, people still make private and public assumptions about the superiority of racial groups in one form of activity or another (Herbes-Sommers, 2003). In fact, genetic studies show that there is greater variation within racial

groups than there is between them, revealing that, despite racial classifications, we are more alike than different (Glover, 2007). In the sports world, biological conceptions of race have led to the universal belief in the “natural Black athlete,” which unfortunately negatively affects perceptions about his or her lack of “natural” prowess in other realms (i.e., intelligence).

Race as a social construct.

Lacking the basis of genetics and science behind their usage, racial categories have become social factors for positioning difference. By stating that race is a social construct in the United States, we acknowledge that attitudes and perceptions about people are influenced by this nation’s history of prejudice and discrimination (Evans, 1997). The influence of race on historical policies and practices cannot be ignored in lieu of a future “colorblind” society because historical race relations have resulted in systemic disparate impact. The problem with the seemingly benign concept of a colorblind society is that it ignores the inherent privilege that has become associated with whiteness in society (Glover, 2007; Hylton, 2009).

Even without science to back up the rationale underlying racial stratification, such practices still persist in our everyday lives in America. Part of the reason for this, Nagai (2010) asserted, has to do with the government’s use of racial categories to assess census numbers and disparate impact. Nagai detailed an interesting history of the use of racial designations dating back to the creation of the United States Constitution and the Three-Fifths Clause, which counted a fraction of the slave population toward the population numbers of the Southern states. After the social, political, and civic movements of the late sixties, data on racial identity was largely collected to address policy and measure the presence of systemic inequalities. In 1978, the Office of Management and Budget (OMB) devised five basic race assignments for use in government data sets: White, Black, Hispanic, Asian/Pacific Islander, and American Indian/Alaska Native (Lopez, 2003). In sport, subtle effects of racial ideologies are seen in the disproportions of minorities in high-level positions and through biased media coverage and commentary (Coakley, 2007b; Evans, 1997). Another area where disparate impact is observed is in the under- and over-representation of racial and ethnic groups in different playing positions—a

phenomenon known as stacking (Coakley, 2007a). Stacking, and the consequences of its effects in sport society, is the topic of focus for this study.

Adding to the complexity of discussions of the differences between racial and ethnic identities in American society is the reality of multiracial and multiethnic persons and their experiences. Johnson et al. (2007) presented the complexity of the way in which different persons respond to and identify with questions of racial and ethnic identity. The authors remarked that while some people do not differentiate between race and ethnicity, others of the same group do not self-identify with the commonly recognized racial categories. In preparation for the 2000 Census, the U.S. Census Bureau responded to critiques about the way it collected multiracial identification data by funding numerous studies to develop a better method (Johnson et al., 2007). The history of the U.S. government's relationship with the tracking of multiracial and multiethnic identity is far too complex and detailed for this report, but it is important to note that originally, multiracial identity was categorized on the basis of percentage of Black heritage (Nagai, 2010). This fact strengthens the motivation for the focus on the Black-White dynamic of racial relations that studies in sport sociology have historically emphasized. That said, the movements advocating the rights and needs of individuals of identities outside the Black-White dynamic support the desired attention to other racial and ethnic categories for this study. While considerable research has documented the differences between the social constructions of race and ethnicity, the terms will be used interchangeably going forward, with the intent of recognizing the relationship between group identification and social strata as an important influence on an individual's experience in sport.

Race and class, power and access.

As noted earlier, the discussion of class structure in the United States is inherent in the creation and manifestation of racial stratification in American society. Scholars have noted that members of traditionally underrepresented minority groups are distributed in greater proportions in lower socioeconomic categories (Weeks & Lupfer, 2004). The compounded interaction of race and class upon the opportunities for wealth has been shown to have a suppressing effect, both historically (Wright, 1978) and contemporarily (Acs & Loprest, 2009).

In order to continue to set the context for the impact of stacking in intercollegiate athletics, it is important to discuss the disparate impact that race and social class have on access to higher education in the United States. Reports on the student populations of colleges and universities in the United States revealed that the demographic and socioeconomic breakdowns do not match those in the greater population (Carnevale & Rose, 2003). Where socioeconomic status (SES) is concerned, research showed that only a small percentage of students from the lower two quartiles gained access to higher education (Bowen, 2004). For example, only 10.8% of the 1995 cohort was from the bottom quartile. In addition, it appears that financial aid structures create a double privilege system, where higher SES students benefited through attendance to the most selective and private institutions (Carnevale & Rose, 2003). When race interacted, the prospects for equal access to higher education were even slimmer. Carnevale and Rose (2003) found that trends between 1979 and 2000 showed disadvantages for lower-income minorities. Bowen (2004) acknowledged that family income related to academic preparedness, which influenced expectations toward the attainment of a college degree. The combined effect of race and SES in access to higher education results in a higher threshold of entry for minority students. As education, which is often seen to be an agent of upward mobility, becomes increasingly difficult for lower SES individuals to attain, the separation between classes in the United States will continue to widen.

Gender norms and sex roles.

Just as the application of racial status in American society is based on socially produced and reproduced ideologies, gender status and roles are understood to be symbolic productions rather than biological certainties (Lorber, 1994). Fecteau, Jackson, and Dindia (1992) discussed “psychological gender orientation” as a concept guiding individuals to ascribe to socially appropriate sex-typed personalities (p. 18). As a social construction, gender identity is often associated with expected behaviors, roles, and activities. Historically tied to the notions of property and ownership, gendered identities have often existed as opposite entities, but differ by cultural context (Rothenberg, 1992). When applied to sport, the ideals that society reinforces about the acceptable behaviors for women have historically steered them toward “aesthetically pleasing” activities (Snyder & Spreitzer, 1978, p. 5). These low contact and low interaction sports—such as

tennis, gymnastics, and synchronized swimming—have often put participants of typically deemed “masculine” sports at a disadvantage in media representation, acceptance, and support.

In addition, most of the research concerning sport, including that pertaining to positional segregation and leadership recruitment, is conducted from the perspective of the male participant or coach. This study provides some insight into a research area in which a void currently exists. Part of what is problematic about the domination of male perspective in sport fields of research is that the male model of sport (which emphasizes competition and enterprise) becomes the measure of success for all involved. Considering that the National Collegiate Athletic Association (NCAA) takeover of Association for Intercollegiate Athletics for Women’s (AIAW) responsibilities in 1982 resulted in a decrease in the number of female coaches in female participant sports, the male model of sport has influenced a male dominant leadership schema across sport organizations (Clement, 2012). The discussion of gender roles in the leadership recruitment research area of this study is also unique, in that it investigates the phenomenon with both male and female coaches of the same sport, a situation usually only encountered in women’s sports at the intercollegiate and professional level.

Sport as a facilitator of racial and gender hegemony.

Regardless of the basis for racial classifications (biological or social), an area for concern regarding the intersection of race and sport is the potential that it has for reproducing and reifying hegemonic ideologies. Hegemony is a socio-political construct that posits that processes work to maintain social power hierarchies by gaining the consent of the people being controlled (Coakley, 2007a). The powers of hegemonic practices lie within their subtlety. Disempowered groups often submit to hegemonic forces unknowingly by merely accepting the status quo that they live under as natural and justified. Just as race was employed in early United States history as a means for justifying the unfair treatment of people of color (i.e. the enslavement of dark-skinned peoples from Africa), its continued use as a classification agent has allowed the persistence of racism and has provided justification for disparate impact.

Racial minorities, being under-represented and largely powerless in sport organizations, tend to be marginalized and lacking a vocal presence when it comes to

creating or protesting policies and practices. Essentially, through discriminatory practices and disparate impact, racial minorities get lumped into subordinate positions, which in turn, provide justification (or “proof”) of their need to be subjected (Maguire, 1988; Sack, Singh, & Thiel, 2005). The assumption of helplessness also supports existing power structures. Research has shown that Black athletes, expecting to be stereotyped and discriminated against, used coping mechanisms to overcome these obstacles (Long & Hylton, 2002).

In general, these strategies result in athletes exhibiting passive acceptance of discrimination as ways to “rise above” and “keep the peace” while focusing instead on their performance. Qualitative studies reveal that when Blacks are represented in small proportions on teams, they experience less opportunity to express their shared cultures and tend to conform to the norms of the dominant group (Peretto Stratta, 2003). Ultimately, the pressures for team success push athletes toward team conformity, placing team values and outcomes above individualistic ideas about equality and fairness (Coakley, 2007a). Thus, racial hegemony in sports becomes reified by the lack of protests against the system as it stands, and those in power are able to claim that their policies and practices are not discriminatory because no one complains (Long & Hylton, 2002).

Sport and society.

The examination of the history of sport in the U. S. reveals ideologies about class, race, and gender that are relevant to the phenomena of positional segregation and leadership recruitment that are under investigation.

Leisure, sport and class.

In American society, the connection between sport and class persisted from European ideologies about leisure and who was allowed to experience it. Early American sports organizations adopted the England club system, which favored aristocracy (Masteralexis, Barr, & Hums, 2009). Messner's (2007) essay on sport as a male domain discussed a brief history of the evolution of sport in the U.S. from an elitist practice to an exercise in leisure management. Early in American history, sport participation was seen to be an activity of privilege because it inferred that those who played had “free time.” Leisure was a privilege of higher social class members and it was not until the Industrial Age that innovations in technology allowed factory workers the benefit of having extra

time available in their schedules. By opening access to organized sport leagues for the middle class, city leaders were able to create ordered and monitored activities that shaped the leisure time of their constituents.

The influence of social class status on sport participation is still evident in contemporary society. The quality and type of sport participation afforded an individual is highly related to his or her access to economic resources, facilities, and training. Research has shown that the highest rates of sport participation and spectatorship at all levels (from youth sports to the Olympic Games) have been connected to the people with the highest income, education, and social class (Coakley, 2007b). The consequences of this correlation between social class and organized sport participation range from depressed career opportunities to problematic health and obesity issues in lower class children. As economic concerns continue to plague schools, organized physical activity options are often being cut from the educational agenda, further making quality sport participation a privilege of higher socioeconomic status (Coakley, 2007b).

Race and sport.

As discussed earlier, sport was one of the first American social institutions to racially integrate. At its best, sport has been applauded for its facilitation of interpersonal race relations, acting as a model society to be lauded and mirrored. At its worst, however, sport has brought global attention to ideologies and practices that prove racial discrimination is still a prevalent issue in modern society (Coakley, 2007a; Eitzen, 2005). Aside from leading the way for public industries¹ in racial relations with the integration of Major League Baseball in 1947, sport has experienced a tumultuous relationship with the Black participant (Hoberman, 1997). As athletes, Blacks have gone from being excluded to accounting for the majority of players in the National Basketball Association (NBA) and the National Football League (NFL), two of the five major revenue producing sports in the U.S. (Evans, 1997). The increase in participant numbers, however, has not been replicated in the management ranks. In addition to evidence of under-representation of Blacks in key leadership positions, studies have also revealed patterns of discrimination and White superiority within the arena (Yiannakis & Melnick, 2001).

¹ Government industries integrated earlier.

In sport, race studies have generally posited topics against the backdrop of the Black-White dynamic, but the changing demographics of the American population suggest that racial issues are more culturally complex than that polarized relationship indicates (Coakley, 2007a; Malcolm, 1997). Increased attention has been drawn to the plight of Latinos, as many studies showed that the varied histories of the different cultures produce unique racialized experiences when it comes to sport (González, 1996). Ultimately, although sport has the potential to facilitate and even further race relations by increasing interracial interaction, the racial ideologies dominant in society at large work toward an opposing agenda. Further complicating matters, the representation and collection of data supporting multi-ethnic identities is an endeavor recently adopted by the U.S. Census Bureau (Lopez, 2003). Through the collection of various race/ethnic identifiers, this study attempted to provide an analysis of racial/ethnic communities not usually investigated in sport research.

Gender and sport.

Just as race and social class have played a role in limiting access to select groups of American people, gender has often been a factor in discriminatory practices. Throughout the history of women's sports in the U.S., female athletes have struggled against patriarchal ideologies in their efforts to be viewed as equally deserving of opportunities to play sports as their male counterparts (Messner, 2007). The introduction of Title IX in 1972 provided the legal stance from which to demand more opportunities, but research has shown that even though female athletes are experiencing increased participation opportunities, they are marginalized through poor and biased media coverage.

Title IX of the Education Amendments, ratified in 1972 and enacted in 1979, created a revolution in women's sports by prohibiting sex discrimination in federally funded education programs. The passage of Title IX resulted in increased participation opportunities for women and girls and spurred many changes in organizational structure and processes of federally funded institutions and programs. After the passing of Title IX, the once all female-led Association for Intercollegiate Athletics for Women (AIAW) eventually folded as its teams became members of the National Collegiate Athletic Association (NCAA). The increased attention and interest of the NCAA in former AIAW

teams led to the NCAA's running of women's sports championships, influencing the AIAW's dissolution in 1982 (Clement, 2012; Olson, 1990). An unintended by-product of Title IX was the creation of greater competition for, and attractiveness of, coaching positions in women's sports to men. For male coaches, administrators, and officials, the usurpation of the AIAW brought with it an influx of potential employment opportunities. Acosta and Carpenter (2000) reported that males were able to take advantage of those opportunities, gaining employment within women's intercollegiate athletics, while women were not cross-represented in the same manner.

With the dissolution of the AIAW, the proportion of women in management level positions declined. Where women once held the majority of head coaching positions (90% in 1970), they currently hold only 42.9% of head coaching positions for women's teams in collegiate athletics (Acosta & Carpenter, 2012). The percentages drop even further when looking at the head coaches that are women of color. Lapchick (2011) reported that for the 2010-2011 season, 3.5% of women's sports head coaches in Division-I were Black women. Results such as these indicate that there is a compounded disparity effect in sport when race and gender intersect (Washington & Karen, 2001). This sentiment was shared by Donna Lopiano, former Chief Executive Officer of the Women's Sports Foundation, who advocates for grassroots efforts to increase Olympic Sport opportunities for participants of all races, genders, and economic levels. She stated, "The African-American female is in double jeopardy. She is discriminated against by her gender. She is discriminated against by her race," (Lopiano, n.d., para. 2). While it was Lopiano's stance that all women can benefit from sport participation, Hanson (2007) found that White and Hispanic women experienced positive effects from sport participation while African American women did not. This finding further supports the argument that racial disparity among minority groups is diverse and bears further investigation. As commented upon earlier, the present study offers a unique analysis of the similarities and differences among the leadership recruitment profiles of both men and women, as the representation of multiple genders in a sport leadership context is generally limited to women's sport teams, departments, and organizations.

Formal and informal leadership in teams.

As part of an organization's structure, formal and informal leaders play a key role in shaping goals and motivating members to achieve them. Robbins (2000) discussed the role of leaders within teams. His review of organizational structure revealed that outside of the normal duties of being a member, the team leader has the additional responsibility to act as a liaison to external constituencies, a problem-solver, a conflict manager, and a motivational and social support. In sport, the role of team leader is an important one for many reasons (Eys, Loughhead, & Hardy, 2007). Research has shown that athlete preference for peer leaders, both official (such as team captains) and unofficial, is that they show more social support, positive reinforcement, and democratic leadership than exhibited by their coaches (Loughhead & Hardy, 2005; Wildman, 2006). While the areas covered by informal and formal peer leadership in a sports team setting are the same (task, social, and external functions), studies have shown that there are some differences in the dispersion of those functions by type of leader. In general, findings showed that formal leaders dealt with task and external functions more, while informal leaders spent more energy on social functions (Eys et al., 2007; Loughhead, Hardy, & Eys, 2006). Eiche, Sedlacek, and Adams-Gaston (1997) demonstrated that leadership in university athletes was associated with higher achievement in grades and degree attainment, lower needs for emotional and social support, and higher social adjustment.

Robbins (2000) presented the function of status as another aspect of a team's organizational structure. The author discussed status—the formal or informal grading of prestige or rank within a group—as an integral element of how teams interact. The basis for the social hierarchy within a team may come from age, skill, experience, gender, or education, however it is important that the hierarchy appear equitable. Where sports teams are concerned, research has shown that team and peer leaders are mostly starters and third-year players (Loughhead et al., 2006), revealing a clear sense of status congruence with perceived leadership ability. This study applied centrality theory to formal and informal peer leadership levels to determine if stacking results for playing positions were replicated when non-playing roles were considered.

Summary.

The social environment in which the stacking phenomenon takes place is shaped and influenced by the relationships between and among race, gender, and class in the United States. The historical experiences of the various racial and ethnic groups of interest will have an impact on how stacking in their communities is interpreted. Ultimately, the purpose of this project was to understand how these three social constructs confound and intensify the effect of racial stacking in sport. In addition, this study explored how the stacking results relate to patterns of leadership recruitment for female coaches in Women's Division-I basketball.

CHAPTER 2 - REVIEW OF THE LITERATURE

The following review was based on a search for related literature conducted primarily through the University of New Mexico Library's Pronto search engine, with ancillary searches done through Google Scholar. The main engines that were referred by Pronto were Academic Search Complete (EBSCOhost) with a SPORTdiscus database subscription, and PROQUEST. Main keywords and terms of interest were leadership recruitment, stacking, intercollegiate sport, and centrality.

The Origins of Leadership Recruitment and Stacking Research

The research traditions involved in leadership recruitment and "stacking" are two of the oldest research areas in the study of sport sociology. Stacking is a term originally coined by sociologist Henry Edwards (1973) to reflect the patterns of positional segregation that scholars were finding in sports. Early studies showed that positional segregation patterns in sports resulted in minority players being overrepresented in positions that required less interaction and leadership capabilities than others (Blalock, 1962; Chappell, Jones, & Burden, 1996; Edwards, 1973; Grusky, 1963; Loy & Elvogue, 1970). Simultaneously, the studies revealed that White athletes were overrepresented in positions of high interaction and leadership. In these early studies, the racial dynamic that was predominantly of interest was that between Black and White athletes, again echoing the concerns underlying the civil unrest of the era. Scholars reporting on positional segregation in sports drew attention to the possibility that discrimination and stereotypes were the main causes for the stacking patterns that resulted. The other tradition of research discussed here—that pertaining to leadership recruitment—explores some of the detrimental effects of positional segregation. Leadership recruitment studies, and by extension occupational segregation studies, investigate the linkages between playing position and managerial, coaching, and administrative positions in sports.

Both of these research traditions trace their origins back to Grusky's (1963) paper. He investigated the relationship between interdependent aspects of playing position and the likelihood of becoming employed at the management level. Defining positions as high or low interactors, his hypothesis was that the baseball players in high interactor positions would be more likely to become managers, as those playing positions would

influence the development of the skills required for management positions. The determination of interactor level was developed through the examination of three interdependent features. As Grusky explained, the factors that determined the dimension of position interdependence were: “(1) spatial location, (2) nature of task, and (3) frequency of interaction” (p. 345). In addition, the underlying theory was presented in the following manner:

“All else being equal, the more central one’s spatial location: (1) the greater the likelihood dependent or coordinative tasks will be performed and (2) the greater the rate of interaction with the occupants of other positions. Also, the performance of dependent tasks is positively related to frequency of interaction” (p. 346).

High interactor positions, determined by combining assessments of these three factors, were then deemed to be “central” positions, while low interactor positions were termed “periphery.” Grusky’s application of his theory to unspecified professional baseball organizations was supported, as results revealed that current and previous team field managers were more likely to have played in central positions (infielders and catchers) during their playing careers. Grusky’s theory became the groundwork for future studies on positionality in sports (Jones, Leonard, Schmitt, Smith, & Tolone, 1987). Another study presented by Blalock (1962), applied propositions related to discrimination to sport organizations.

In 1970, Loy and Elvogue extended upon Grusky’s theory of interaction in central and peripheral positions and began the tradition now informally known as stacking. Their investigation examined racial segregation in the playing positions of professional baseball and football players. In addition to Grusky’s proposition of interaction, the authors employed Blalock’s proposition of centrality. Working from Grusky’s (1963) use of formal structure and Blalock’s (1962) argument that there was less discrimination in positions of low interaction, Loy and Elvogue sought to examine the relationship between centrality and race in sport (Leonard, 1987; Loy, Curtis, & Sage, 1978; Medoff, 1986). Their use of the centrality theory was predicated on the trends of leadership recruitment of former players of central positions (Malcolm, 1997).

The timing of Loy and Elvogue’s 1970 study coincided with the height of the Civil Rights Era and their resulting conclusion of discrimination as cause spurred

numerous related studies. In 1978, two sets of literature reviews were conducted on the stacking research completed since 1970 (Curtis & Loy, 1978a; Loy et al., 1978). Loy and colleagues (1978) reported that a total of seven studies using Grusky's centrality theory had been conducted in the sports of baseball (at the professional, college, and high school levels), football (professional and college), and hockey (professional). Overall, these studies confirmed Grusky's hypothesis that the higher levels of position centrality would correlate to greater representation of sport leaders (managers, coaches, etc.) who once played those positions. In their review of stacking research conducted, Curtis and Loy (1978) reported that a total of 27 studies had been conducted in addition to the Loy and Elvogue study, and that all of them revealed an under-representation of Black athletes in central positions. Of these 27 studies, nine were done on baseball, 13 on football, three on basketball, and three on hockey.

Leadership Recruitment and Minority Group Under-Representation

Grusky's purpose in his application of formal structure theory rested solely in the analysis of the relationship between playing position and relative career mobility, specifically baseball managers. Loy et al. (1978) reviewed a number of studies that replicated Grusky's research in various ways. Some applied the theory to additional sports (football, basketball, and hockey), some investigated additional competition levels (interscholastic and intercollegiate), and some used different outcome measures (coaches, MVPs, and team captains). The authors of the meta-review reported that most of the support for the positive association between playing positions and leadership roles was accounted for by specific positions within the studied sports. This finding suggested that the effect of centrality depended on how the researcher operationalized playing positions for the sport-specific context. Overall, the findings of the reviewed studies supported Grusky's hypothesis, in that individuals from central playing positions filled the majority of leadership positions.

In a more recent study, Kjeldsen (1982) supported Grusky's study with the finding that managers in professional baseball formerly played central playing positions. In comparison between players that had become managers to those that had not, the author found that managers experienced more individual and team successes (i.e., championships) and had longer careers. The author posited that visibility as a result of

success played a key role in the possibility of being hired into management, and suggested that quality of career (performance level) was a potential predictor of career mobility in the sport context.

Related to the study of leadership recruitment in sport is the analysis of racial and gender disparities in prominent positions. Occupational segregation studies investigate the impact of protected group status on employment opportunities and prestige. Research on the relationship between race and sport organization personnel have found that minorities are significantly under-represented in the head positions of sport organizations (Anderson, 1993; Cunningham, Bruening, & Straub, 2006; Evans, 1997; Hairston & Jackson, 2004; McDowell & Cunningham, 2007). Anderson (1993) warned that the small percentages of minority coaches moving within the trajectory (i.e., assistant coach to offensive coordinator to head coach to athletic director) have the potential to limit access to top positions. Evans (1997) pointed out that even though Black athletes had overcome discriminatory practices that historically obstructed their participation in professional sports, their representation had not yet been reflected in key leadership positions.

A number of researchers have considered the effect of racially stratified playing positions on leadership recruitment. Chu and Segrave (1981) evaluated this relationship within men's professional and intercollegiate basketball, finding that while former players of central positions dominated coaching positions, Blacks were under-represented both in the coaching population and in central playing positions. The authors suggested that the intersection of the two research theories could be the barrier to entry that limited the proportion of coaching staff positions filled by Blacks. Cunningham's (2003) research supported these findings, adding that minority coaches perceived that race would affect their coaching opportunities, and made career decisions accordingly. In contrast, Fabianic (1984) reported that even when minorities are proportionally represented in central positions, they are still not hired into management at a proportionate rate. Likewise, Finch, McDowell, and Sagas (2010) found that, in the sport of football, Black coaches with experience playing central positions were not being hired to the extent that were their White colleagues. The implications suggest the presence of compounded discrimination in hiring decisions.

Other research has revealed that race effects also limit career mobility for minority coaches through promotions (Day & McDonald, 2010), networking opportunities (Borland & Bruening, 2010), and employment options (Cunningham et al., 2006). Fewer scholars have observed the disproportion of women in upper sport management and coaching and fewer still have extensively investigated the intersection of race and gender in these contexts. Borland and Bruening's (2010) study did just that, reporting that Black women felt restricted in their abilities to pursue coaching beyond the assistant coach position, and perceived greater oppressive pressures due to their dual-statuses (Black and female). The intersection of the identities of race and gender in leadership recruitment studies is a research area that is under-evaluated.

Stacking and Minority Group Under-Representation

Over the years since the first investigation into stacking by Loy and Elvogue in 1970, research has shown evidence of stacking patterns in professional, intercollegiate, and youth sports. As the current study is primarily interested in elite level sport, the following section presents a review of relevant literature about positional segregation research in professional and intercollegiate sport.

Stacking in professional sports.

Since the publications of the reviews on the two research traditions—stacking and leadership recruitment studies—birthed by Grusky's study (Curtis & Loy, 1978a; Loy et al., 1978), scholarly interest in racial group representations on sports teams has continued. Studies continue to reveal that Blacks are under-represented in positions of centrality in sports at all levels (Maguire, 1988; Malcolm, 1997). The presence of stacking in sports is so widespread that Sack and his colleagues (2005) stated that occupational segregation as a practice appeared to be “the norm rather than the exception” (p. 300). A number of studies conducted on professional sports in the United States have resulted in similar conclusions. Studies on the National Football League (NFL) have revealed that, as a function of race, centrality theory exposes positional segregation (Blackburn, 2008; Burns, 1988; Kooistra, Majoney, & Bridges, 1993).

One of the key issues that must first be determined when stacking research is conducted is the operationalization of playing position by Grusky's (1963) factors of centrality. In the sport of football, authors have dichotomized positions into central versus

non-central, generally following the model established by Loy and Elvogue's 1970 report (Marsh & Heitman, 1981). In these studies, the positions of quarterback, center, offensive guards, left, middle, and right defensive linebackers are categorized as central positions. Loy and Elvogue (1970) determined the centralization of these positions by diagramming the starting locations of the players in a down ball situation (see Figure 2.1), therefore relying heavily on the spatial location tenet of Grusky's (1963) theory.

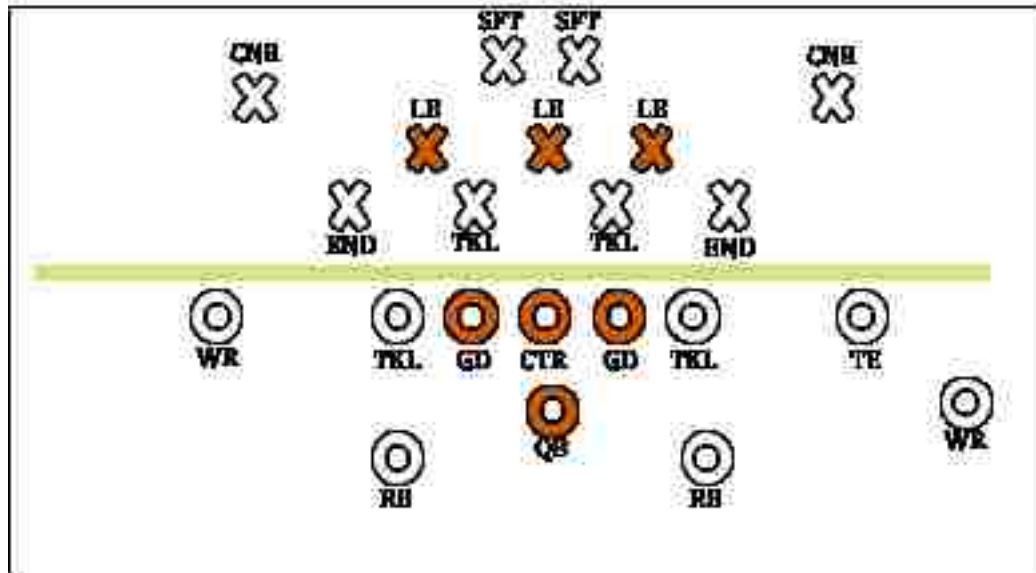


Figure 2.1. Loy and Elvogue's Operationalization of the Centrality of Playing Positions in Football. Central positions as determined by Loy and Elvogue (1970, p.12) are highlighted. The authors selected central positions based on proximity to the downed ball at the beginning of the play.

Best (1987) took a different approach in categorizing football playing positions, gleaned from Eitzen and Yetman's (1977) report of positions that were either predominantly Black or predominantly White. In his results, Best described the "Black positions" as running back, defensive back, and wide receiver, juxtaposed against the "White positions," which were quarterback, center, and offensive lineman (Best, 1987; Eitzen & Sanford, 1975). Similar classifications of football positions have been used in studies that examine stacking in football at the collegiate level. Marsh and Heitman (1981) based their classifications from Eitzen's report, determining that central positions were quarterback, offensive line, wide receivers, tight ends, and defensive backs.

Washington and Karen (2001) reported that in 1991, stacking in the NFL was evidenced through the distribution of central positions in the following positional breakdown: quarterback (91% White), center (83% White), wide receiver (92% Black), running back (87% Black), cornerback (99% Black), and safety (91% Black). In a recent examination of stacking in the NFL, a dissertation completed by Blackburn (2008), found that even with the large increases in the proportion of Black players in the league, Black athletes were still over-represented in the non-central positions. Kooistra and others (1993) investigated the composition of marginal players to evaluate the hypothesis that Black athletes have to be better than their White counterparts in order to attain team membership. The authors found that marginal players were disproportionately White, indicating that equal levels of talent did not lead to equal chances at playing in the NFL for Black and White athletes.

Studies on other professional sports have uncovered similar findings. Replicating the findings of Grusky's study on professional baseball, Loy and Elvogue (1970) determined that Blacks were found to be continuously under-represented at the pitcher, catcher, and infield positions (González, 1996, 2002; Jobu, 1988; Margolis & Piliavin, 1999). Grusky's (1963) initial categorization of central and non-central positions in Major League Baseball has persisted as the model of centrality determination for later studies (Fabianic, 1984; Leonard, Ostrosky, & Huchendorf, 1990; Loy, Curtis, & Hillen, 1987; Loy & Elvogue, 1970; Phillips, 1991). Using information about the spatial location and the average interaction of the positions, Grusky (1963) categorized central positions as being "high interactor" positions: infielders and catchers. In contrast, non-central positions, called "low interactors," were outfielders and pitchers. Similar investigations into college baseball replicated these classifications (Scully, 1974). Some studies altered Grusky's model slightly to include pitcher as a central position, given the importance of the position in starting game play and spatial location (González, 1996; Johnson & Johnson, 1995; Lavoie & Leonard, 1994; Medoff, 1977). Also different from the Grusky study, authors have employed both a three-tiered and a six-point scale classification system, where playing positions were separated by their degrees of centrality (Margolis & Piliavin, 1999; Phillips, 1983).

Several of the studies on professional baseball attempted to use additional variables to lessen the effect of direct discrimination in the assignment of player positions. Margolis and Piliavin (1999) used skill variables associated with seven different playing positions (“job/technical skills”) and found that only power and speed had a significant effect on the relationship between race and playing position. The results of the study indicated that Black athletes were over-represented in the outfield and that they were judged to be faster than their White and Latino colleagues. Studies of this type encourage caution because they suggest that a biological difference does indeed exist between racial/ethnic categories. This inference, which falls under the biological explanation for stacking, will be discussed later in this paper.

Similarly, Sack et al. (2005) replicated Margolis and Piliavin’s study, controlling for speed and power to reduce the effect of race. The authors found that stacking was evident, but that controlling for speed and power reduced the effect of race. Whereas other studies omitted the position of pitcher because of difficulty comparing success measures against other positions (Jiobu, 1988; Margolis & Piliavin, 1999; Sack et al., 2005), Johnson and Johnson (1995) focused their study on the different types of pitchers on a team (starting pitcher versus relief pitcher). Their findings showed that while Black and Latino athletes were overall under-represented at the pitcher position, there was no significant difference in their representation in either pitching position type. In his research of stacking patterns in Major League Baseball (MLB), Phillips (1991) warned that the appearance of progress given by the increased number of Black players had the potential to hide the evidence of disproportionate representation in central positions.

Stacking in college sports.

Research on stacking in college sports has returned results generally equivalent to those found at the professional level. The semblance between the two ranks is not surprising given that professional sports tend to serve as the model that collegiate sports follow. Stacking studies focused on college football reveal, once again, that Black athletes are concentrated in the periphery positions (Jones et al., 1987; Lewis, 1995). Comparing the results of two different time periods (1972 and 1982), Jones and his colleagues (1987) used control variables related to region, time period, coaches experience, and offensive or defensive alignment to glean further information about

stacking patterns. Their analysis revealed that, beyond the confirmed evidence of stacking in college football, neither region nor coaches' level of experience added a significant effect. Lewis (1995) concentrated his study on the Southwest Conference, and focused his analysis on the compositions and position allocations of players on teams for two different years, 1978 and 1989. The author found that the racial compositions of the teams remained virtually the same over the time period, and that race continued to be a factor in position allocation.

Fewer studies on stacking have been conducted on basketball teams, most likely because of the highly interactive nature of the sport. As Edwards (1973) noted, "...in basketball there is no positional centrality as in the case in football and baseball, because there are no fixed zones of role responsibility attached to specific positions," (p. 213). Unlike with the positions in football and baseball, the spatial distances between positions in basketball are harder to determine (Eitzen & Furst, 1989). In general, of the five players that are on the court, two are forwards, two are guards, and one is a center. Given that breakdown, an evenly proportionate split would see 40% of a given population in the forward position, 40% as guards, and 20% as centers (Leonard, 1987). Scholars studying basketball have delineated the central positions to be guard and center, positions ascribed with greater levels of leadership and outcome control (Berghorn, Yetman, & Hanna, 1988). Generally speaking, stacking research at both the professional and intercollegiate levels in the sport of basketball has looked at three positions in terms of centrality: guard, forward, and center (Berghorn et al., 1988; Chu & Segrave, 1981; Eitzen & Tessenorf, 1978; Loy et al., 1978). Leonard (1987) offered a different approach to the classification of playing positions in basketball by identifying six positions into the categories of central (center, guard, and point guard) and non-central (center forward, guard forward, and forward) positions. The author did not specify how these positions were determined based on their interaction levels, explaining only "in basketball there is reasonable consensus that the placement of positions on the [above] continuum is descriptive," (p. 404). Stacking research in basketball at the collegiate level does not conclusively support the centrality theory as was shown with other sports, however, a few studies do lend evidence suggesting that stacking still occurs (Curtis & Loy, 1978a; Leonard, 1987).

Eitzen and Tessendorf's (1978) study is one of the earliest ever conducted on stacking in basketball. The authors of that study found that stacking existed in the disproportionate representation of Blacks in the forward position, while they were underrepresented at guard and center. In their analysis, the authors classified the positions of guard and center as being central because they were more "desirable" than the non-central position of forward (p. 117). Leonard's (1987) attempt to update Eitzen and Tessendorf's study returned different results than the original. Leonard considered the increase in specialized positions used in the game by defining new categories of analysis: point guard, center forward, and guard forward. His analysis showed contradictory results in that Blacks were slightly overrepresented at the center position while being underrepresented as guards. The results showed a significant overrepresentation of Black athletes at the forward position as well. The results of Yetman's 1982 study indicated that the stacking phenomenon had all but disappeared in the sport of basketball. The authors' analysis of racial participation in basketball for the years between 1958 and 1980 showed that increased participation correlated with a more even racial distribution of positions. Berghorn and colleagues (1988) expanded upon Yetman's findings by comparing information from the 1984-1985 seasons. Their data showed that by 1985, the increase in the number of Black athletes in collegiate basketball had increased their proportions in all positions to the extent where Blacks and Whites were nearly equal in distribution at the guard and forward positions. On the other hand, their study confirmed that a significant disproportionate distribution continued to exist in the center position. The authors returned with an update to their research in 1992 which confirmed their previous findings (Yetman & Berghorn, 1993).

Stacking in women's sports.

In addition to the increased interactivity of positions, another unique aspect of studying the sport of basketball for stacking patterns is that it allows the examination of women's participation. While their results indicate that the participation patterns for women's college basketball are similar to those for men's basketball, Berghorn et al. (1988) did find more evidence of stacking on the women's side. The racial distribution for women in collegiate basketball during the years between 1985 and 1990 reported significant over-representations of Black females in the forward position, and under-

representations at both guard and center, with the center position showing the greatest disparity.

Softball and volleyball are two other women's sports that were examined for stacking patterns. Eitzen and Furst (1989) found that, for college volleyball teams, the position of setter was considered the most crucial in terms of court leadership and interaction. Hypothesizing that stacking would be shown in the positions of setter and hitter, the authors confirmed that Black players were under-represented at the central position and overrepresented at the periphery. In the sport of volleyball, the importance of the skill and the dependency of success on the setter designated this position as the one with the greatest degree of centrality. Other positions in the analysis were blocker, hitter, and defensive specialist, however the other positions were not discussed in terms of their degrees of centrality. Jamieson, Reel, & Gill's (2002) study of Division-I intercollegiate softball teams suggested that the designation of central positions differs by the context the sport exists within. Their analysis of softball recognized the findings of Major League Baseball, but inferred that softball differed, not only because of the gender of the players, but because of potential strategies, field dimensions, and economic resources. The data showed that White players were over-represented in the most central positions of pitcher and catcher.

Beyond the Black-White binary.

In addition to confirming the under-representation of Black athletes in softball's central positions, Jamieson et al. (2002) also argued for the need of research that investigated stacking of racial groups besides Blacks and Whites². Most studies in the

² It is relevant to note that stacking research has been done for international populations. Conflicting results regarding stacking in international sports add to the complexity of the issue. Whereas some studies report significant stacking proportions in the sports of soccer (Crust & Lawrence, 2006; Maguire, 1988; Norris & Jones, 1998), cricket (Malcolm, 1997), and hockey (Lavoie, 1989a), research on the sports of netball (Melnick, 1996) and basketball (Chappell, Jones, & Burden, 1996) show no evidence in support of stacking. In the study on Maori women and netball, Melnick (1996) hypothesized that the social acceptance of both netball (as the national sport for women)

stacking research tradition have neglected to analyze other racial or ethnic groups because their participation percentages are generally quite a bit smaller than those for Blacks and Whites. In the softball study, the authors added categories for Latinas and Asians in order to compare the results across minority groups (Jamieson et al., 2002). Overall, while stacking evidence was confirmed for the minority groups to be under-represented in central positions, the patterns proved to be different for each group. The results for Latinas showed a generally even distribution between central and periphery positions.

The fact that the stacking distributions in the Jamieson et al. (2002) study differed depending on the racial/ethnic group of interest indicates that the intersection of centrality and race is quite complex. González's (2002, 1996) studies on Major League Baseball echo this sentiment. Her research showed that Latinos were stacked in the central positions of shortstop and second base. These findings contradict the overall trend of stacking research, but have been replicated in other studies of the sport of baseball (Jamieson et al., 2002; Margolis & Piliavin, 1999). González (1996) theorized that the increase of Latinos as participants in Major League Baseball decreased the appearance of stacking patterns among this racial group. Her analysis of participation trends over the years between 1961 and 1992 supported her theory, as the results presented a nonlinear growth of Latinos in core positions, from 15.7% in 1961, to 25.9% in 1992.

Explanations for Stacking

Stacking research in American sports has generally presented evidence of disproportionate distribution of traditionally under-represented minorities playing in central playing positions, especially when the minority group in focus is Black athletes. Once the stacking phenomenon has been established, most researchers turn their attention to providing an explanation for the results. Over the years, the hypothesized explanations have generally fallen into the categories of biological, sociological, psychological, economical, role modeling, or outcome control.

and the Maori culture in New Zealand accounted for the non-significant results of stacking. The mixed results of the international studies demonstrated the strength of the argument for historical context as significant in discussions of race in the United States.

Biological explanations for stacking.

The biological explanation for stacking patterns in sports is based on the argument that there are genetic differences between racial and ethnic groups. As discussed earlier, this argument has been widely discredited by scientists who have demonstrated a lack of proof of genetic markers that account for race (Herbes-Sommers, 2003; Washington & Karen, 2001). Even though the genetic difference premise had been discredited, beliefs about the inherent athletic abilities of different racial and ethnic groups continue to shape the minds and decisions of people who influence American sport. Entine (2000) is one of the proponents for the existence of biologically formed racial groups. His opinion that Blacks have biogenetic advantages over Whites has spurred much criticism and debate. In response to Entine's comments, Jim Brown, a Black former NFL player and well-known sports analyst, responded by saying, "I would like to say to Jon there is no scientific definition that holds up race... so you have no basis for your work" (Herbes-Sommers, 2003, para. 31).

Other biological explanations for stacking are not as controversial. A few scholars correlate their findings of stacking patterns with physical characteristics that are needed to successfully play a given position (Sack et al., 2005). Margolis and Piliavin (1999) suggested that power and speed were the key variables in the stacking of central baseball positions. Eitzen and Furst (1989) hypothesized that the reason Whites were over-represented in the center position was because height, a physical characteristic topped by Whites in the general population, is the most important requirement of the position. Challengers to the biological explanation point out, however, that hypotheses regarding racial group biological differences associated with athletic performance are largely unverified and inconsistent (Curtis & Loy, 1978a; Malcolm, 1997; McPherson, 1975; Medoff, 1986, 2004).

Sociological explanations for stacking.

Discrimination is the standard argument behind results showing stacking patterns in sports. The results of numerous leadership recruitment studies show the relation of central playing positions to higher level management positions within sports organizations (Loy et al., 1978). The results of their study show that for ex-professional baseball players, those that played infield and battery positions (pitcher and catcher) were

hired into management positions at a higher rate than ex-players from outfield positions. Resting within the association between central positions and leadership recruitment is the belief that central positions carry with them a level of leadership, intelligence, emotional control, and decision-making skills (Byrd & Utsler, 2007; Daddario & Wigley, 2008; Lavoie, 1989b; Maguire, 1988). Similarly, the Matching Hypothesis follows that stereotypes about the intellectual abilities of certain racial and ethnic group athletes leads to discrimination in the recruitment and assignment of players to different positions on teams (Jamieson et al., 2002).

Psychological explanations for stacking.

Proponents of psychological explanations for stacking patterns posit that personality differences and style preferences determine the positions to which players are assigned. Researchers suggest that Black players that are stacked in non-central positions tend to prefer self-paced, individual, and reactive tasks (Curtis & Loy, 1978a; Medoff, 1986). These findings may be interpreted to implicate that these preferences lead Black athletes to desire non-central roles. Williams and Youssef (1972) showed that coaches made decisions based on personality-related racial stereotypes that were not always accurate. The results demonstrated that the positions players were assigned to on football teams corroborated with the personality stereotypes held by the teams' coaches.

The perceived attractiveness theory is another psychologically-framed explanation offered for stacking. Under this premise, positions with the greatest exposure are associated with greater levels of attractiveness and the greater amount of imitation of players in that sport (McPherson, 1975). Thus, given these assumptions about exposure and attractiveness, as young developing athletes consume media representations of certain positions, they will mimic those representations, practice those positions, and naturally become over-represented—or stacked—in them.

Economic explanations for stacking.

Medoff's (1976) economic theory suggested that stacking patterns occurred because of the greater costs associated with the development, equipment, and training needed to acquire the necessary skills for central positions. After examining the median income levels for Black athletes over a time period of ten years (1960-1970), Medoff surmised that the stacking results found over the time span were related to the economic

resources to which the Black athletes had access. His conclusion was that, instead of discrimination and stereotyping being the mitigating factors in position assignment, pre-recruitment economics determined the positions Black players chose to pursue.

Similar to Medoff's premise, rational choice theory proposes that the teams choose the best athletes, regardless of racial or ethnic background, in order to create the best chances for being successful (i.e. winning) (Sack et al., 2005). In fact, some authors have opined that discrimination of talented players would be an irrational strategy for sports managers to employ (Coakley, 2007a; Kahn, 2000). The economic hypothesis suggests that as minority group members increase their socioeconomic status levels, so will they increase their representation in central playing positions. An unintended effect of the rational choice theory is that it offers explanation for the suggestion that Black players have to be twice as talented as White players. This phenomenon has been encountered in studies of Blacks being under-represented as back-up/substitute players. The relative similarity in economic status of members of racial groups leads them to eventually compete for the same positions, increasing the level of skill needed in order to stand out as qualified to play (González, 1996; Goss, Jubenville, & Polite, 2007). Another variant of the rational choice theory suggests that young athletes, expecting to face institutional discrimination, choose not to expend energy in pursuing central positions (Sack et al., 2005).

Opponents of economic explanations for stacking challenge the component of the theories that infer that members of minority groups freely choose non-central positions based on their circumstances (Curtis & Loy, 1978a; Lavoie, 1989b; Yetman, 1987). Their arguments contend that the economic environments experienced by these groups are an extension of discriminatory systems already institutionalized in the greater society.

The role-modeling explanation for stacking.

Like the perceived attractiveness and economical resource premises described above, the role modeling explanation for stacking patterns involves an element of self-selection. The role-modeling premise suggests that players' decisions about what positions to pursue are shaped by the positions of the players they esteem. As an explanation for stacking patterns, the role model theory presents a problematic vicious cycle (Chappell & Karageorghis, 2001). The cycle is such that, as stacking results

become normalized and publicized through the media, developing young athletes choose to imitate players from their racial and ethnic groups, eventually maintaining and reifying the disproportionate racial/ethnic distributions of central positions (Harrison, 1995; McPherson, 1975).

The outcome control explanation for stacking.

In 1973, Harry Edwards proposed that Grusky's factors of interaction, spatial location, and task did not fully define centrality in sports. Edwards argued that the stacking of playing positions had more to do with the leadership characteristics and aspects of control over the game outcome than spatial proximity. The outcome control premise posits that minority group athletes are discriminated against on the basis of preconceived beliefs about their abilities to excel in positions that require decision-making or "thinking" skills (Chu & Segrave, 1981; McPherson, 1975). Sack et al. (2005) related the discrimination premises in sports to the "social closure" theories used to explain discrimination in the workforce. These theories appear to focus on discriminatory practices that could be motivated by either prejudice or the desire to maintain the status quo.

The uncertainty hypothesis as an explanation for stacking.

Originally tested by Lavoie and Leonard (1994), the uncertainty hypothesis suggests that subjective performance criteria (such as leadership, intelligence, discipline, mental toughness, social capital, age, gender, and interpersonal interaction skills) will be used when managers and coaches cannot accurately assess a player's talent objectively. The authors proposed that in sports where performances at central and non-central positions are easy to assess, discrimination and stacking should not be observed because subjectivity need not influence position assignment. The result of the uncertainty hypothesis, therefore, would be seen in truncated distributions and evidenced in higher barriers to entry for minority group members.

Stacking Explanations and Leadership Recruitment

In Blalock's (1962) initial investigation, his propositions regarding baseball as an ideal setting for integration were situated in the assumption that Black athletes, as non-central participants, posed little threat to White athletes. The author went on to explain that because Blacks were not in positions of responsibility and authority, they were not

likely to be moved into management positions. As this review of literature has shown, his theory of centrality has persisted, to some degree or another, in contemporary sport organizations. The previously discussed explanations have been given to suggest the precursors to stacking patterns. In turn, these explanations also impact organizational discrimination patterns through the vehicle of leadership recruitment. Simply put, disproportionate racial/ethnic representation of athletes in the playing positions most likely to be recruited and molded into becoming coaches will result in the same types of disproportionate representation at those levels.

Homologous Reproduction in Sports

Kanter (1977) introduced the concept of “homosocial reproduction” in her discussion of the roles that men and women have in corporations (p. 63). The theory posits that organizational personnel in dominant positions show a preference for subordinates that are similar to them in social background and experience. The author explained that pressures from organizational situations lead managers to value trust and mutual understanding higher than diversity of perspective, characteristics usually associated with similarity. Such practices of self-reproduction contribute to a hiring selection process that reinforces the status quo and creates barriers to access for dissimilar members. In human resources management, education, and legal work, a similar phenomenon often discussed is unconscious bias—the disparities created in group memberships (i.e., employees, medical students, etc.) as a result of unintentional homologous selection processes (Collins, 2007; Corrice, 2009; Gorman, 2005; Parloff, 2007). In sport, studies on homologous reproduction have focused on the potential influence that the background characteristics of top administrative decision-makers have on the gender and racial proportions of their organizations. Such studies have centered on athletic directors at interscholastic (Lovett & Lowry, 1994; Mullane & Whisenant, 2007; Stangl & Kane, 1991; Whisenant, Pedersen, & Clavio, 2010), community (Regan & Cunningham, 2012), and intercollegiate (Hoffman, 2011; Sagas, Cunningham, & Teed, 2006; Walker & Bopp, 2010) institutions.

Of particular interest to the current study is the work that scholars have done on homologous reproduction within coaching staff. Cunningham and Sagas' (2005) research on the compositions of men's Division-I basketball staff revealed that White head

coaches were more likely to hire White assistant coaches than Black assistant coaches, and vice versa. The perception of an “old boys network”—a result of entrenched homologous reproduction—is often cited as being a barrier to entry for women and minorities desiring coaching positions (Hoffman, 2011; Lovett & Lowry, 1994). Borland and Bruening's (2010) study revealed that a consequence of homologous reproduction patterns in women's intercollegiate basketball is the isolation and obstacles to advancement that assistant coaches perceive when they are the only coach of their race within a staff. The assistant coaches that were interviewed in the study cited a lack of mentorship opportunities, and shared that experiences of being pigeon-holed as recruiters because of their similar backgrounds with the majority of student-athletes left them little time for, and access to, formal development programs to advance their careers.

Statement of the Problem

The general consensus of the stacking explanations described above was that discrimination in sports organizations, whether direct or systemic, has a disparate effect on members of traditionally underrepresented racial and ethnic groups. At this stage in our social history, however, it appears that many scholars have trouble accepting that discrimination alone causes stacking patterns in sports. In his qualitative study of stacking in the NFL, Blackburn's (2008) interviews with coaches revealed that Black coaches perceive race as an issue while White coaches deny its influence. Examinations of the professional athlete salaries support the belief that discrimination is a nonfactor (Kahn, 1992, 2000), given that there is no significant difference in the overall compensations of Black and White athletes. While comparable compensation is a positive step toward equity, level of pay alone is not enough to address the issues of power and access that come with critical mass and equal representation. In addition, while players may experience comparable compensation, it is their access to career mobility and team ownership that will determine their personal social capital in sport. Evidence of stacking patterns and leadership recruitment differences, however, signal that some form of disparate impact is occurring.

One of the major challenges that researchers face when trying to provide explanations for stacking and leadership recruitment patterns is that the proposed relationships are more complex than single explanatory theories can address. The

explanation of overt discrimination is an unpopular one, for it negates the positive effect that sport has had on intergroup relations through integration and cooperative interaction. Through the explanations discussed in this review of literature, it is clear that scholars have yet to find a valid estimation of how all of these potential theories explain the evidence of discriminatory practices in sport. A method of inquiry that would take into account these various propositions in an attempt to unpack the determinants of positional segregation and leadership recruitment patterns would be a welcome addition to these research traditions.

In lieu of growing discomfort with the acknowledgement of systemic discrimination in sports, many people may decide that stacking patterns are the result of natural economic forces that cannot be helped. Another type of economic explanation for stacking—one that does not rest on the premise of free choice—might be offered for the shaping of stacking outcomes in contemporary American college sports. This study included an examination of the socioeconomic status (SES) stratifications of players in central and non-central positions in an attempt to provide additional insight, not only into the formation of stacking patterns, but into the sociological disparate impact these patterns have the potential to incur.

Sport as an agent of social mobility.

The trouble with blindly accepting economic forces as the culprit for disproportionate position distribution in sports goes back to the power of hegemonic practices. By not challenging the status quo and attempting to insert leveling adjusters into social systems, systemic discrimination becomes more subvert and pervasive. In sport, the effects of stacking patterns are evidenced in realms other than the playing field. Media coverage of sports, highlighting players' positions, tends to reify and reproduce stereotypes. Byrd and Utsler (2007) discussed how coverage of Black athletes in sports media tends to differ from that of White athletes on descriptions related to intelligence and physicality. In their examination of textual passages related to Black and White quarterbacks, the authors found that Black quarterbacks were described in more physical terms than their White counterparts.

In some instances, stereotypical perspectives about Black athletes have not been as subtle as shown with contemporary media commentary. In 1987, former L.A. Dodger

manager Al Campanis explained in an interview with Nightline's Ted Koppel that Blacks never became baseball field managers because "they may not have some of the necessities" (McCarthy & Nightengale, 1997, para. 2). Failing in his attempt to deny a link between the lack of upward mobility and prejudice or discrimination, Campanis stated that the low representation of Blacks in sport management positions was because they lacked the capabilities to fulfill key roles (Evans, 1997). While it may be less controversial to discredit the remarks of one individual as localized opinion, similar statements throughout history indicate a deeper issue. In 1910, after the Black boxer Jack Johnson defeated his White opponent, Jim Jeffries, of the Los Angeles Daily Times, ran an editorial stating that the White man's "mental supremacy" and overall superiority was not dependent on his muscle (Entine, 1999). Roger Bannister, a White English Olympic runner, once commented that Black athletes had natural physical advantages over White athletes in track and field (Woodward, 2004). Jimmy "the Greek" Snyder, a former NFL commentator, publicly declared that Blacks were bred to be better athletes, an allusion to the United States history with slavery. On the international front, stereotypes about Black players were evidenced when Jim Smith, manager of the Queens Park Rangers, commented that Black athletes "use very little intelligence; they get by on sheer natural ability," (as cited in Maguire, 1988, p. 261). The consequence of the entrenchment and buy-in of stereotypes about Black athleticism is also seen in the following statement from Carl Lewis, a Black Olympic medalist in track and field: "Blacks, physically, in many cases, are made better" (as cited in Entine, 1999, para. 7).

Stereotypical comments about Black athletes and their natural abilities insinuate that success in sports and athletics is fair compensation for any disparate impact left over from historical discrimination. Sport, because of its potential to lead to university scholarships and high professional career salaries, is often lauded as an agent of upward mobility (Eitzen & Sanford, 1975; Kahn, 1992). Scholars contend, however, that reports of upward social mobility caused by sports are exaggerated, in that the actual sports in which Blacks have been given large scale opportunities are few (i.e. boxing, basketball, and football), and that the actual odds of a high school student rising to the professional ranks are quite prohibitive (Maguire, 1988; Washington & Karen, 2001).

Cole and Oman (2003) presented in their report on the intersection of race and class that many Black Americans viewed education as their best opportunity for upward mobility. If this perception is valid, then sports participation provides valuable opportunities for upward social mobility for lower- and middle-class Blacks. The truth, however, is that the effect of sport as an agent of upward mobility is impacted by the percentages of minority group members that actually gain access to athletic scholarships. The National Collegiate Athletic Association (NCAA) reports that the possibilities of high school athletes to compete at a member institution, whether aided by an athletic scholarship or not, are rather limited (less than 3.1% for men's basketball, 3.5% in women's basketball, 5.8% in football, and 6.3% in baseball) (National Collegiate Athletic Association, n.d.). Note that these probabilities are weighed against an aggregate of the participation opportunities housed within all levels (Divisions I, II, and III) of the NCAA's oversight. As such, the possibilities for scholarship opportunities are even less than the possibilities for participation, as Division-III institutions do not grant athletic-related scholarships. In addition, Owings, McMillen, and Daniel (1995) reported that the proportions of college-bound high school seniors that meet NCAA grade and academic requirements are skewed by racial group (46.4% of Blacks, 54.1% of Hispanics, and 67% of White and Asians).

Beyond the access to higher education degree attainment, the potential for sport participation to lead to key functionary positions in sport organizations is seen as a benefit. As earlier discussions of leadership recruitment studies have exhibited, access to these positions is often predicated by playing positions and biased by race (Chu & Segrave, 1981; Cunningham et al., 2006; Cunningham & Sagas, 2005; Eitzen & Sanford, 1975; Goss et al., 2007; Sack et al., 2005; Tropp & Landers, 1979). Thus, given the findings of these studies, sport has not yet lived up to its potential as a true and consistent agent of social mobility for minority group athletes.

The consequences of stacking.

The consequences of stacking patterns in sports are generally indirect. First, the concept of marginality as proposed by Brower, Pascal and Rapping (see Berghorn, Yetman, & Hanna, 1988; González, 1996) implies that minority group players, faced with increased within-group competition, must demonstrate a higher level of skill than their

White majority-group counterparts. Second, disparate impact of minority group athletes being assigned (by self or others) to positions associated with leadership and decision-making is evidenced in their underrepresentation in key functionary roles (Evans, 1997). In addition, the persistence of stacking being exhibited in sports at all levels has the potential to reinforce stereotypical perspectives for members of all racial and ethnic groups. Probably most troublesome is the impact that stacking patterns have on young athletes who make decisions about which sports and positions to pursue based on self-stereotyped schema that reflect systemic discrimination (Harrison, 1995). Finally, the blind acceptance and maintenance of the status quo has the potential of reifying and institutionalizing detrimental hegemonic systems at work within, and alongside, sport.

Justification for the study.

A review of the relevant literature on stacking in sports has shown that not much scholarly work has been conducted on women's intercollegiate sports (Berghorn et al., 1988; Daddario & Wigley, 2008; Margolis & Piliavin, 1999). In addition, researchers have suggested that stacking patterns in women's sports occur in different distributions than are observed in men's sports (Yetman & Berghorn, 1993). To provide additional research to address this void, this study examined stacking in women's college basketball from a racial, as well as socioeconomic, standpoint.

This study investigated the impact of socioeconomic status (SES) on the stacking phenomenon in Division-I women's basketball. While stacking research has declined in popularity and attention, the comparison of the current participation demographics in the coaching and administrative ranks show supporting evidence that positional inequity still exists. Multivariate analyses were used to determine whether the racially correlated allocation of positions in sports was compounded by socioeconomic status (SES)—an indicator of the amount of access athletes would have to training and development opportunities. Results from this study may suggest the existence of a mediator variable that, if applied to young athletes, could help to level the effects of lower SES. The revelation of such a variable presents opportunity for practitioners to create programming and policy that can correct trends of social disparity.

A review of the relevant research on leadership recruitment and positional segregation in sport has revealed that there is an under-explored link between the

determinants of stacking and the results of minority representation in coaching and administrative positions. Again, this is a research area that is dominated with studies featuring male sports and participants. To help justify the importance of investigating positional segregation in Women's Division-I basketball, an exploratory leadership recruitment study was conducted. The information gathered from the leadership recruitment portion of the study informed the analysis of the stacking results.

Also introduced in this study is a novel measure of the degree of position centrality with a variable influenced by Grusky's (1963) original centrality theory. The variable of interest combines aspects of position on the court (related to interaction and task) and position off the court (i.e. team captain). The leadership recruitment portion of this study sought to confirm the findings of previous leadership recruitment research by examining the former positions played by current Division-I Women's basketball coaches.

The Research Questions

The overarching objective for this study was to explore the relationship between an individual's biographical characteristics and leadership development and recruitment in Division-I Women's Basketball. The research questions and their associated null hypotheses for the study are listed below:

RQ1. What is the impact of demographic, experiential, and contextual factors on the attainment of coaching positions in Division-I Women's Basketball?

RQ2. What is the impact of demographic, experiential, and contextual factors on the assignment of playing positions in Division-I Women's Basketball?

- H1₀. The position that a coach played in college is not associated with the likelihood of that individual being found in a Division-I Women's Basketball coaching position.
- H2₀. The race/ethnicity of the coach is not associated with the former playing position of the coach.
- H3₀. The sex of the coach is not associated with the former playing position of the coach.
- H4₀. The race/ethnicity of the coach is not associated with the position value the coach has within the team's staff.

- H5₀. The sex of the coach is not associated with the position value the coach has within the team's staff.
- H6₀. The homologous race/ethnicity of the head coach is not associated with the individual's likelihood to be assigned to a certain position.
- H7₀. The homologous sex of the head coach is not associated with the individual's likelihood to be assigned to a certain position.
- H8₀. The race/ethnicity of the student-athlete is not associated with the individual's current playing position.
- H9₀. The race/ethnicity of the student-athlete is not associated with the likelihood that the individual will be a member of a women's basketball team at the Division-I level.
- H10₀. The socioeconomic status of the student-athlete is not associated with the likelihood that the individual will be a member of a women's basketball team at the Division-I level.
- H11₀. The race/ethnicity of the student-athlete is not associated with the individual's likelihood to be assigned to a certain position.
- H12₀. The race/ethnicity and socioeconomic status of the student-athlete is not associated with the individual's likelihood to be assigned to a certain position.
- H13₀. The race/ethnicity, socioeconomic status, and access level of the student-athlete is not associated with the individual's likelihood to be assigned to a certain position.
- H14₀. The homologous race/ethnicity of the head coach is not associated with the individual's likelihood to be assigned to a certain position.
- H15₀. The homologous sex of the head coach is not associated with the individual's likelihood to be assigned to a certain position.
- H16₀. There is no relationship between the centrality of a student-athlete's position and the individual's demographic, experiential, or contextual status.

Figure 2.2 presents a graphical representation of the research design for this study. Items surrounded by broken lines indicate the hypothesized variables and relationships at the demographic, experiential, and contextual levels.

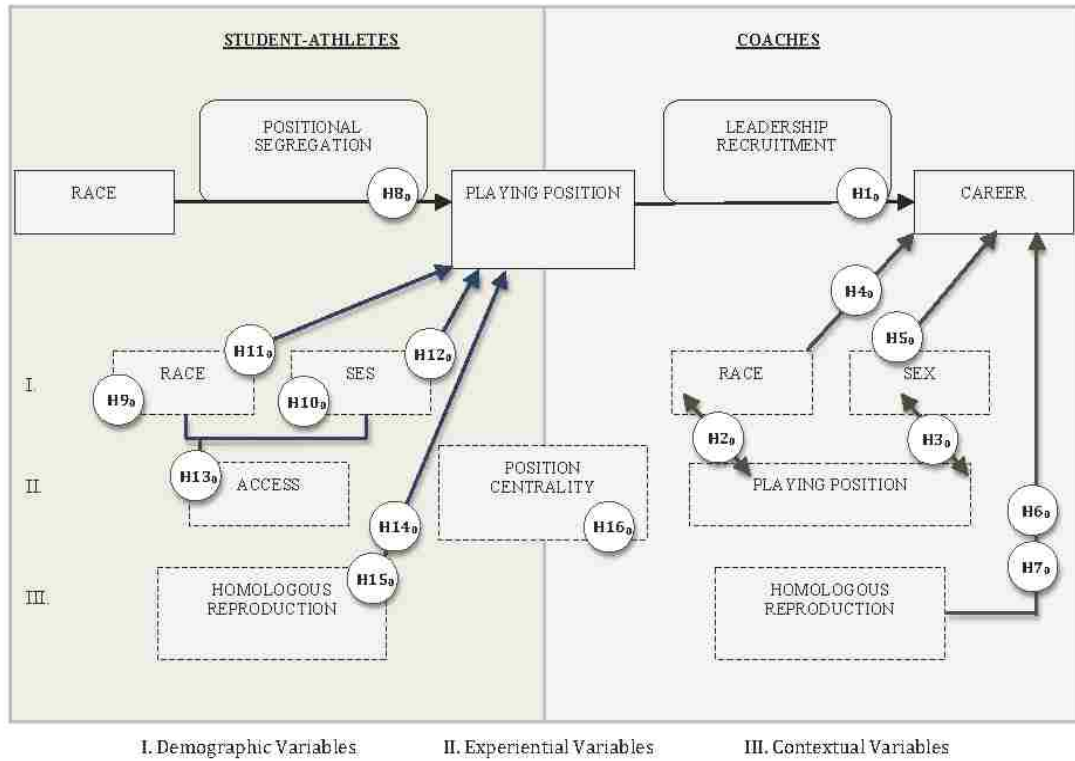


Figure 2.2. The Research Design Model. Solid lines in the figure represent the traditional hypotheses associated with the research tradition. Broken lines in the lower portion of the figure represent the hypotheses introduced in this study, with demographic (I), experiential (II), and contextual (III) variables.

CHAPTER 3 - RESEARCH DESIGN

Overview

This chapter presents an overview of the methods and procedures used for this study. The chapter covers the following sections: (a) participants, (b) method, (c) hypotheses, (d) instrumentation, (e) data collection procedures, and (f) data analysis procedures. A combination of multivariate analyses was employed to evaluate the data collected for this study. Scholars suggest that multivariate analyses should be used when investigating positional allocation in sport (Jones, Leonard, Schmitt, Smith, & Tolone, 1986), especially when the goal is generating new information on a traditional area of study (Birrell, 1989). The implementation of multiple predictor and outcome variables in the analyses of this study justify the use of multivariate analysis techniques. For the various hypotheses evaluated in this study, the following methods were utilized: descriptive induction, correlation, chi-square analyses, ordinal logistic regression, and multinomial logistic regression. Multivariate analyses are preferable in social science research because they allow for a more complete description of the phenomenon of interest, and have the potential for uncovering the interaction of multiple effects (Stevens, 2009).

Participants

The standard method employed in both leadership recruitment and positional segregation research has been for researchers to create profiles of participants using secondary data. Studies have used team media guides (Berghorn et al., 1988; Finch et al., 2010; Hawkins, 2002; Jones et al., 1986; Marsh & Heitman, 1981; Yetman, Berghorn, & Thomas, 1982), statistical and records reviews (Fabianic, 1984; Maguire, 1988), and popular magazines (Pattnayak & Leonard, 1991). For this study, the chosen method involved obtaining data directly from participants in hopes that racial and ethnic identities would be more accurately assigned (Chu & Segrave, 1981; Leonard, 1987). A purposive sampling technique called “total population sampling” (Lund Research Ltd 2010, n.d.) was selected as the sample actually consisted of the entire group sharing the investigated characteristics. Specifically, the participants in this study share the characteristic of being

involved in Division-I women's basketball. The research design for this study was cross-sectional survey (Gay, Mills, & Airasian, 2009).

Two groups of individuals served as the participants for this study. First, all current (for the 2012-2013 season) Division-I women's basketball coaches were surveyed as part of the examination of leadership recruitment patterns: the relationships between the centrality of former playing position and current coaching position. Second, all current (for the 2012-2013 season) Division-I women's basketball players were surveyed in order to evaluate positional segregation patterns: the relationships between the centrality of current playing position and racial/ethnic identity group. The results from each survey were used to expand upon these basic analyses to include the direct and indirect effects of additional variables (as detailed further below). Coaches were deemed eligible for this study if they were employed in the position of Head Coach, Co-Head Coach, Associate Head Coach, Assistant Coach, Graduate Assistant Coach, or Director of Basketball Operations at a NCAA Division-I member institution at the time of the launch. The list of NCAA Division-I institutions that have varsity women's basketball was generated from the NCAA website: <http://web1.ncaa.org/onlineDir/exec/divisionListing> (NCAA, n.d.-c). Student-athletes were eligible for the study if they were members of a women's basketball team at any of the NCAA Division-I member institutions at the time of the launch. The NCAA Members by Division listing showed a total of 344 Division-I level member institutions that had a women's basketball program during the 2011-2012 season. Of those listed, 342 of the teams are classified into one of 32 regional conferences, with the remaining competing as Independent (having no assigned conference). The list of Division-I universities and colleges with women's basketball teams is presented in Appendix A.

The 2012 Racial and Gender Report Card for College Sport (Lapchick, 2012) reported the following breakdowns for Division-I women's basketball head coaching personnel by gender and race/ethnicity for the 2011-2012 season (see Table 3.1 for a summary): 35.7% Male (31.5% White Male, 3.8% African American, 0% Asian, 0.3% Latino, 0.0% Native American, 0.0% Other), and 64.3% Female (51.6% White, 10.8% African-American, 0.3% Asian, 0.6% Latino, 0.0% Native American, and 1.0% Other). Assistant coaches in Division-I women's basketball were tabulated as follows: 31.0%

Male (20.0% White, 9.2% African-American, 0.2% Asian, 0.4% Latino, 0.2% Native American, and 0.6% Other), and 69.3% Female (39.9% White, 25.3% African-American, 1.0% Asian, 0.8% Latino, 0.0% Native American, and 0.0% Other). Table 3.1 presents the counts and percentages of coaches and student-athletes in Division-I Women's Basketball as reported for the 2011-2012 season in the NCAA's Race and Gender Demographics website (Irick, 2011).

Table 3.1

Coach and Student-Athlete Participation Racial/Ethnic Rates, 2011-2012

	COACHES						STUDENTS	
	MALE		FEMALE		TOTAL		FEMALE	
	N	%	N	%	N	%	N	%
White	319	65.0	532	59.9	851	61.7	1,713	35.1
Black	155	31.6	319	35.9	474	34.4	2,536	51.9
American Indian/ Alaskan Native	0	0.0	1	0.1	1	0.1	21	0.4
Asian	2	0.4	12	1.4	14	1.0	28	0.6
Hispanic/ Latino	8	1.6	9	1.0	17	1.2	95	1.9
Native Hawaiian/ Pacific Islander	0	0.0	0	0.0	0	0.0	19	0.4
Two or More Races	3	0.6	6	0.7	9	0.7	145	3.0
Nonresident Alien	1	0.2	5	0.6	6	0.4	191	3.9
Other	3	0.6	4	0.5	7	0.5	138	2.8
TOTAL	491		888		1,379		4,886	

Note. The percentages shown in this table reflect the percentage of the gender group (MALE, FEMALE).

The count of coaches reported by the NCAA's website was 342 head coaches and 1,037 Assistant Coaches for the season ending in 2012, for a total of 1,379 coaches. With the addition of other staff members not likely included in these counts (such as Graduate Assistant, and Director of Basketball Operations), a rough estimate of the number of coaches in the population who had the potential to be surveyed was 1,700. The number of female athletes playing Division-I women's basketball in the season ending in 2012 was

given as 4,886. The estimated number of student-athletes in the population who had the potential to be surveyed for this study was 4,900.

Instrumentation

The instruments of choice in this quantitative study were surveys. Previous stacking research has been done using unobtrusive methods of document and photo analysis alone, but the use of direct responses from participants for biographical data—especially that about racial/ethnic and socioeconomic classifications—was desired for greater accuracy. Based on a literature review of related studies, two surveys were designed as a means to create demographic and experiential profiles of coaches and student-athletes currently involved in Division-I Women's Basketball (see Appendix B for the instruments).

Leadership and playing position profile for coaches.

The coaches' survey consisted of twenty-seven (27) questions divided into six (6) sections. The questions were framed to collect information about the coach's background and career development experiences. The sections were organized as follows: consent, current career status, team status, career development, previous playing experience, and demographics. Development of the measures followed the abstract constructs described below.

Personal background.

The personal background questions considered factors that are uncontrollable by the participant, but which are hypothesized to impact their access to mobility in the coaching profession. One such factor, race/ethnicity, is derived from positional segregation research, based on Loy and Elvogue's (1970) employment of centrality theory in sport. The factors considered for the collection of background information were very similar to those used in the student-athlete model. Included questions asked about race/ethnicity, national origin, age, and gender.

Career development.

Measures dealing with the career development indicators for the coach population differ from those of the student-athlete group with the inclusion of development specific activities. An important study informing the development of this construct is Agyemang and DeLorme's (2010) investigation into the under-representation of Black head coaches

in football. Population specific factors for this thematic area include: highest education level completed, length and diversity of coaching career, athletic success, professional playing experience, and head coach career intention. Also of note, Stangl and Kane (1991) investigated homologous reproduction theory to explain gender effects in the coaching ranks of women's sports.

Team context.

The 2010 study by Day and McDonald used social network to investigate the effect of social capital through evidence of homophilic and heterogeneous associations. Their research supports the inclusion of team contextual factors such as head coach race and head coach sex.

Coaching staff position.

For the coach population, coaching staff position was the outcome of interest instead of playing position. Rimer's (1996) study presents cause for concern in the representation of coaches in different levels on the staff, as his results revealed that Blacks, Hispanics, and Whites were hired as MLB managers on the basis of different attributes. Variables measured toward this underlying theme were current staff position and length of time at current position.

Leadership position.

Borland and Bruening (2010) found in their qualitative investigation of the underrepresentation of Black women as head coaches that lack of support and networks were key influencing factors. The leadership position construct includes measures that will speak to these and similar elements that mediate women in gaining access to career mobility in the coaching realm. Measures considered here were current role responsibilities, both on and off the court.

Leadership and playing position profile for student-athletes.

Similar to the coaches' survey, the student-athletes' survey consisted of thirty-eight (38) questions divided into the following five (5) sections: consent, current career status, team status, demographics, and previous playing experience. The response options on both surveys ranged from multiple-choice to open ended, with matrix charts that allowed for a variety of multiple response types in the same question (see Appendix B).

Information about the development of the measures for student-athlete respondents follows.

Personal background.

The questions associated with gathering personal background information for the student-athletes were very similar to those used in the coaches' survey. Indicators of socioeconomic status replaced gender as a main factor for this participant set. Included measures dealt with race/ethnicity, national origin, and age (educational class level). The personal background variable is made up of factors that are uncontrollable by the participant, but which are hypothesized to impact the various tests of positional segregation.

Other variables associated with personal background were designed to be indicators of socioeconomic status (SES). They included household income, parent/guardian's profession, parent/guardian's education, household poverty level, educational class, and former high school type.

Athletic development.

Questions about the athletic development experiences of the student-athletes were designed on the premise that they give information about the activities the athlete participated in before obtaining their current role. Medoff's (1976) economic theory—which suggests that stacking patterns are revealed in positions that have additional costs associated with training, equipment, and development—is one that informs this theme. Some of the indicators included in this variable set were development activities, previous playing position, previous leadership positions, coaching career intent, and college entry path.

Team context.

Elements associated with the ranking, region, and past success of the university's basketball program have an influence on the recruitment and integration of players the team setting. The consideration of regional influence on racial integration revisits the work done by Berghorn and colleagues' (1988) study. Additional variables of interest here were: head coach race and head coach gender.

On-Court position.

Related to the outcome variables, these questions included measures of a participant's current status and role on the court. Some elements of interest here were: primary playing position, secondary playing position, percentage of game starts, and on-court specialty roles.

Leadership position.

Expanding upon current stacking research—which focuses investigations solely on the status of playing position—questions on this survey were designed to assist in the evaluation of formal (on-court) and informal (off-court) leadership positions. The findings of Melnick and Loy (1996) are important to note for this theme, as they reveal that high skill level is associated with the motivation for selecting athletes as leaders at the collegiate level of competition. The indicators chosen here were: team captain status and off-court leadership positions.

Validity.

Groves, Fowler, Couper, Lepowski, Singer, and Tourageau (2004) described construct validity as “the extent to which the measure is related to the underlying concept” (p. 30). Validity testing was conducted on two levels for the survey instruments. First, an expert panel of two faculty committee members and the researcher evaluated each question to determine content and cognitive standards (Gay et al., 2009; Groves et al., 2004; Vaske, 2008). After the initial review, the surveys were piloted with a convenience sample of former women's basketball players and coaches. During both phases of the survey review process, reviewers were asked to pay attention to relevance to the overall topic of the study, terminology and language, comprehension, order, and sensitivity. These discussions resulted in minor adjustments to the branching, wording, and exclusion of questions for the final version of the surveys.

Procedures

Previous stacking studies have excluded Historically Black Colleges and Universities (HBCUs) from their samples because their population demographics are significantly different from those of Predominantly White Institutions (PWIs), but only one participant (coach) was from an HBCU. Given that this respondent's answers were similar to those in the general group, the HBCU coach was retained in the study. No

separate analysis of HBCU members was conducted. The surveys were developed using the Opinio v6.4.4 survey deployment system, an online application run by the company ObjectPlanet, Inc. and supported by the University of New Mexico. A web deployed survey was chosen as the method for this project to take advantage of the ease of distribution and access to participants located across the United States (Bourque & Fielder, 2003).

A database of all 2012-2013 NCAA member Division-I women's basketball teams was created to ensure that every potential participant coach was sent an invitation. The email addresses for each coaching staff member was collected from the respective College/University web directory. After approval was obtained from the Human Research Protections Office at the University of New Mexico (see Appendix C), the following data collection procedures took place. An email containing the link to the survey was sent using the Opinio application. Opinio automatically sends reminder emails to a customized list of participants on a set schedule. While Opino has the ability to create individualized links and track responses, that functionality was not utilized for the sake of simplicity and consistency in communication materials. A packet with letters and flyers was sent to the attention of every head coach via U.S. Postal mail. In addition, the Sports Information Director (SID) associated with each women's basketball team was sent an informational email about the study. The additional contact was utilized in an attempt to allow for a better chance of participants receiving the information. Given the nature of privacy laws and university student data protection policies, many schools do not make student email addresses available. Thus, no student emails were collected. The cover letter introduced the study, requested assistance with informing team members by delivering the postcards, and alluded to the forthcoming emails with the survey's url address. The communication materials are presented in Appendix D.

The drawback of the generic link used in the participation requests was that reminder emails were sent to all coaches, regardless of whether or not they had already completed the survey. In an attempt to increase response rate, two follow-up reminders were sent: the first occurring two weeks after the initial invitations, and the second occurring one week after that (Bourque & Fielder, 2003). The survey remained open for a period of four weeks. The url address link in the email and mailed invitations took

participants to the researcher's website which featured the participant agreement statement and two links to begin the survey—one for each participant group. Respondents were able to begin the survey by clicking the relevant link after having read the statement.

Data Analysis

One of the benefits of doing an online survey is that data are automatically collected into a database. While this eliminates much of the need for transcription and data entry for this study, the data still needed to undergo a process of cleaning. Fink (2003) suggested the creation of a codebook and a plan of how to deal with missing data. The codebook included a listing of all variables used in the analyses (see Appendix E). Instances of missing data were removed before the start of each statistical test using listwise deletion. No outliers were discovered in the dataset. The data were analyzed using SPSS v20 for reports on descriptive statistics, correlations analyses, chi-square tests, ordinal and multinomial logistic regressions, and chi-square tests. Microsoft Excel for Mac 2010, was used for percentage calculations and correlation group comparisons. The results of the data analyses are presented in the next chapter. See Appendix F for a summary of the statistical tests associated with each hypothesis for this study.

Descriptive statistics.

Descriptive statistics were calculated as appropriate for all of the variables of interest. Continuous variables were analyzed for measures of central tendency (mean and median) and spread (standard deviation and range) (Fink, 2003). Categorical variables were analyzed for frequencies, proportions, and percentages.

Correlation analyses.

The analysis of correlation coefficients evaluates the association between variables (Vaske, 2008). Reported values of the correlations, the sample sizes, and the significance levels allow for a judgment of strength for the relationships. Pearson correlation coefficients were estimated for relationships between continuous variables, Spearman rho coefficients for relationships between ordinal variables, and Biserial correlation coefficients for relationships between dichotomous and continuous variables. Comparisons of correlations between variables of two groups were conducted using coefficient values that were converted into z scores (z_{obs}) (Pallant, 2010).

Chi-Square tests.

Both chi-square goodness-of-fit and chi-square independence tests were utilized to analyze the categorical data this study (Fink, 2003; Pallant, 2010; Vaske, 2008). Chi-square tests for goodness-of-fit are used to compare the observed frequency of categorical data to expected values. Chi-square tests for independence are used in cross-tabulation analyses that explore the relationships between categorical variables by comparing the proportions of values within each variable. The resulting chi-square values reveal whether or not the proportions of observed and expected values of the compared variables indicate an association (Pallant, 2010). As is customary, chi-square results are reported with degrees of freedom, sample size, and significance level. Effect size in the form of Cramer's V is reported for chi-square independence tests of cross-tabulations when the tables are larger than 2-by-2. The reporting of effect sizes is a valuable addition to the significance tests, as they allow comparisons across variables both internal and external to the study (Vaske, 2008). The chi-square tests in this study were particularly used to compare group positional outcomes based on race/ethnicity, replicating the approaches used by previous scholars in the field.

Logistic regression.

Logistic regression is an analysis technique that allows for the prediction of categorical variables using either continuous or categorical variables as the predictors (Pallant, 2010). The interpretation of logistic regression results allow for the analysis of odds ratios (ORs), which represent the increase or decrease in the odds of an event happening with a unit increase of a predictor. Models composed of sets of predictor variables are compared to one another using the -2 Log Likelihood differences (based on a chi-square distribution) and their relative predictive abilities (Pedhazur, 1997). Binary logistic regression is limited to tests where the outcome variable is dichotomous. This study employed the polytomous logistic regression techniques of ordinal and multinomial logistic regression. These latter regression methods allow for analyses where the outcome variable has more than two categories. Ordinal logistic regression is used when the dependent variable is ordinal, and the results report the odds of the outcome occurring among the different outcome categories (Fullerton, 2009). Multinomial logistic regression is appropriate for use when the categories of the outcome variable do not have

an ordinal nature, or when the test for parallel lines indicates that the estimated coefficients are not equal across categories. Such a violation indicates that the predictor variables impact the outcome variable in different ways depending on the category in focus (IBM Corporation, 2011). In this study, the models tested using these techniques estimated the utility of race/ethnicity, gender, SES, access, and key interactions on the prediction of playing and coaching positions.

Variable construction.

A continuous outcome variable representing staff position value (JOBVALUE) was created from the responses to the coaches' survey. This variable was a composite of the hierarchical value of the individual's job title (i.e., Head Coach) and a weighted score based on the category assigned to the individual's main job responsibilities. This variable was evaluated using correlation analyses to test its association with other variables of interest. Variables that were used to construct the continuous scales for the student-athlete data were also explored through correlation analyses. The continuous SES variable (SESSCORE) was constructed from the values of Suburban neighborhood (HSSUBURB), private high school attendance (HSPRIVATE), household status (TWO PARENT), average level of parental/guardian education (PARENTED), average level of parental/guardian occupation (PARENTOC), neighborhood median income (ZIPINCOME), and self-reported household income (HSINCOME). The access score (ACCESS) was constructed from an individual's response to questions about pre-college training activities (HSCAMP, CGCAMP, PRSNLTRN, WGTTRN, AAUBCI, SUMMR), age started playing basketball (BSKBAGE), transfer type (PATHEDU), and percentage of organized Country Club sports played before college (PERCCLUB). See Appendix G for additional information about the construction of variables for this study.

Unlike in sports like football or baseball, the playing positions in basketball engage in various movements that take them both near to and far from the goal. Since there are no specific zones of play that each position is regulated to, the determination of proximity (spatial location in relation to game action) for each position is not as valuable for a centrality score as in other sports with limited mobility. As such, another method of position evaluation was needed. Interaction process analysis (IPA) is a technique used in communication studies to evaluate of group interactions (Bales, 2009). Traditionally, an

act of verbal or non-verbal behavior is scored, coded and analyzed for information on the nature, purposes, and achievements of the interactions. The IPA framework was loosely interpreted in this study as an attempt to create a replicable method of determining the rate of interaction involved with each playing position in women's basketball. A mobile application was created for ease of data entry and use, with touch-screen buttons representing players' positions from a home and away team. The application was used to analyze the numbers of passes each position received during the course of a game. The games analyzed were the three Women's Final Four competitions of the 2011-2012 season (University of Connecticut vs. University of Notre Dame, Stanford University vs. Baylor University, and University of Notre Dame vs. Baylor University). Aggregated results showed that the rate of interaction for each position ranged from highest to lowest in the following order:

1. Point Guard
2. Shooting Guard
3. Off Guard/Wing
4. Forward/Post
5. Center

Thus, that order of positions was used for the determination of centrality; with point guard considered to be the position of greatest centrality and greatest proximity (as it was 'closest' to the most action). See Appendix H for a screenshot of the application.

Limitations and Delimitations

- This study focused solely on Division-I Women's Basketball for its participants and context.
- Inherent in online survey research is the inability to control the context in which participants respond to the survey. The facility to obtain to participant responses was dependent on their access to both email and Internet connectivity.
- Although the entire population of teams was sent invitations as part of the census method of sampling, the actual delivery of participation invitations to each student-athlete depended 1) the head coach's willingness to participate, 2) the head coach's permission for the students to participate, and 3) the subsequent

passing on of the invitation and instructions. Direct contact with the participants could have potentially increased the response rates.

- The frequent use of this population for concurrent research studies lowered the chances that this study would be selected for participation by head coaches. In fact, a few coaches declined to participate citing the team's participation in other studies. It is possible that other teams who did not reply declined to participate for similar reasons.
- Low response rates limit the generalizability of the study, even though the subgroup proportions in the study are representative of the proportions within the population-at-large.
- The cross-sectional survey design of this study comes with some inherent limitations (Gay et al., 2009). A cross-sectional survey interacts with participants at a single point in time, resulting in a description of the context and situation that may no longer be the same after the study is completed. Other forms of survey research design, such as longitudinal, allow researchers the opportunity to revisit a population for additional information. For the scope of this project, a cross-sectional design sufficed but future research could apply longitudinal methods to paint a more thorough investigation of the phenomena.
- The cross-sectional nature of this study makes it impossible to describe any trends apparent in the population.

CHAPTER 4 - RESULTS

The purpose of this study was to evaluate the contemporary relevance of the leadership recruitment and positional segregation (a.k.a. “stacking”) research traditions as related to Division-I Women’s Basketball. Specifically, this study sought to explore the relationships between an individual’s background characteristics and leadership development and recruitment for coaches and student-athletes. The study collected demographic and personal background information for two sets of participants. The first set, coaches in Division-I Women’s basketball, were surveyed for the leadership recruitment theory, which posits that former athletes who played in central positions in their sport are more likely to move into key positions in the industry. For this study, the industry of interest was coaching women’s basketball at the Division-I level. In addition to questions about former playing position, coaches were also asked to share specific information about their experiences as athletes and as coaches. The second set of participants, student-athletes participating in Division-I Women’s Basketball, were surveyed for information about their current playing position, in order to test the positional segregation theory, which posits that an athlete’s racial/ethnic background motivates their assignment into central versus peripheral playing positions. Specifically, positional segregation studies imply that Non-White athletes are under-represented in central playing positions. Student athletes were also asked to provide information about their financial backgrounds, their high school careers, and pre-college activity participation.

In addition to testing for the evidence of traditional interpretations of leadership recruitment and positional segregation, this study explored the potential of adding different predictor variables to models relating playing position to career mobility (for coaches) and race/ethnicity (for athletes). Also, in an attempt to answer the challenge of bringing novel perspectives of stacking research to the field, this study explored an additional measure of position centrality within the context of women’s basketball teams. Ultimately, the goal of this study was to explore the potential for linked discrimination in position assignments for both coaches and athletes, influenced by demographic and experiential data. Upon collection of the data, the researcher produced coded analytic

datasets for both the coach and student-athlete populations. Regression, correlation, and chi-square analyses were used to evaluate the various hypotheses presented in the previous chapter. Descriptive statistics, model taxonomy, and statistical test results are presented in this chapter.

Descriptive Statistics

Survey packets and emails containing instructions to access both surveys were sent to each of the 344 Division-I Women's basketball teams in the United States in 2011-2012. Coaching staff members were asked to participate in the study by responding to the coach's survey, and to provide the information to their team's athletes so that they could respond to the student-athlete's survey. One packet was returned from the coach of a team whose division status had been reclassified for the 2012-2013 season, leaving 343 mailed packets. Representatives from seven teams replied to the email declining to participate. The researcher chose to use listwise deletion in instances where missing data were found. Given the demographic nature of the variables used with both participant groups, the adoption of imputation methods for missing data was not utilized.

Coaches.

Each team in the population ranged from having between two to eight relevant staff members, which included Head Coaches, Co/Associate Head Coaches, Head Assistant Coaches, Assistant Coaches, Directors of Basketball Operations, and Graduate Student Assistants. Responses from persons in ancillary positions such as Team Managers, Administrative Assistants, and Video Coordinators ($n = 7$) were removed from the dataset prior to analysis. A survey was considered complete if the user reached the final question and clicked the "Submit" button. The only question that required a response was the consent and age-above-18 verification request at the start of the survey. Responses were not collected from surveys where users did not reach the final page. Of the 343 teams, 152 coaches' surveys were coded and used for the analyses of the leadership recruitment hypotheses (response rate of 9%).

Of the 152 coach participants, 108 (71.1%) self-identified as White, 27 (17.8%) as Black, four (2.6%) as Mixed-Race (two or more boxes selected), four (2.6%) as Hispanic/Latino, two (1.3%) as American Indian/Alaska Native, and one (<1%) as Pacific Islander. There were no participants who self-identified as Asian, and six (3.9%)

respondents chose not to select a racial/ethnic identifier. For the purpose of meeting statistical test requirements, the racial/ethnic identities of the coaching population were aggregated into a dichotomous variable (WHITE) indicating if the coach identified as White versus Non-White. The majority of the coaches were female ($N_f = 101, 66\%$; $N_m = 52, 34\%$); also coded into a dichotomous variable (FEMALE) representing the sex of the respondent. The coaches represented 97 of the 343 teams, and 31 of the 33 NCAA Division-I Conferences. The two conferences not represented were the Great West and Southwestern (SWAC) conferences. Only one coach reported working at a historically Black college or university (HBCU) so this contextual variable was not utilized. The latest version of the population demographics released by the NCAA details the 2011-2012 season, and Table 4.1 and Table 4.2 show the comparison of the race/ethnicity and sex percentages of this study's coach participants to the Division-I Women's Basketball coach population.

Table 4.1

Demographic Statistics for Division-I Women's Basketball Coaches (Percentages)

	2011-12 ^a ($n = 1,379$)	2012-13 ^b ($n = 152$)
Race/Ethnicity		
American Indian/ Alaska Native	0.1	1.3
African American/ Black	34.4	17.8
Asian	1.0	-
Hispanic	1.2	2.6
Pacific Islander	0.0	0.7
White	61.7	71.1
Mixed Race	0.7	2.6
Other	0.9	-
Sex		
Female	64.4	66.0
Male	35.6	34.0

^a(NCAA, 2012)

^bCurrent Study Demographics

Chi-square goodness-of-fit tests for both race/ethnicity ($\chi^2_{1,146} = 33.562, p < .001$) and sex ($\chi^2_{1,148} = 15.568, p < .001$) showed statistical significance of the coach's sample being overwhelmingly White and female. A significant chi-square test for independence

showed that race/ethnicity and sex were moderately associated in this sample, $\chi^2(1,146) = 9.051, p = .002$, Cramer's $V = .249$. Table 4.3 shows the breakdown of coaches by their current titles. The majority of head coaches were White (93.1%) and female (72.4%). All of the Non-White male coaches were found in the general Assistant Coach category. The last category combined the Graduate Assistant and Director of Basketball Operations categories into one. These results show that Non-White coaches were under-represented in all positions ($\chi^2_{4,146} = 11.624, p = .020$, Cramer's $V = .282$), especially in the highest hierarchical categories of Head Coach and Co-/Associate-Head Coach.

Table 4.2

Race/Ethnicity by Sex Demographic Statistics for Division-I Women's Basketball Coaches (n = 146)

	FEMALE		MALE	
	N	%	N	%
Race/Ethnicity				
American Indian/ Alaska Native	2	2.0	0	0.0
African American/ Black	23	23.5	4	2.7
Asian	0	0.0	0	0.0
Hispanic	3	3.1	1	0.7
Pacific Islander	1	1.0	0	0.0
White	65	66.3	43	29.5
Mixed Race	4	4.1	0	0.0
Other	0	0.0	0	0.0
Total	98	67.1	48	32.9

Note. Listwise deletion for the cross-tabulation of race/ethnicity and sex resulted in fewer cases reported for this analysis.

Table 4.3

Cross-Tabulations by Race/Ethnicity and Sex for Current Position Title of Division-I Women's Basketball Coaches (n = 146)

Job Title	WHITE			NON-WHITE			TOTAL	
	Female	Male	%	Female	Male	%	N	%
Head Coach	19	8	18.5	2	0	1.4	29	19.9
Co-/ Associate-Head Coach	4	3	4.8	0	0	0.0	7	4.8
Head Assistant Coach	1	6	4.8	2	0	1.4	9	6.2
Assistant Coach	31	16	32.2	21	5	17.8	73	50.0
Graduate Assistant Coach/ Director of Operations	10	10	13.7	8	0	5.5	28	19.2
TOTAL	65	43	74.0	33	5	26.0		

Note. The percentages in this table reflect the percentage the given job title and race/ethnicity category for the entire population.

A tabular representation of the breakdown of race/ethnicity and sex for variables relating to the playing experiences of coaches is presented in Table 4.4. Overall, the majority of coaches played college basketball at a Division-I university (52.1%), were captains on their teams (63.0%), were part of the starting line-up in the majority of their games (65.1%), and had intentions to become a basketball coach at the Division-I level while a player (52.1%). The racial/ethnic and sex differences in the variable frequencies indicate the presence of bias influencing the likelihood of an individual becoming a coach. A greater percentage of Non-White female coaches played at the highest level of competition (73.7% of the Non-White female population versus 36.1% for their counterparts in the White population). Similar trends were seen for experience as a team captain (76.3% vs. 48.1%) and starter (76.3% vs. 48.1%). Also, while 18.6% of the White population did not have any experience playing at the collegiate level, all of the Non-White participants played at some level of intercollegiate basketball. In the comparison between female and male coaches for both racial/ethnic groups, female coaches were more likely to have had a history of team leadership (Captain, SAAC) and successful playing career (MVP, Starter, NCAA Tournaments) than male coaches.

Table 4.4

Cross-Tabulations by Race/Ethnicity and Sex for College Experience Variables of Division-I Women's Basketball Coaches (Percentages) (n = 146)

	WHITE		NON-WHITE		TOTAL
	Female	Male	Female	Male	
Alma Mater					
Division-I	36.1	7.4	73.7	2.6	52.1
Division-II	9.3	5.6	10.5	5.3	15.1
Division-III	10.2	4.6	0.0	5.3	12.3
NAIA	1.9	5.6	2.6	0.0	6.2
AIAW	0.9	0.0	0.0	0.0	0.7
Did Not Play	1.9	16.7	0.0	0.0	13.7
Team Captain					
Yes	48.1	8.3	76.3	5.3	63.0
No	12.0	31.5	10.5	7.9	37.0
MVP					
Yes	24.1	1.9	23.7	5.3	26.7
No	36.1	38.0	63.2	7.9	73.3
Starter					
Yes	47.2	12.0	76.3	5.3	65.1
No	13.0	27.8	10.5	7.9	34.9
SAAC					
Yes	22.2	1.9	31.6	0.0	17.1
No	38.0	38.0	55.3	13.2	82.9
NCAA					
Tournament(s)					
Yes	32.4	1.9	31.6	2.6	34.2
No	27.8	38.0	55.3	10.5	65.8
Intent to Coach D-I					
Yes	31.5	20.4	44.7	7.9	52.1
No	28.7	19.4	42.1	5.3	47.9

Note. The percentages shown in this table reflect the percentage of the racial/ethnic group (WHITE, NON-WHITE).

Additional variables of interest presented in Table 4.5 echo these findings. Female coaches, both White and Non-White, were more likely than male coaches to have

experience playing basketball as a professional athlete after college. In general, the education attainment of coaches was quite similar across racial/ethnic groups; however, Non-White male coaches did attain a lower degree status (Bachelor's Degree, 8.1%) at a higher relative proportion than the other coaches. The majority of coaches (45.9%) indicated that the person who most influenced them to pursue a coaching career was a coach for whom she or he played. The large proportion of Non-White female participants influenced by former coaches (56.8%) taken into consideration with the large proportions of leadership factors in the previous table could indicate that mentorship and coach-player interaction opportunities are associated with team leadership positions. While Table 4.4 shows that a greater proportion of Non-White female coaches intended to pursue a coaching career while still a player, Table 4.5 shows that this group has the lowest average number of years working in that capacity at the D-I level ($M = 4.394$ years) or overall ($M = 8.606$ years).

Table 4.5

Cross-Tabulations by Race/Ethnicity and Sex for Post-College Experience Variables of Division-I Women's Basketball Coaches (n = 146)

	WHITE		NON-WHITE		TOTAL
	Female	Male	Female	Male	
Professional Athlete (%)					
Yes	12.0	1.9	26.3	0.0	17.1
No	48.1	38.0	60.5	13.2	82.9
Mentor Type (%)					
Family Member	13.1	10.3	18.9	2.7	21.9
Friend	1.9	0.9	0.0	0.0	2.1
Teacher	1.9	0.0	0.0	0.0	1.4
Coach	30.8	9.3	56.8	8.1	45.9
Colleague	9.3	16.8	5.4	5.4	21.9
Self	2.8	2.8	2.7	0.0	4.8
Highest Education (%)					
Bachelor's Degree	22.2	21.3	37.8	8.1	43.8
Master's Degree	37.0	37.0	51.4	2.7	54.8
Professional Degree	0.9	0.0	0.0	0.0	1.4
Career Path (%)					
Was Grad Asst	44.9	32.7	61.5	7.7	32.2
Was Grad & DBO	14.3	8.2	23.1	7.7	10.3
Years Coaching D-I Women's Basketball					
Mean	8.085	7.488	4.394	9.000	7.056
Min	0	0	0	1	0
Max	37	34	22	15	37
N	65	43	33	5	151
Years Coaching All Levels Girl's/Women's Basketball					
Mean	11.992	16.163	8.606	12.400	12.470
Min	0	1	0	5	0
Max	37	52	29	20	52
N	65	43	33	5	151

Note. The percentages shown in this table reflect the percentage of the racial/ethnic group (WHITE, NON-WHITE).

Student-Athletes.

Each team in the population ranged from 10 to 15 players, and responses were treated as described for the coach population. Of the approximately 343 teams in the population, 172 individual surveys were coded and used for data analyses (response rate of 3.6%). Of the 172 student-athlete participants, 84 (45.9%) self-identified as Black, 73 (39.9%) as White, six (3.3%) as Mixed-Race (two or more boxes selected), four as African (2.3%), three (1.6%) as Hispanic/Latino, one (<1%) as American Indian/Alaska Native, and one (<1%) as European. There were no participants who self-identified as Asian or Pacific Islander. For the purpose of meeting statistical test requirements, the racial/ethnic identities of the student population were aggregated into a dichotomous variable (WHITE) indicating if the athlete identified as White versus Non-White. Of the 343 teams, the student-athlete respondents represented 41; this accounted for 21 of the 33 NCAA Division-I Conferences. Conferences not represented were American East, Big 12, Big West, Colonial, Independents, Ivy League, Mid Eastern, Northeast, Pac 10, Patriot League, and Southwestern. None of the student-athletes reported attending an HBCU, so this contextual variable was not utilized in the hypothesis tests. The latest version of the population demographics released by the NCAA details the 2011-2012 season, and Table 4.6 shows the comparison of the race/ethnicity percentages of this study’s student participants to the Division-I Women’s Basketball student-athlete population.

Table 4.6

Demographic Statistics for Division-I Women’s Basketball Student-Athletes (Percentages)

	2011-12 ^a	2012-13 ^b
Race/Ethnicity		
American Indian/ Alaska Native	0.4	0.5
African American/ Black	51.9	45.9
Asian	0.6	-
Hispanic	1.9	1.6
Pacific Islander	0.4	-
White	35.1	39.9
Mixed Race	3.0	3.3
Other	6.7	2.7

^a(NCAA, 2012)

^bCurrent Study Demographics

The distribution of student-athletes by educational class level was relatively even across classes with the exception of 5th year students (4.1%); but given that students requiring a 5th year for eligibility are the exception rather than the rule, their proportion of the population was expected to be low. The majority of the student-athlete participants were freshmen (32.6%), followed by juniors (22.7%). These percentages are presented in Table 4.7.

Table 4.7

Class Level Frequencies and Percentages for Division-I Women's Basketball Student-Athletes (n = 172)

	WHITE		NON-WHITE		TOTAL	
	N	%	N	%	N	%
Class Level						
Freshman	27	15.7	29	16.9	56	32.6
Sophomore	14	8.1	19	11.0	33	19.2
Junior	17	9.9	22	12.8	39	22.7
Senior	13	7.6	24	14.0	37	21.5
5th Year	2	1.2	5	2.9	7	4.1

Note. The percentages shown in this table reflect the percentage of the total sample (n = 172).

The breakdown of playing positions for the student-athlete participants is presented in Table 4.8. Here, too, the distributions of playing positions are relatively even, both for the overall sample and within the racial/ethnic categories. A chi-square goodness-of-fit test was conducted to evaluate the equal distribution of student athletes among the five playing position options. The findings indicated that there was no significant difference in the proportions of athletes in each of the positions at the .05 level, but statistical significance was found at the .10 level, $\chi^2(4, 176) = 9.057, p = .060$. An evaluation of cell frequencies revealed an overrepresentation of student-athletes in the forward/post position (28.5%), and an under-representation in the shooting guard position (15.2%).

Table 4.8

Cross-Tabulations by Race/Ethnicity for Matching High School and College Playing Position for Division-I Women's Basketball Student-Athletes (n = 160)

	WHITE		NON-WHITE		TOTAL	
	N	%	N	%	N	%
Playing Position						
(1) Point Guard	10	14.3	15	16.7	25	15.6
(2) Shooting Guard	8	11.4	7	7.8	15	9.4
(3) Off Guard/ Wing	9	12.9	8	8.9	17	10.6
(4) Forward/ Post	10	14.3	16	17.8	26	16.3
(5) Center	11	15.7	10	11.1	21	13.1

Note. The percentages shown in this table reflect the percentage within the given racial/ethnic group (WHITE, NON-WHITE).

Figure 4.1 graphically illustrates the similar patterns of position assignment for both White and Non-White student athletes.

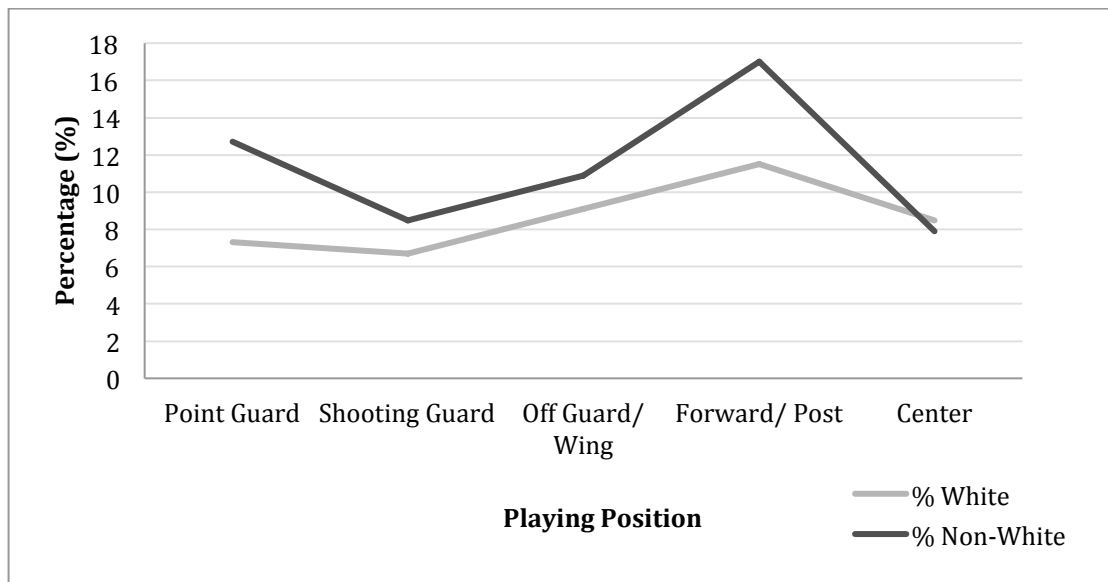


Figure 4.1. Percentages of Student-Athletes in Playing Positions, by Race/Ethnicity (n = 172).

Socioeconomic status (SES) indicators for this study are presented in Table 4.9. Frequency analyses of these descriptive statistics revealed that the majority of all student-athletes in this study came from two-parent/two-guardian homes (76.6%). While a lesser proportion of Non-White athletes shared this characteristic than their White counterparts

(62.2% to 95.9%, respectively), the majority of student-athlete households in both groups did. Also similar across race/ethnicity was the finding that most students (70.6%) attended a public high school. There were opposite directional trends for the two racial/ethnic groups where access to supplemental funding (above and beyond the athletic scholarship) was concerned. Non-White student-athletes were more likely to require special funding (55.6%:44.4%) than White student-athletes (23.3%:76.7%). Non-White participants scored slightly lower for parent's average education (14.577 years to 15.993 years), parent's average occupation (2.78 to 3.16), and neighborhood median income levels (\$40.242 to \$56.687 K), but scored significantly lower for mean income, $F(1,144) = 28.835, p < .001, \eta = .38$).

Table 4.9

*Cross-Tabulations by Race/Ethnicity for Socioeconomic Variables of Division-I
Women's Basketball Student-Athletes*

	WHITE		NON-WHITE		TOTAL	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Two Parent Household	70	95.9	61	62.2	131	76.6
High School Type						
Charter	0	0.0	2	2.1	2	1.2
Private	21	28.8	27	27.8	48	28.2
Public	52	71.2	68	70.1	120	70.6
Special Funding						
Yes	17	23.3	55	55.6	72	41.9
No	56	76.7	44	44.4	100	58.1
Full Athletic Scholarship						
Yes	72	98.6	97	98.0	169	98.3
No	1	1.4	2	2.9	3	1.7
Average Parent Education (Years)						
Mean	15.993		14.577		15.206	
Min	11.5		9		9	
Max	21		21		21	
<i>N</i>	71		87		161	
Average Parent Occupation Zone						
Mean	3.16		2.78		2.946	
Min	1.5		1		1	
Max	5		5		5	
<i>N</i>	71		87		161	
Zip Code Median Income (in Thousands)						
Mean	58.106		45.535		50.814	
Median	56.687		40.242		46.035	
Min	21.21		17.41		17.41	
Max	150.17		101.45		150.17	
<i>N</i>	66		91		159	
Household Income (in Thousands)						
Mean	84.38		54.93		69.66	
Median	92.50		45.00		65.00	
Min	15		15		15	
Max	125		125		125	
<i>N</i>	72		74		147	

Note. The percentages shown in this table reflect the percentage within the racial/ethnic group.

Figure 4.2 illustrates the mean income by position of the two racial/ethnic groups. The main feature of interest is the difference between the income values for point guards relative to other positions. The income variable may be biased, as fewer Non-White participants answered this question ($n = 74$) than the other similar SES variables ($n_{\text{PARENTED}} = 87$, $n_{\text{PARENTOCC}} = 87$, and $n_{\text{ZIPINCOME}} = 91$). The failure to provide a response could be an indication of sensitivity or lack of confidence about the topic for Non-White participants.

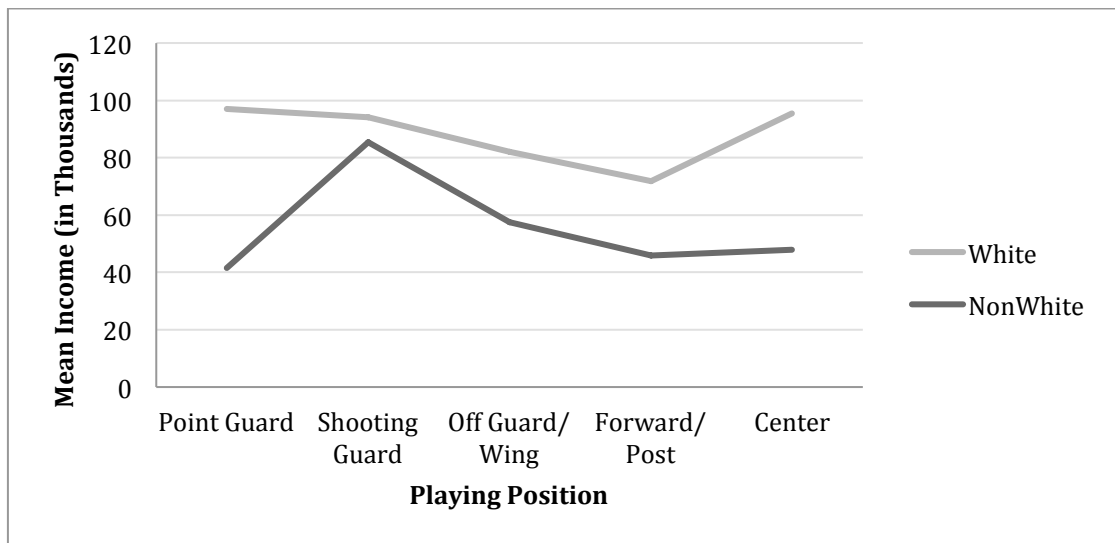


Figure 4.2. Mean Household Income for Playing Positions of Student-Athletes ($n = 172$).

Access level indicators for the participants revealed that regardless of race/ethnicity group, student-athletes take advantage of similar opportunities to develop their skills in preparation for a collegiate career playing basketball. Overall, the majority of student-athletes participated in all of the listed preparatory activities (high school basketball camp = 51.2%; college basketball camp = 64.0%; one-on-one training = 51.7%; weight training = 52.3%; AAU/BCI travel teams = 87.2%; and summer basketball leagues = 69.2%). The overall lower SES levels presented in the previous table could influence the findings that Non-White student-athletes participated in these prep activities at lesser proportions. Most of the participants began playing basketball at a young age; 84.5% started at the age of 10 or younger, which suggests that early socialization and specialization to organized basketball is a shared characteristic of athletes participating at

the elite level. While the majority of students signed with their teams directly out of high school (87.7%), a greater proportion of Non-White athletes than their White counterparts matriculated through transfers from other institutions, including junior or community colleges (6.5% of Non-White athletes). Different educational pathways for student-athletes could influence their experiences and goals in significant ways. A statistically significant difference between the means for percentage of pre-college “Country Club” sport participation ($F_{1,143} = 10.285, p = .002, \eta = .26$) presented another suggestion that the pre-college basketball experiences for student-athletes differs by cultural context. These findings are detailed in Table 4.10.

Table 4.10

Cross-Tabulations by Race/Ethnicity for Access Variables of Division-I Women's Basketball Student-Athletes

	WHITE		NON-WHITE		TOTAL	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Prep Activities^a						
HS Camp	49	67.1	39	39.4	88	51.2
College Camp	55	75.3	55	55.6	110	64.0
Personal Training	45	61.6	44	44.4	89	51.7
Weight Training	47	64.4	43	43.4	90	52.3
AAU/BCI	66	90.4	84	84.8	150	87.2
Summer League	52	71.2	67	67.7	119	69.2
Basketball Start Level						
Pre-K (1-5)	16	32.7	18	26.9	34	29.3
Elementary (6-10)	29	59.2	35	52.2	64	55.2
Middle School (11-13)	4	8.2	11	16.4	15	12.9
High School (14-18)	0	0.0	3	4.5	3	2.6
Transfer Path/Previous Institution						
High School	65	92.9	78	83.9	143	87.7
International School	0	0.0	1	1.1	1	0.6
Junior College	1	1.4	6	6.5	7	4.3
Division-I University	4	5.7	7	7.5	11	6.7
Division-II University	0	0.0	0	0.0	0	0.0
Division-III University	0	0.0	1	1.1	1	0.6
Percentage Country Club Sport Participation						
Mean	25.12		13.32		19.10	
Min	0		0		0	
Max	100		100		100	
<i>N</i>	67		78		148	

Note. The percentages shown in this table reflect the percentage of the racial/ethnic group (WHITE, NON-WHITE).

^aThe percentages for this group are calculated separately for each level (i.e., HS Camp).

Descriptive statistics of leadership variables for student-athletes are presented in Table 4.11. The responses from first-year student-athletes were filtered from the analyses of collegiate leadership experience variables, as their responses would bias the negative category due to a lack of previous college experiences. For most of the indicators, the proportions of affirmative cases were similar. Student-athlete respondents experienced similar proportions of status as captains, MVPs, and starters. A different result was

noticed for the SAAC status, as a larger proportion of Non-White participants were not their team's representative (12.9%:87.1%) in comparison to their White counterparts (37.0%:63.0%). Of the full sample, a larger proportion of Non-White student-athletes (32.3%:67.7%) indicated intent to pursue a D-I level women's basketball coaching career than White student-athletes (19.2%:80.8%). This finding is similar to the results of the coaches, discussed earlier, about intent to pursue a D-I coaching career as a player.

Table 4.11

Cross-Tabulations by Race/Ethnicity for Collegiate Leadership Experience Variables of Division-I Women's Basketball Student-Athletes

	WHITE		NON-WHITE		TOTAL	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Team Captain^a						
Yes	8	17.4	10	14.3	18	15.5
No	38	82.6	60	85.7	98	84.5
Team MVP^a						
Yes	5	10.9	4	5.7	9	7.8
No	41	89.1	66	94.3	107	92.2
Team SAAC Representative^a						
Yes	17	37.0	9	12.9	26	22.4
No	29	63.0	61	87.1	90	77.6
Starter (>50%)^a						
Yes	24	52.2	42	60.0	66	56.9
No	22	47.8	28	40.0	50	43.1
Intent to Coach D-I^b						
Yes	14	19.2	32	32.3	46	26.7
No	59	80.8	67	67.7	126	73.3

Note. The percentages shown in this table reflect the percentage of the racial/ethnic group (WHITE, NON-WHITE).

^aThese variables were calculated for upperclassmen only (FRESHMAN = 0) (*n* = 116)

^bThis variable was calculated for the entire sample (*n* = 172)

Key Variables

Coaches.

The hypotheses tested in this study were primarily concerned with the impact of key background variables in both of the study populations. For the coaches' survey, the outcome variables for the statistical analyses were former playing position (cPLAYPOS)

and staff position value (JOBVALUE). The continuous staff position value outcome variable was created from responses to the coaches' survey to represent the rank and nature of task associated with each respondent. More information on the construction of this variable can be found in Appendix G. For the coach level participants, the average position value was 37.42, and the maximum and minimum were 8.75 and 100 respectively. For this variable, a higher score reflected the higher rank and management level responsibility of the respondent. For example, the coach with the score of 100 was a head coach whose job duties were fully within the top category of job responsibilities (refer to Appendix G). When used in the regression analysis, this variable indicated higher leadership ranked positions and job responsibilities at the end of the continuum with the larger values. The predictor variables for the coaches' hypotheses were self-identified race/ethnicity (cWHITE), sex (FEMALE), and the contextual characteristics of a head coach with the same race (cHDCSMRC) and same sex (cHDCSMSX). In later tests using staff position value as the outcome, playing position was also used as a predictor. The descriptive statistics for the categorical variables are presented in Table 4.12.

Table 4.12

Categorical Variable Names, Descriptions, and Descriptive Statistics for Coach Participant Data

Variable Name	Description	Count	Percentage
cWHITE (<i>n</i> = 146)	Self-identification of the coach		
	1 = White	108	74
	0 = Non-White	38	26
FEMALE (<i>n</i> = 148)	Sex of the coach		
	1 = Female	98	33.8
	0 = Male	50	66.2
cPLAYPOS (<i>n</i> = 148)	Coach's former college playing position		
	1 = Point Guard	49	33.1
	2 = Shooting Guard	22	14.9
	3 = Off Guard / Wing	24	16.2
	4 = Forward / Post	28	18.9
	5 = Center	7	4.7
	6 = Did Not Play	18	12.2
cHDCSMRC ^a (<i>n</i> = 121)	Is the head coach the same race/ethnicity?		
	1 = Yes	76	65
	0 = No	41	35
cHDCSMSX ^a (<i>n</i> = 121)	Is the head coach the same sex?		
	1 = Yes	65	55.6
	0 = No	52	44.4

^aThese predictors were only used in analyses where the head coach respondents were filtered out.

Student-Athletes.

A continuous outcome variable was created from responses to the student-athletes' survey to represent the exploratory measure of centrality introduced in this study. The variable, CENTRALGRU, was a composite variable measured according to Grusky's (1963) three elements of centrality: rate of interaction/ coordination, nature of task, and proximity to important team action. The average score for student-athletes on the Grusky variable was 40.15, with a maximum and minimum of 10 and 93 respectively. A high score on the Grusky variable corresponded with a position of greater centrality, indicating that the respondent's position was one of higher interaction and greater leadership.

Additional continuous variables for student's socioeconomic status (SESSCORE) and access level (ACCESS) were created as predictors. The mean score for the SES status of the student-athletes was 50.97, ranging from a minimum of 13.13 to 90.75 at the maximum. The average score for the access level variable was 74.21, with a minimum and maximum of 40 and 95.56 respectively. High scores on the SES and access variables indicated student-athletes with higher levels of income and a greater number of athletic development experiences. See Appendix G for more information about the construction of these variables.

Table 4.13 presents the statistically significant correlations between the variables for race/ethnicity, SES, and access level. Vaske (2008) reported that absolute values for correlation statistics for nonparametric relationships tend to be lower than Pearson correlations. Thus, for the purposes of this study, correlation strengths for Spearman rho correlations are interpreted as follows:

- weak < 0.25
- moderate 0.25 – 0.40
- strong > 0.40

In addition, the strengths for Pearson correlations, Biserial correlations, and Cramer's V are interpreted as follows (Crewson, 2006):

- weak < 0.30
- moderate 0.30 – 0.50
- strong > 0.50

Table 4.13

Correlations Between SES and Access Variables for Student-Athletes by Race/Ethnicity

		sWHITE	SESSCORE	ACCESS
sWHITE	Biserial Correlation	1		
	Sig. (2-tailed)	-		
	N	172		
SESSCORE	Biserial Correlation	.370***	1	
	Sig. (2-tailed)	.000	-	
	N	127	127	
ACCESS	Biserial Correlation	.353***	.357*** ^a	1
	Sig. (2-tailed)	.000	.000	-
	N	116	94	119

Key: ~ $p < .10$; * $p < .05$; ** $p < .01$; *** $p \leq .001$

^aThis is a Pearson correlation for the association between two continuous variables.

The correlations presented in Table 4.13 reveal that the White status of student-athletes had a moderate positive association with a higher SES ($r_{127} = .370, p < .001$) and a higher access level ($r_{116} = .353, p < .001$). Given those relationships, it is not surprising that SES and access are correlated as well ($r_{94} = .357, p < .001$), indicating that higher SES levels are associated with greater access to sport development opportunities. Categorical variables used in the analyses included the self-identified race/ethnicity of the student (sWHITE), head coach with the same race (sHDCSMRC), and head coach with the same sex (sHDCSMSX). Current playing position of the student-athlete (sPLAYPOS) was used as both an outcome and predictor variable in separate analyses. Descriptive statistics for these variables are presented in Table 4.14.

Table 4.14

Categorical Variable Names, Descriptions, and Descriptive Statistics for Student-Athletes

Variable Name	Description	Count	Percentage
sWHITE (<i>n</i> = 172)	Self-identification of the student		
	1 = White	73	42.4
	0 = Non-White	99	57.6
sPLAYPOS (<i>n</i> = 176)	Student's current playing position		
	1 = Point Guard	33	18.8
	2 = Shooting Guard	27	15.3
	3 = Off Guard / Wing	36	20.5
	4 = Forward / Post	50	28.4
	5 = Center	30	17
sHDCSMRC (<i>n</i> = 183)	Is the head coach the same race/ethnicity?		
	1 = Yes	72	39.3
	0 = No	111	60.7
sHDCSMSX (<i>n</i> = 183)	Is the head coach the same sex?		
	1 = Yes	151	82.5
	0 = No	32	17.5

Statistical Analyses

Coaches.

The first research question (RQ1) in this study considered traditional and exploratory views of the influence of former playing position on leadership recruitment for coaching in Division-I Women's Basketball. It is posited as follows: "What is the impact of demographic, experiential, and contextual factors on the attainment of coaching positions in Division-I Women's Basketball?"

The traditional test of leadership recruitment.

H₁₀. The position that a coach played in college is not associated with the likelihood of that individual being found in a Division-I Women's Basketball coaching position.

The traditional test of leadership recruitment suggests that individuals with experience playing in central positions are more likely to pursue a coaching career than those in non-central positions. A statistically significant chi-square goodness-of-fit test indicated that former playing positions were not equally distributed among coaches in the sample, $X^2(5, n = 148) = 39.22, p < .001$. Upon finding the statistically significant result for the chi-square test, descriptive statistics for the distribution of former playing positions among coaches were analyzed to determine which cells could be sources of the variation. The examination of playing position frequencies revealed that the majority of coaches (33.1%) were formerly point guards, a finding that provides support for the traditional application of leadership recruitment theory in Division-I Women's Basketball.

The next largest percentage of coaches was former forwards (18.9%). The highlighted notation in Table 4.15 shows that the option of no former college playing position ("Did Not Play") was selected by 12.3% of respondents. The latter finding was a surprise because it is generally accepted that coaches usually have corresponding playing experience in the sport they coach (Evans Jr., 1997). Notice that the coaches who selected the Did Not Play option were all White and mostly male (17 of 18 = 94.4%). While the most central playing position (point guards) was indeed overrepresented in the coaching population, the presence of more peripheral positions at high frequencies suggests that other variables impact leadership recruitment trajectories. The Did Not Play option provides an example of this, indicating the influence of both race/ethnicity and sex in the examination of leadership recruitment patterns.

Table 4.15

Cross-Tabulations of Coaches' Former Playing Positions by Race/Ethnicity and Sex (n = 146)

cPLAYPOS	All Coaches		cWHITE = 1		FEMALE = 1		WHTxFEM = 1		WHTxMALE = 1		nWHTxFEM	
	N	%	N	%	N	%	N	%	N	%	N	%
Point Guard	49	33.6	35	24	31	21.2	20	13.7	15	10.3	11	7.5
Shooting Guard	22	15.1	15	10.3	17	11.6	12	8.2	3	2.1	5	3.4
Off Guard/ Wing	23	15.8	18	12.3	19	13	14	9.6	4	2.7	5	3.4
Forward/ Post	28	19.2	18	12.3	24	16.4	14	9.6	4	2.7	10	6.8
Center	6	4.1	4	2.7	6	4.1	4	2.7	0	0.0	2	1.4
Did Not Play	18	12.3	18	12.3	1	.7	1	.7	17	11.6	0	0.0
TOTAL	146	100	108	73.9	98	67.1	65	44.5	43	29.5	33	22.6

Note. The percentages for the sub-populations (cWHITE, FEMALE, WHTxFEM, WHTxMALE, nWHTxFEM) represent percentages of the total population (All Coaches).

Table 4.16 shows the breakdown of former playing positions for Head Coaches. In support of the leadership recruitment theory, the majority of coaches at the highest rank were former point guards (44.8%).

Table 4.16

Cross-Tabulations by Race/Ethnicity and Sex for Former Playing Positions of Head Coaches (n = 29)

	WHITE			NON-WHITE			TOTAL	
	Female	Male	%	Female	Male	%	N	%
Playing Position								
Point Guard	8	3	37.9	2	0	6.9	13	44.8
Shooting Guard	2	0	6.9	0	0	0.0	2	6.9
Off Guard/ Wing	4	1	17.2	0	0	0.0	5	17.2
Forward/ Post	4	3	24.1	0	0	0.0	7	24.1
Center	1	0	3.4	0	0	0.0	1	3.4
Did Not Play	0	1	3.4	0	0	0.0	1	3.4
TOTAL	19	8	93.1	2	0	6.9		

Note. The percentages in this table reflect the percentage the given job title and race/ethnicity category for the entire population.

Race, sex, and former playing position.

H2₀. The race/ethnicity of the coach is not associated with the former playing position of the coach.

H3₀. The sex of the coach is not associated with the former playing position of the coach.

A multinomial regression equation for former playing position was estimated based on a model with race/ethnicity and sex predictors. A multinomial logistic regression was estimated instead of an ordinal logistic regression for this model because the test of parallel lines assumption was rejected ($\chi^2 = 88.531$, $df = 4$, $p = .021$); an indication that the coefficients for the two equations were not equal across race/ethnicity groups. The SPSS NOMREG command produced the following warning while computing the estimates: “Unexpected singularities in the Hessian matrix are encountered. This indicates that either some predictor variables should be excluded or some categories should be merged.” This warning is issued when one of the categories of the dependent variable is constant for one of the predictors (IBM Support Portal, 2012). In this test, the error was

caused because none of the Non-White participants scored in the category for “Did Not Play” as a former playing position, thus, the playing position variable was recoded to collapse the response categories of Center and Did Not Play. Table 4.17 presents the nested taxonomy of fitted multinomial regression models for the distribution of former playing positions of coaches, predicted by race/ethnicity and sex.

Model 2 was selected as the final model for this analysis because of improved prediction ability (from 33.6 to 34.9) and explained variance (from .04 to .17). The Cox and Snell pseudo- R^2 value is not interpreted as a true proportion of variance explained by the predictors for multinomial regression, but its relative increase does suggest that the final model has better predictive ability. Model 3, the model with the interaction between race/ethnicity and sex, was not used because it did not significantly increase the omnibus chi-square from Model 2 (Δ -2LL = 7.151, Δ df = 4, $p = .128$) and the interaction failed to show significance at any level of the outcome. The final model indicates that when controlling for the main effects of race/ethnicity, the probability of a coach’s former playing position is influenced by their sex. Significant differences between female and male coaches were found in the comparison between the reference category (Center or Did Not Play) and all other positions.

Table 4.17

Taxonomy of fitted multinomial logistic regression models in which former playing position (cPLAYPOS) is predicted by demographic variables (cWHITE, FEMALE, WHTxFEM) (n = 146)

	MODELS			
	Null	#1	#2	#3
Center and Did Not Play vs. Point Guard				
Intercept		.464~	1.202**	1.386**
cWHITE		1.482~	1.110	
FEMALE			-1.243*	-1.511*
WHTxFEM				.318
Center and Did Not Play vs. Shooting Guard				
Intercept		-.383	.602	.875
cWHITE		1.636~	1.110	
FEMALE			-1.923**	-2.610***
WHTxFEM				.041
Center and Did Not Play vs. Off Guard				
Intercept		-.201	.894~	1.030*
cWHITE		1.117	.518	
FEMALE			-.2375***	-2.477***
WHTxFEM				-.113
Center and Did Not Play vs. Forward				
Intercept		-.201	.913~	1.030*
cWHITE		1.810*	1.199	
FEMALE			-2.471***	-2.477***
WHTxFEM				.580
-2LL	77.800	70.888	50.700***	43.549
Cox & Snell R ²		.046	.169	.209
Percent Correct	33.6	33.6	34.9	34.9
df		4	8	12

Key: ~ p < .10; * p < .05; ** p < .01; *** p ≤ .001

Note. In Model 3, a Hessian Matrix warning was issued by SPSS because of empty cells for the interaction term for Non-White male coaches (WHTxFEM).

Subsequently, the reference values for the predictors are as follows: cWHITE (0); FEMALE (0); WHTxFEM (0,1).

Link: Logit

The equation for Model 2 for the outcome of former playing position as point or shooting guard is presented below:

$$\begin{aligned}
 p(\text{Point Guard vs. Center and Did Not Play} \mid W, F) & \\
 &= 1 + e^{-(\beta_0 + \beta_1 \text{WHITE} + \beta_2 \text{FEMALE})} \\
 &= 1 / (1 + e^{-(1.202 + 1.110 \text{WHITE} - 1.243 \text{FEMALE})})
 \end{aligned}$$

When controlling for race/ethnicity, the fitted odds for a female coach (FEMALE = 1) to have played point guard versus center or not having played is 3.47 times the odds that a male coach would have the same outcome. This means that female coaches were more likely to have playing experience in central positions over peripheral positions. The odds ratios for the final model are presented in Table 4.18. Race/ethnicity was not a significant predictor of the former playing positions of coaches, however the variable was retained in the estimated equation because of overall model fit and the importance of the variable to this research.

Table 4.18

Influences on former playing positions of coaches: Odds ratios and confidence intervals (reference = Center/Did Not Play) (n = 146)

	MALE	FEMALE
Point Guard		
Odds Ratio	.288*	3.472*
(95% CI)	(.098, .851)	
Shooting Guard		
Odds Ratio	.146**	6.849**
(95% CI)	(.038, .569)	
Off Guard/ Wing		
Odds Ratio	.093***	10.753***
(95% CI)	(.023, .382)	
Forward		
Odds Ratio	.085***	11.765***
(95% CI)	(.021, .343)	
-2LL	50.700	
N	146	

Key: ~ p < .10; * p < .05; ** p < .01; *** p < .001

Note. Female Odds Ratio = 1 / (Male Odds Ratio); Male (FEMALE = 0)

The influence of race, sex, and homologous reproduction on coaching position.

H4₀. The race/ethnicity of the coach is not associated with the position value the coach has within the team's staff.

H5₀. The sex of the coach is not associated with the position value the coach has within the team's staff.

H6₀. The homologous race/ethnicity of the head coach is not associated with the individual's likelihood to be assigned to a certain position.

H7₀. The homologous sex of the head coach is not associated with the individual's likelihood to be assigned to a certain position.

A correlation matrix was estimated for the non-head coaches' position value (JOBVALUE) and other variables of interest. Demographic variables included race/ethnicity (WHITE) and sex (FEMALE), and contextual variables included head coach race (cHDCSMRC) and head coach sex (cHDCSMSX). Former playing position (cPLAYPOS) served as an additional predictor for this analysis. None of the variables had statistically significant correlations with the outcome variable (JOBVALUE) at the .05 level, however the marginally statistically significant contrasting direction relationships between the position value and head coach of the same race for the two racial/ethnic groups ($r_{W,81} = .195, p = .081$; $r_{NW,36} = -.310, p = .065$) could indicate the presence of an interaction. Such an interaction would suggest that Non-White coaches attain staff positions of higher value when the head coach is not in the same race/ethnicity group, whereas White coaches attain staff positions of higher value when the head coach is the in the same race/ethnicity group. This finding is likely due to the fact that the White head coaches are overrepresented in the population. The correlation results are presented in Table 4.19. Among the predictors, a statistically significant relationship was found between sex and playing position, ($X^2_{4,81} = 20.995, p < .001$, Cramer's V = .5), and sex and head coach of the same sex ($X^2_{1,81} = 11.292, p = .001$, Cramer's V = .373) for the White population only. This finding indicates that for the White coaches, women were more likely to have played non-central positions and work for a female head coach than for a male head coach. Given the overrepresentation of female head coaches in the population, this finding was not unusual.

Table 4.19

Correlations between position value (JOBVALUE) and demographic and contextual variables for non-head coaches, grouped by race/ethnicity (WHITE)

		JOBVALUE (cWHITE = 1) (n = 81)	JOBVALUE (cWHITE=0) (n = 36)
FEMALE	Biserial Correlation	-.028	-.189
Is coach female?	Sig. (2-tailed)	.805	.269
cHDCSMRC	Biserial Correlation	.195~	-.310~
Is the team's head coach the same race?	Sig. (2-tailed)	.081	.065
cHDCSMSX	Biserial Correlation	.140	.114
Is the team's head coach the same sex?	Sig. (2-tailed)	.213	.507
cPLAYPOS	Biserial Correlation	.118	.124
	Sig. (2-tailed)	.293	.470

Key: ~ p < .10; * p < .05; ** p < .01; *** p < .001

Student-Athletes.

The second research question (RQ2) in this study considered traditional and exploratory views of the influence of biographic factors on positional segregation and assignment for student-athletes in Division-I Women's Basketball. It is posited as follows: "What is the impact of demographic, experiential, and contextual factors on the assignment of playing positions in Division-I Women's Basketball?"

The traditional test of positional segregation.

H₈₀. The race/ethnicity of the student-athlete is not associated with the individual's current playing position.

A chi-square test of independence indicated no significant association between race/ethnicity and playing position, $\chi^2(4, 165) = 1.674, p = .795$. Table 4.20 presents the cross-tabulations and distributions of playing positions within the student-athlete sample. While the patterns of playing positions for the two groups are slightly different, the non-significant chi-square test indicates that the differences are not great. In both groups, the position most frequently selected by respondents was the forward/post position. The point guard position was the second most selected position for the Non-White group, while the

Off Guard/Wing position was the next highest frequency for the White student-athletes. Those frequencies support the failure to reject the null hypothesis for traditional positional segregation. The results reveal that the assignment of players to the point guard position, argued to be the most central playing position on a basketball team, does not reflect racial bias against minority athletes.

Table 4.20

Cross-Tabulations of Student-Athletes' Playing Positions by Race/Ethnicity (n = 165)

sPLAYYPOS	All Athletes		sWHITE = 1		sWHITE = 0	
	N	%	N	%	N	%
Point Guard	33	20	12	7.3	21	12.7
Shooting Guard	25	15.2	11	6.7	14	8.5
Off Guard/ Wing	33	20	15	9.1	18	10.9
Forward/ Post	47	28.5	19	11.5	28	17.0
Center	27	16.4	14	8.5	13	7.9
TOTAL	165	100	71	43.0	94	57.0

Note. The percentages for the sub-populations (sWHITE = 1; sWHITE = 0) represent percentages of the total population (all student-athletes).

Race and socioeconomic status in Division-I Women's Basketball.

H9₀. The race/ethnicity of the student-athlete is not associated with the likelihood that the individual will be a member of a women's basketball team at the Division-I level.

H10₀. The socioeconomic status of the student-athlete is not associated with the likelihood that the individual will be a member of a women's basketball team at the Division-I level.

A chi-square goodness-of-fit test for race/ethnicity proved to be statistically significant for the over-representation of Non-White student-athletes in the sample, $\chi^2(1,163) = 3.930, p = .047$. This finding is not as informative in isolation because given the number of de-aggregated racial/ethnic categories in the population, participants from a single category (i.e., White) would be expected to have fewer participants than the sum of the rest. To explore further analysis of the significance of race/ethnicity within the sample of D-I women's basketball players, a chi-square analysis was conducted to

compare the proportion of White athletes to Black athletes. This test proved to be non-significant. In sum, while the proportions of the two largest participant racial/ethnic groups are not statistically significant from one another, they are quite different from the remaining racial/ethnic categories. A chi-square goodness-of-fit test that analyzed the racial/ethnic breakdown into three categories (WHITE, BLACK, OTHER) supported the finding that student-athletes that self-identify as something other than White or Black are underrepresented in the Division-I Women's Basketball population, $\chi^2(2,172) = 63.640, p < .001$.

When the income variable was recoded into quintiles based on the national levels of median income, a chi-square goodness-of-fit test showed statistical significance for the proportion of student-athletes in the five quintile levels, $\chi^2(4,173) = 9.688, p = .046$. Student-athletes were underrepresented at the lower levels (quintiles 1-3) and overrepresented in the higher quintiles (quintiles 4 and 5). This finding suggests that SES factors play a role in the matriculation of student-athletes to the D-I level. When the consideration of race/ethnicity was added to the cross-tab analysis, the result was statistically significant, $\chi^2(4,170) = 30.389, p < .001$, Cramer's $V = .423$, suggesting a moderate association between race/ethnicity and income quintile. To further explore this relationship with additional indicators of socioeconomic status, correlation matrices were examined.

As discussed earlier (see Table 4.13), a bivariate correlation analysis revealed a statistically significant moderately strong relationship between race/ethnicity and SES, $r(127) = .370, p < .001$. Under-representation of sample size was found in lower quintile cells for White student-athletes and high quintile cells for Non-White student-athletes. The reverse of this relationship was also shown in the overrepresentation of White participants in high quintile cells, and vice versa. As shown in Figure 4.3, the trends for White versus Non-White participants and the centrality of their playing positions take on different shapes, suggesting something other than a linear relationship for the income levels of Non-White student-athletes.

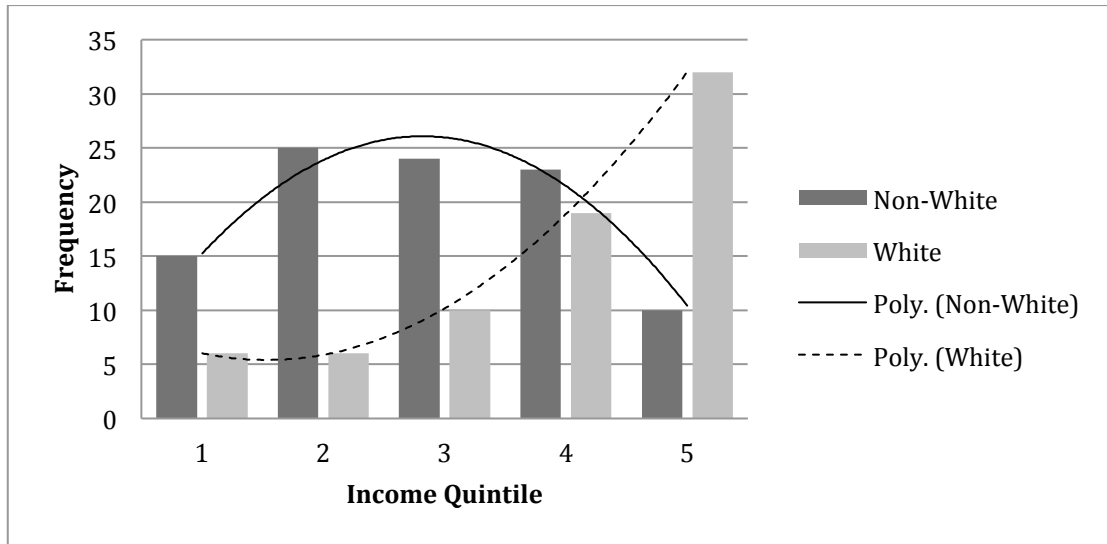


Figure 4.3. Frequencies of Income Quintile Levels of Student-Athletes. (n=172)

The relationship of race, socioeconomic status, and homologous reproduction with playing position.

H11₀. The race/ethnicity of the student-athlete is not associated with the individual's likelihood to be assigned to a certain position.

H12₀. The race/ethnicity and socioeconomic status of the student-athlete is not associated with the individual's likelihood to be assigned to a certain position.

H13₀. The race/ethnicity, socioeconomic status, and access level of the student-athlete is not associated with the individual's likelihood to be assigned to a certain position.

H14₀. The homologous race/ethnicity of the head coach is not associated with the individual's likelihood to be assigned to a certain position.

H15₀. The homologous sex of the head coach is not associated with the individual's likelihood to be assigned to a certain position.

An ordinal logistic regression was acceptable for this analysis because the test of parallel lines assumption was not violated ($\chi^2 = .377$, $df = 3$, $p = .945$). Variables tested in addition to race/ethnicity and SES were access to preparatory activities (ACCESS), a team head coach of the same race (sHDCSMRC), a female head coach (sHDCSMSX), and the interaction between race/ethnicity and access (WHTxACC). None of the models significantly improved prediction ability above chance, so the odds ratios are not

interpreted here. Also, none of the variables indicated statistical significance at the .05 level in any of the hypothesized models. Statistical significance was found at the .10 level in Model 2 for the race/ethnicity-SES interaction, suggesting that the impact of race/ethnicity on the assignment of playing position depends on the individual's level of socioeconomic status. When entered into Model 3 and Model 4, access appeared to consume the impact of the race/ethnicity by SES interaction term. This suggests that when race/ethnicity and SES are controlled for, a lower access score increases the odds of an individual having a non-central playing position assignment. Recall here that the level of centrality, based solely on playing position, decreases from point guard to center. The model taxonomy for this analysis is presented in Table 4.21.

Table 4.21

Taxonomy of Fitted Ordinal Logistic Regression Models in which Playing Position (sPLAYPOS) is Predicted by Demographic Variables (n = 91)

	MODELS					
	Null	#1	#2	#3	#4	#5
sWHITE		-.041	2.054~	-.318	1.590	-.509
SESSCORE			.014	-.002	.016	-.002
ACCESS				-.026~	-.023	-.026~
WHTxSES			-.039~		-.034	
sHDCSMRC						.191
sHDCSMSX						-.015
-2LL	285.630	285.617	282.568	282.481	280.414	282.463
Cox & Snell R ²		.000	.033	.034	.056	.034
df		1	3	3	4	5

Key: ~ p < .10; * p < .05; ** p < .01; *** p < .001

Note. The reference values for the predictors are as follows: sWHITE (0); sHDCSMRC (0); sHDCSMSX (0,1).

Link: Logit

Considering leadership: An alternative centrality variable.

H16₀. There is no relationship between the centrality of a student-athlete's position and the individual's demographic, experiential, or contextual status.

Correlation analyses were used to evaluate the relationship between the Grusky centrality outcome variable (CENTRALGRU) with demographic (race/ethnicity, SES), experiential (access) and contextual (head coach's race and sex) variables. No significant relationships at the .05 level were found between Grusky centrality and the predictor variables for either racial/ethnic group, however, a weak statistically significant correlation at the .10 level was observed between the centrality and access variables for the Non-White participants, $r(64) = .232, p = .065$. This difference in strength is not statistically significant for White versus Non-White participants, $z_{\text{obs}} = 1.63$. This correlation indicates that for the Non-White student-athletes in this sample, the higher their access score, the higher their level of centrality based on the Grusky scale. This suggests that access level has more of an impact on an individual's centrality for the Non-White population, meaning that individuals may be able to increase their chances of attaining more central positions by having greater access to athletic development opportunities during their pre-college years.

The correlations between the Grusky centrality variable and the predictor variables described above are presented in Table 4.22. A moderate positive correlation of statistical significance was observed between access and socioeconomic status for the Non-White sample, $r(51) = .348, p = .012$. This relationship indicates that for the Non-White student-athletes, a higher score of SES correlates with the student-athlete's increased access to pre-college training and activities, meaning Non-White student-athletes with higher SES levels tended to participate in more activities. Again, this difference in strength between the racial/ethnic groups is not statistically significant, $Z_{\text{obs}} = 1.19$.

Table 4.22

Correlations Between Grusky Position Centrality (CENTALGRU), Demographic, Experiential and Contextual Variables, Grouped by Race/Ethnicity (sWHITE)

		CENTRALGRU (sWHITE = 1)	CENTRALGRU (sWHITE = 0)
SESSCORE	Pearson Correlation	-.069	.167
	Sig. (2-tailed)	.592	.202
	N	62	60
ACCESS	Pearson Correlation	-.083	.232~
	Sig. (2-tailed)	.573	.065
	N	48	64
sHDCSMRC	Biserial Correlation	.049	-.021
	Sig. (2-tailed)	.685	.844
	N	71	94
sHDCSMSX	Biserial Correlation	-.061	.119
	Sig. (2-tailed)	.615	.254
	N	71	94

Key: ~ p < .10; * p < .05; ** p < .01; *** p < .001

Additional correlations between the Grusky centrality variable and elements of each of the constructed background variables for SES and access were used to explore the relationships of proxy variables. Appendix I, Table I.1 presents correlations for Grusky centrality and SES indicators, only one of which is statistically significant. The association between centrality and private school attendance was statistically significant and weak positive for Non-White student-athletes ($r_{60} = .256, p = .048$), but weak negative and non-significant for White student-athletes. This finding suggests that private high school attendance has a greater impact on potential centrality at the collegiate level for Non-White students, whereas White student-athletes were more likely to have central positions if they did not attend a private high school. In general, where the SES indicators were concerned, White student-athletes tended to score higher on the Grusky centrality variable when they had a higher household income, came from a two-parent home, and had parents with higher education and occupation statuses. Non-White student-athletes scored higher on centrality when they attended private high schools, lived in the suburbs,

had higher household incomes, came from a two-parent home, and had parents with higher education and occupation statuses.

When access indicators were taken into consideration, only two relationships (both within the Non-White group) showed statistical significance with the Grusky centrality variable. The first relationship, statistically significant at the .10 level, was a weak positive association between centrality and personal training experience, $r_{64} = .222$, $p = .078$ (see Appendix I, Table I.2). This finding indicates that for Non-White students, the experience of having been coached in personal one-on-one sessions for basketball skill development was associated with a higher centrality score at the collegiate level. This same relationship was negligible for the White participants. The second statistically significant relationship was a weak positive correlation between centrality and the age an individual started playing basketball, $r_{64} = -.238$, $p = .058$. This finding indicates that, for Non-White participants, an increase in the number of years playing basketball (the younger the age started playing) before college was associated with a higher centrality score. Generally speaking, where the access indicators were concerned, Non-White student-athletes achieved a higher centrality scores when they participated in high school- and university-hosted basketball camps, had access to extra training, started playing basketball at a younger age, and were transfers from other Division-I universities. These same relationships were negligible for White participants.

Selected variables of interest for the Non-White participants show statistically significant correlations between guard status and personal training, guard status and years playing basketball, Student-Athlete Council (SAAC) participation and high school path, Student-Athlete Council (SAAC) participation and Division-I transfer path, captain status and years playing basketball, previous MVP status and high school camp training, and previous MVP status and parents' average occupation level. The correlation values for these relationships are presented in Appendix I, Table I.3. None of the relationships were statistically significant when compared to the corresponding correlations within the sample of White participants.

The results of the correlation analyses suggest that SES and access indicators have a greater impact within the Non-White population than they do in the White population. Student-athletes in the Non-White group are more likely to be guards if they have had

one-on-one training and started playing at a younger age. Also, Non-White student-athletes were more likely to be their team's captain the longer they played basketball before college. The fact that statistical significance for these relationship was not found for White student-athletes hints that access opportunities for student-athletes could potentially be a leveling factor in Division-I Women's Basketball. The lack of statistically significant associations for White participants might indicate that Non-White students gain more benefit from SES and access, and that higher scores on those indicators assists Non-White student-athletes attain positions of centrality in at the D-I level.

Summary

The hypothesis tests based on the responses from the coach participants revealed support for the traditional test of leadership recruitment. Coaches at the Division-I level in women's basketball do tend to matriculate from central playing positions; mostly the position of point guard. This was especially true for head coaches, whose majority were formerly point guards (44.8%). The results indicate that there is evidence of racial bias for both the presence of minorities in coaching and in the valuation of experience. The importance of having played a central position on a college team appears to have more impact for minority coaches, whereas White coaches were hired without having any college playing experience at all. The consideration of sex also provided a source of potential bias, as male coaches appear to require less evidence of success as a player to support their resumes. Race/ethnicity proved not to be a significant indicator of former playing position, but sex was, largely influenced by the majority male selected Did Not Play option.

The attainment of positions within a coaching staff was not influenced by the race/ethnicity or sex of the individual, as the majority of coaches from all demographic groups were found in the general category of Assistant Coach. Where head coaches were concerned, race/ethnicity was a significant bias, with only two of the 29 head coaches self-identifying as Non-White. While some evidence of homologous reproduction was apparent in the results, the finding was likely due to the overrepresentation of White female coaches in the sample. The effect of the interaction between race/ethnicity and sex for the analyses of homologous reproduction indicate that White assistant coaches benefit

more from having head coaches with identical demographics than minority assistant coaches.

The results of the hypothesis tests from the student-athletes' responses did not support the traditional test of positional segregation. The race/ethnicity of the individual did not act as a statistically significant predictor of playing position assignment. The suggestion from scholars stating that stacking in basketball no longer exists because of the overall proportions of minority athletes in the sport may be true for this study as well (Berghorn, Yetman, & Hanna, 1988; Yetman & Berghorn, 1993; Yetman, Berghorn, & Thomas, 1982). The proportion of Black athletes in both this study's sample and the population of D-I women's basketball players is the largest of all of the racial/ethnic categories. White athletes make up the second largest proportion at a slightly lower amount. The proportion of athletes from other racial/ethnic groups is statistically significantly lower than that for White or Black.

Generally speaking, the experiential factors for the overall sample of student-athletes were similar regardless of racial/ethnic identity. Student-athletes reported similar ranges of SES indicator values, even though the mean household income was higher for White participants across all playing positions. White student-athletes also experienced more access and higher levels of SES at a larger proportion than did minority respondents. The hypothesis tests supported the inclusion of SES as an influential variable in analyses of participants and their access to leadership opportunities within team environments. Interactions between race/ethnicity and SES were found to impact the analyses even in situations where the main effect of race/ethnicity was not significant. The introduction of the access variable provides a potential source of mediation, as increased opportunities for pre-college preparation appears to provide a leveling factor for minority student-athletes when comparing outcomes with their White counterparts. In a similar finding to that of coaches, minority athletes reported a desire to pursue a coaching career at the Division-I level of women's basketball at a greater proportion than did their White colleagues. The implications for these findings are presented in the following chapter.

CHAPTER 5 - DISCUSSION

This final chapter positions the results of this study within the context of similar research in sport. Along with a review of the limitations of this study, this chapter presents a summary of the findings presented in the previous chapter, and discussions of the implications and recommendations of this research endeavor.

Restatement of the Problem

This study aspired to explore the link between two research traditions in the sporting realm: leadership recruitment and positional segregation. As the common factor in both areas, playing position was a primary variable of interest as it related to both coaches and student-athletes. This study sought to evaluate the relationships between various demographic, experiential, and contextual variables and the under-representation of sub-populations in Division-I Women's Basketball. Following historical trends of recognized discrimination in sport, key variables included race, sex, socioeconomic status (SES), and access.

Previous research on leadership recruitment in sport has shown that the positions that coaches played during their athletic careers are associated with their matriculation into coaching, management, and administrative positions in sport organizations. The seminal work of Grusky (1963) posited a theory of formal structure in professional baseball based on the high-versus-low level of interaction associated with a playing position. His work, along with Blalock's (1962) propositions about workplace discrimination, became the impetus for Loy and Elvogue's (1970) pioneering study into the positional segregation research tradition conventionally termed "stacking." Stacking studies evaluate patterns early in the process, asserting that discriminatory effects in the assignment of playing positions directly impact the under-representation of minority groups in sport leadership positions. Occupational segregation studies relate discrimination practices to employment, positing that discrimination based on elements of an individual's biography (such as federal protected class status) can be barriers to social mobility. This study applied these theories to the specific sport and level of Division-I Women's Basketball to determine if similar patterns of under-representation could imply theoretical links.

Focused on an industry historically dominated by male leadership, sport research has often told its stories from the male perspective. Past research into leadership recruitment and positional segregation have targeted sports with male participants, leaving a void in the field where the experiences of females are concerned. Such a lack of existing literature creates opportunities for such studies to provide some insight into the ways in which different participant sub-groups experience sport. The exploratory nature of this study both brings a novel approach and provides an ample launching point for future work in these classical research domains.

The research questions presented below outline this study's focus on the ways in which an individual's background impacts their current role—whether coach or athlete—within Division-I Women's Basketball.

Objective: To explore the relationship between an individual's biographical characteristics and leadership development and recruitment in Division-I Women's Basketball;

- RQ1: What is the impact of demographic, experiential, and contextual factors on leadership recruitment patterns for coaches?
- RQ2: What is the impact of demographic, experiential, and contextual factors on the stacking of playing positions for athletes?

Figure 5.1 displays a graphical representation of the research design as it was originally presented in Chapter 2. Items surrounded by broken lines represent the hypotheses put forth in this study through additional independent and dependent variables. Situated side-by-side, it is easy to see that positional segregation effects temporally precede leadership recruitment outcomes. This study explored the potential for compounded inequities within sport.

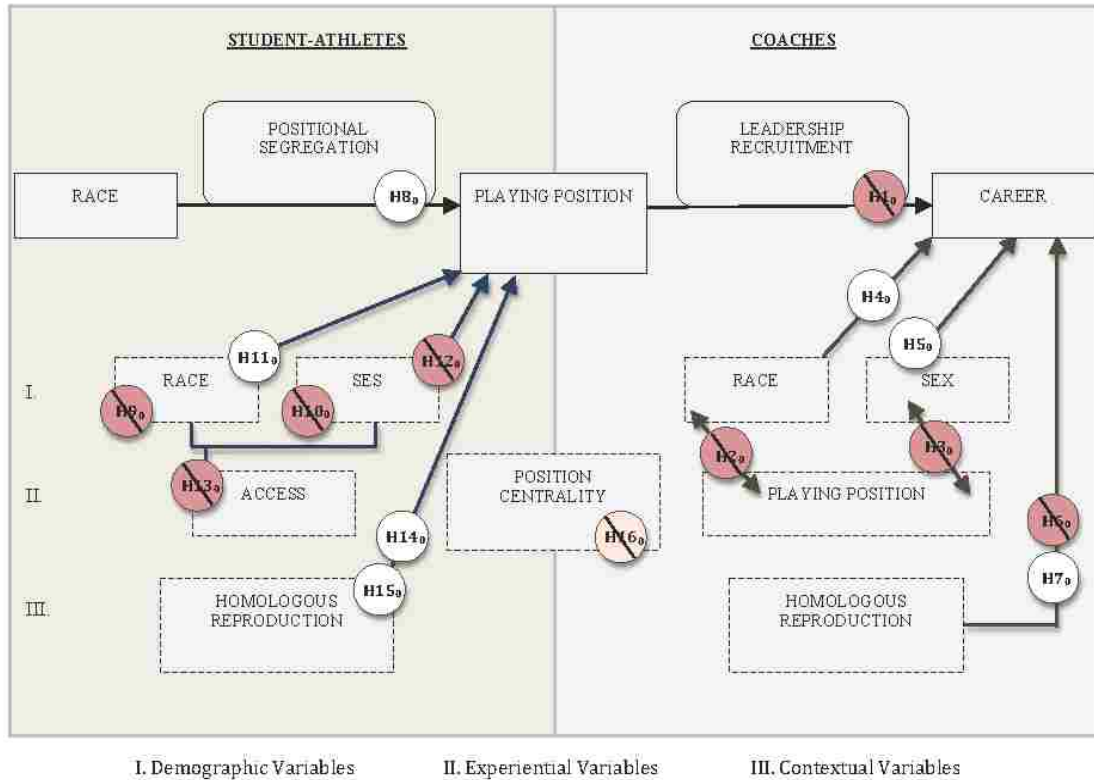


Figure 5.1. Restatement of the Research Design Model. Solid lines in the figure represent the traditional hypotheses associated with the research tradition. Broken lines in the lower portion of the figure represent the hypotheses introduced in this study, with demographic (I), experiential (II), and contextual (III) variables. A shaded circle with a line going through it indicates a result where the null hypothesis was rejected.

Limitations

The low response rates for this census survey limit its generalizability to the population of all individuals involved in Division-I Women’s Basketball across the nation. While the proportions of participants categorized by race and sex were representative of the greater population, the lack of respondents hindered some analyses. For example, in the analysis of the former playing positions of coaches, two categories had to be combined as a result of empty cross-tabulation cells. It is likely that those cross-categories would not be empty if additional responses were obtained. In other words, the phenomenon of only White coaches not having playing experience at the collegiate level might be restricted to the sample, and not an actual phenomenon in the population. Likewise, the lack of sufficient variation in the sample required the collapsing of racial

categories into a White versus Non-White dynamic, a necessity that limited the desired objective of comparing cultural influence on leadership recruitment and position centrality.

Summary of the Findings

Leadership recruitment.

The responses from the coaches confirmed the existence of leadership recruitment based on playing position in Division-I Women's Basketball. Point guard, the most central playing position within the team, was the position that most of the coaches had played during their collegiate athletic careers. The focus on the point guard is not arbitrary. Descriptions in coaching guides refer to the position as the main ball-handler and the key decision-maker on the team. Famed former University of North Carolina head coach, Sylvia Hatchell, has underscored the importance of the position by stating, "This is the most important position on the team. If you have a good point guard, your team will have a good chance of succeeding. ... Your point guard is your team leader on the floor" (Hatchell & Thomas, 2006 p.7-8). The stress put on the requirement for the point guard's basketball intelligence makes it easy to see how their athletic experiences are associated with coaching.

Delving deeper into the under- and over-representations of groups within the coaching population, the addition of the demographic variables of race/ethnicity and sex revealed that these characteristics bring new information to the traditional analysis. Trends reported on the demographics of women's college coaches reveal lasting patterns of under-representation of minorities. With the significant differences in the number of White coaches to coaches of other races, it is apparent that the race/ethnicity variable in isolation is a significant predictor of who becomes a coach. The race/ethnicity effect is especially pronounced when head coaches are examined; a finding that is heavily influenced by the paucity of head coaches of color in the sample and in the population. The impact of race on leadership recruitment revealed that minority coaches tended to have higher levels of leadership and athletic success experience. White coaches in the sample were hired without having collegiate athletic careers; a finding not replicated with the minority participants.

The intersectionality framework warns that race cannot be viewed in isolation, as its intersection with other elements of an individual's identity could potentially create drastically different experiences. For the coaches' survey, race and sex were studied in concert. Results supported the importance of the interaction, revealing sub-group differences in the responses to key variables. One example of the interaction effect was the finding that Black female coaches desired a coaching career at a greater proportion than any other group but they were lowest in proportion when years in the profession were considered. Another example was the finding that lack of collegiate athletic career before becoming a coach was mostly attributed to White males. The category of Did Not Play was considered to be the most peripheral position on the centrality scale, thus showing that White males from non-central positions were hired into coaching positions, contrary to the usual results of leadership recruitment research.

In sum, while traditional leadership recruitment studies focus solely on the relationship between the centrality of an individual's former playing position to their likelihood of being a coach, the consideration of the race-by-sex interaction provides additional insight into patterns of disparate impact.

Positional segregation.

The results of this study did not support the traditional application of positional segregation theory. Race did not play a statistically significant role in the proportions of student-athletes in each playing position, thus confirming the conclusions of previous stacking studies in basketball (Berghorn et al., 1988; Yetman & Berghorn, 1993; Yetman, 1982). While the different strategies used by scholars to operationalize central versus non-central positions in basketball make it difficult to make direct comparisons, the findings of this study suggest that distributions of players by positions for Whites and minorities are relatively identical. Those distributions were not equal across positions, however, likely due to the different terminologies for playing positions that coaches use (i.e., primary ball-handling players may either be point guards, "ones," or simply "guards" depending on their coach's choice of language) (Hatchell & Thomas, 2006).

Once again, the application of the intersectionality framework to this research domain confirms the need to explore the stacking phenomenon with additional self-identification variables. As all of the student-athletes in this study were female, the

intersection of focus for these analyses was that between race and class. Similar to race-by-class standings in the general American public, White student-athletes proved to have higher levels on SES indicators (i.e., household income) than minority student-athletes. This relationship did not significantly impact the assignment of playing position, and while the race-by-class interaction did highlight some general differences among players, similarities in household type and parent educational attainment levels were uncovered as well. Moving beyond the basic interpretation of specific playing positions as a measure of centrality, the results of the study confirmed the alternative hypothesis that race and class interacted in ways that affected the level of centrality associated with an individual's role on the team. The proposed valuation of centrality incorporates opportunities for leadership development through team roles.

The addition of a measure of access to preparation activities for athletic development provided additional insight into the experiences of student-athletes participating at the highest level of intercollegiate competition. Overall, the majority of all student-athletes indicated that they participated in preparatory activities, with White participants reporting more activities than others. The student-athletes' SES levels strongly influenced their access indicators, the impact of which was influenced by racial identity. The influence of access on role centrality was greater for minority athletes, and could suggest that participation in pre-college prep activities could diminish the effect of lower SES levels when it comes to career mobility.

In sum, while evidence of the traditional analysis of stacking patterns in D-I women's basketball is not found, the intersection of race and class for student-athletes provides insight into other social factors that could limit opportunities for career mobility.

Implications

Research on the racially biased assignment of players to particular positions began as part of the inquiry into the under-representation of minorities in upper level leadership positions of sport organizations. The underlying hypothesis was that under-representations of minority athletes in the playing positions most played by those leaders would implicate discriminatory practices as cause. As our society has moved beyond the turbulent Civil Rights Era, the evidences of overt discrimination—especially at the organizational level—have become exceptions where they were once norms. The

increased participation rates of minority athletes in sports have made stacking patterns less visible, and perhaps less impactful, than they once were. For various reasons, both legal and practical, the stacking of players into positions based on their racial/ethnic identity is a non-viable strategy. While stacking patterns may still be found in sports like football (Pitts & Yost, 2012) or baseball (Kanter, 2012), they are rarely the result of overt discrimination. Thus, attention needs to be paid to determinants other than racial/ethnic discrimination to explain why the impact of stacking (limited numbers of minorities in upper management) still exists.

The sport of basketball provides a unique perspective in stacking research. As discussed earlier, scholars have often designated the sport to be the exception in the field, citing the over-representation of minority athletes as players and the highly-interactive nature of play as reasons stacking patterns could not occur (Curtis & Loy, 1978b; Edwards, 1973; Yetman & Berghorn, 1993). Indeed, the different methods that authors use to operationalize the court positions in basketball make the findings difficult to interpret in aggregate, as in some studies the breakdown is guard/forward, or guard/forward/center. To make matters more complicated, authors use various justifications for which positions are considered central. It appears that the difficulty in determining the qualitative differences between playing positions has been a key factor in scholars' conclusions toward stacking in basketball. The problem is, reviews of the coaching and administration ranks of sport organizations show that the demographics of the leaders do not reflect the demographics of the participants.

This study focuses on that dynamic specific to the context of Division-I Women's Basketball. While the student-athlete population in D-I women's basketball is majority Black, the coaching population is overwhelmingly White. The confirmation that positional segregation patterns among student-athletes do not occur within the population indicates that something else is happening to limit minority student-athletes' access to career mobility in coaching. The lack of evidence for stacking patterns also indicates that the singular analysis of playing position is not suitable for insight into the relationship between proportions of minority players and proportions of minority coaches. Career aspirations are not at fault here, as at both the coach and student-athlete levels, Black females report the desire and intent to pursue coaching more than any other sub-group.

Again, the implications are that other career mobility obstacles are in effect, aside from that of college playing position.

The majority of coaches reported that the person who most influenced their matriculation into coaching was a coach that they played for as an athlete. This finding implies that a player-coach mentoring relationship, regardless of homologous race or sex, is very instrumental in a player's future coaching opportunities. These player-coach mentorships may stem from the leadership roles that a student-athlete experiences within the team setting. Coaches reported experience as team captains, a role that increases the interaction a player has with the coaching staff, and grants authority and responsibility. The point guard position is another role that requires higher rates of coach-player interaction than other playing positions. If those two roles are considered leadership development opportunities, then it is no surprise that coaches report having been former point guards more than any other position. The fact that the point guard position was actually over-represented by minorities in the student-athlete sample proposes further exploration, as does the contrasting participation trends for men versus women.

This study revealed that context is important. The findings of previous studies that focused on male participants show that the experiences, successes, and degree attainment of men and women are valued somewhat differently when it comes to hiring decisions, and this truth is compounded for minorities. The different "stories" for men and women of different racial/ethnic groups underscores the importance of applying an intersectionality framework to research in women's sport. It is possible that these hiring differentials are influenced by stereotypes or unconscious bias. The generally homogenous identities of head coaches in this study influenced the failure to reveal evidence of homologous reproduction, thus further examination of the phenomenon is needed. Additional research into the barriers associated with career mobility for the different groups would add insight into the sources of observed disparities.

This study proposed a new valuation of the centrality measure that moved beyond the simple assignment of centrality to a particular playing position. Using Grusky's three tenets of centrality (interaction, proximity, and scope), the composite centrality score incorporated other elements of an individual's role on the team, referring to the coaches' responses about their own experiences as players. The use of such a variable could

expand the scope of the traditional leadership recruitment and positional segregation domain, as it proposes a method of measuring the intangible aspects previously measured as playing position (i.e., leadership, court intelligence, etc.). This would also allow analyses to be carried out in sports like basketball where the interactive and interchanging nature of playing positions make ascribing values of centrality or marginality to them difficult.

Given the separation of classes in the society-at-large, the expectation was to see similar disparities within the student-athlete population in relation to their roles. Race and class levels were noted, however in aggregate, women's basketball players at the D-I level were more alike than different. Minority student-athletes were impacted more by SES indicators than White student-athletes, but the differences between the groups on the SES composite variable were not statistically significant. The association between skill (i.e., player is an MVP) and leadership (i.e., player is a captain) alluded to in this and other studies also indicates that preparatory activities can impact leadership development. The findings related to the access opportunities of students and their general similarities to one another despite race or class differences may suggest that players are socialized into certain expectations about their roles much earlier in their athletic careers. An exploration of stacking patterns for youth when they are first learning to play basketball may reveal a more direct influence of sources (such as coaches perception or athlete's race) on position assignment.

An unexplored relationship was uncovered between SES, playing position, and coaching; the playing positions held by student-athletes from higher income levels matched the former playing positions most reported by coaches when categorized by race. The cross-sectional nature of this study did not support further analysis of the relationship, but it bears additional attention, as it implies additional support of the influence of the race-by-class interaction on career mobility. The findings of the various hypotheses tests were influenced by the calculations used to create composite variables. It should be noted that different scholars may choose to calculate different composites, and thus those results should be interpreted with caution. In addition, the relationships among the individual indicators provide integral insight into the performance of those composite variables, however interpretation of those relationships was limited in this study because

of sample size. In the same vein, other valuations of outcome variables could be created based upon the theories of other scholars (i.e., Edwards' propositions about outcome control).

The findings of this study suggest that addressing intersecting identities may be more relevant in the analysis of disparity in sport research than addressing race/ethnicity alone. The practical implications for this study suggest that the under-representations of minority coaches in the field could be corrected with focused attention. Student-athletes have the desire and intention to pursue coaching careers in proportions that would be representative if actualized. While the findings of this study supported the role of mentorship and athletic team leadership for women, additional research (especially research that is qualitative in nature) would provide more insight into the sources of disparity, the barriers to entry, and effective corrective measures that could be employed. Another finding that could assist practitioners is the relevance of access indicators as elevating factors for minority athletes. Programming that provides access to preparatory activities for pre-college athletes could increase their odds of 1) competing in their sport at the elite level, and 2) of obtaining leadership roles within their teams.

Recommendations for Future Research

The following are suggestions for future research:

- Longitudinal and qualitative cohort analyses of student-athletes' matriculation into the coaching profession;
- Studies of younger athletes and their socialization processes as related to position selection and assignment;
- Targeted examination of homologous reproduction patterns as related to head coaches' hiring biases and reflection of staff race and gender proportions to those created by the players;
- Hierarchical evaluations of the influence of region or rank on the distributions of race and class levels of student-athletes.

Conclusion

This study explored the introduction of demographic, experiential, and contextual variables to the traditional research analyses of leadership recruitment and positional segregation. Framed in intersectionality, this study sought to determine if intersecting

identities experience compounded disparity in the context of Women's Division-I Basketball. In addition, this study proposed an alternative valuation of centrality that incorporated more than just title of playing position. The evaluation of centrality was extended to include team leadership roles in an attempt to better reflect the propositions put forth in Grusky's (1963) original study. Results from the study reveal that, even though evidence of stacking by position was not found, players from different racial/ethnic sub-groups experienced their transition to D-I basketball differently. The results of the student-athlete sample did not totally reflect those of the coach sample. As is the case in the population for Division-I Women's Basketball, the racial/ethnic category proportions in the coaching level are not reflective of the same categories in the student-athlete level. Whereas traditional stacking analyses have been associated with that mismatch in past studies, evidence of such a link was not supported here.

This study addresses a void in the leadership recruitment and positional segregation traditions in that it focuses on female participants, something very few studies have done before. Juxtaposed against the general findings of studies of male participant sports, this study supports the indication that patterns of disparity occur differently for various sub-groups. Scholars should continue to acknowledge those differences as they design their tests and disseminate their results. Practitioners are encouraged to understand the potential of compounded inequities when dealing with sub-groups. The continued exploration of other influential predictors of career mobility for athletes would be a valuable step toward making upper management ranks accessible to people of all races, sexes, and creeds.

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APPENDIX A. Division-I Women's Basketball Colleges and Universities

SCHOOL	CONFERENCE
A&M-Corpus Christi	Southland
Air Force	Mountain West
Akron	Mid-American
Alabama	Southeastern
Alabama A&M	Southwestern
Alabama State	Southwestern
Albany (N.Y.)	America East
Alcorn State	Southwestern
American	Patriot
Appalachian State	Southern
Arizona	Pac-12
Arizona State	Pac-12
Arkansas	Southeastern
Arkansas State	Sun Belt
Arkansas-Pine Bluff	Southwestern
Army	Patriot
Auburn	Southeastern
Austin Peay	OVC
Ball State	Mid-American
Baylor	Big 12
Belmont	Atlantic Sun
Bethune-Cookman	Mid-Eastern
Binghamton	America East
Boise State	Mountain West
Boston College	Atlantic Coast
Boston U.	America East
Bowling Green	Mid-American
Bradley	Missouri Valley
Brown	Ivy
Bryant	Northeast
Bucknell	Patriot
Buffalo	Mid-American
Butler	Horizon
BYU	West Coast
Cal Poly	Big West
Cal State Fullerton	Big West
Cal State Northridge	Big West
California	Pac-12
Campbell	Big South
Canisius	Metro Atlantic
Central Arkansas	Southland
Central Connecticut State	Northeast

Central Michigan	Mid-American
Charleston Southern	Big South
Charlotte	Atlantic 10
Chattanooga	Southern
Chicago State	Great West
Cincinnati	Big East
Clemson	Atlantic Coast
Cleveland State	Horizon
Coastal Carolina	Big South
Colgate	Patriot
College of Charleston	Southern
Colorado	Pac-12
Colorado State	Mountain West
Columbia	Ivy
Connecticut	Big East
Coppin State	Mid-Eastern
Cornell	Ivy
Creighton	Missouri Valley
CSU Bakersfield	Division-I Independents
Dartmouth	Ivy
Davidson	Southern
Dayton	Atlantic 10
Delaware	Colonial
Delaware State	Mid-Eastern
Denver	Sun Belt
DePaul	Big East
Detroit	Horizon
Drake	Missouri Valley
Drexel	Colonial
Duke	Atlantic Coast
Duquesne	Atlantic 10
East Carolina	Conference USA
East Tennessee State	Atlantic Sun
Eastern Illinois	OVC
Eastern Kentucky	OVC
Eastern Michigan	Mid-American
Eastern Wash.	Big Sky
Elon	Southern
Evansville	Missouri Valley
Fairfield	Metro Atlantic
Fairleigh Dickinson	Northeast
FIU	Sun Belt
Fla. Gulf Coast	Atlantic Sun
Florida	Southeastern
Florida A&M	Mid-Eastern
Florida Atlantic	Sun Belt

Florida St.	Atlantic Coast
Fordham	Atlantic 10
Fresno State	Western Athletic
Furman	Southern
Ga. Southern	Southern
Gardner-Webb	Big South
George Mason	Colonial
George Washington	Atlantic 10
Georgetown	Big East
Georgia	Southeastern
Georgia State	Colonial
Georgia Tech	Atlantic Coast
Gonzaga	West Coast
Grambling	Southwestern
Green Bay	Horizon
Hampton	Mid-Eastern
Hartford	America East
Harvard	Ivy
Hawaii	Western Athletic
High Point	Big South
Hofstra	Colonial
Holy Cross	Patriot
Houston	Conference USA
Houston Baptist	Great West
Howard	Mid-Eastern
Idaho	Western Athletic
Idaho State	Big Sky
Illinois	Big Ten
Illinois State	Missouri Valley
Illinois-Chicago	Horizon
Indiana	Big Ten
Indiana State	Missouri Valley
Iona	Metro Atlantic
Iowa	Big Ten
Iowa State	Big 12
IPFW	Summit
IUPUI	Summit
Jackson State	Southwestern
Jacksonville	Atlantic Sun
Jacksonville State	OVC
James Madison	Colonial
Kansas	Big 12
Kansas State	Big 12
Kennesaw State	Atlantic Sun
Kent State	Mid-American
Kentucky	Southeastern

La Salle	Atlantic 10
Lafayette	Patriot
Lamar	Southland
Lehigh	Patriot
Liberty	Big South
Lipscomb	Atlantic Sun
LIU Brooklyn	Northeast
Long Beach State	Big West
Longwood	Division-I Independents
Louisiana Tech	Western Athletic
Louisiana-Lafayette	Sun Belt
Louisiana-Monroe	Sun Belt
Louisville	Big East
Loyola Chicago	Horizon
Loyola Maryland	Metro Atlantic
Loyola Marymount	West Coast
LSU	Southeastern
Maine	America East
Manhattan	Metro Atlantic
Marist	Metro Atlantic
Marquette	Big East
Marshall	Conference USA
Maryland	Atlantic Coast
Maryland-Eastern Shore	Mid-Eastern
Massachusetts	Atlantic 10
McNeese State	Southland
Memphis	Conference USA
Mercer	Atlantic Sun
Miami (Fla.)	Atlantic Coast
Miami (Ohio)	Mid-American
Michigan	Big Ten
Michigan State	Big Ten
Middle Tennessee	Sun Belt
Milwaukee	Horizon
Minnesota	Big Ten
Mississippi State	Southeastern
Mississippi Valley	Southwestern
Missouri	Big 12
Missouri State	Missouri Valley
Monmouth	Northeast
Montana	Big Sky
Montana State	Big Sky
Morehead State	OVC
Morgan State	Mid-Eastern
Mt. St. Mary's	Northeast
Murray State	OVC

N.C. A&T	Mid-Eastern
N.C. Central	Mid-Eastern
Navy	Patriot
Nebraska	Big Ten
Nevada	Western Athletic
New Hampshire	America East
New Mexico	Mountain West
New Mexico State	Western Athletic
Niagara	Metro Atlantic
Nicholls State	Southland
NJIT	Great West
Norfolk State	Mid-Eastern
North Carolina	Atlantic Coast
North Carolina State	Atlantic Coast
North Dakota	Great West
North Dakota State	Summit
North Florida	Atlantic Sun
North Texas	Sun Belt
Northeastern	Colonial
Northern Arizona	Big Sky
Northern Colorado	Big Sky
Northern Illinois	Mid-American
Northwestern	Big Ten
Northwestern State	Southland
Notre Dame	Big East
Oakland	Summit
Ohio	Mid-American
Ohio State	Big Ten
Oklahoma	Big 12
Oklahoma State	Big 12
Old Dominion	Colonial
Ole Miss	Southeastern
Oral Roberts	Summit
Oregon	Pac-12
Oregon State	Pac-12
Pacific	Big West
Penn	Ivy
Penn State	Big Ten
Pepperdine	West Coast
Pittsburgh	Big East
Portland	West Coast
Portland State	Big Sky
Prairie View	Southwestern
Presbyterian	Big South
Princeton	Ivy
Providence	Big East

Purdue	Big Ten
Quinnipiac	Northeast
Radford	Big South
Rhode Island	Atlantic 10
Rice	Conference USA
Richmond	Atlantic 10
Rider	Metro Atlantic
Robert Morris	Northeast
Rutgers	Big East
S.C. Upstate	Atlantic Sun
Sacramento State	Big Sky
Sacred Heart	Northeast
Saint Francis (Pa.)	Northeast
Saint Joseph's	Atlantic 10
Saint Louis	Atlantic 10
Saint Peter's	Metro Atlantic
Sam Houston State	Southland
Samford	Southern
San Diego	West Coast
San Diego State	Mountain West
San Francisco	West Coast
San Jose State	Western Athletic
Santa Clara	West Coast
Savannah State	Mid-Eastern
Seattle	Division-I Independents
Seton Hall	Big East
Siena	Metro Atlantic
SIU Edwardsville	OVC
SMU	Conference USA
South Alabama	Sun Belt
South Carolina	Southeastern
South Carolina State	Mid-Eastern
South Dakota	Summit
South Dakota State	Summit
South Florida	Big East
Southeast Missouri State	OVC
Southeastern Louisiana	Southland
Southern	Southwestern
Southern California	Pac-12
Southern Illinois	Missouri Valley
Southern Miss	Conference USA
Southern Utah	Summit
St. Bonaventure	Atlantic 10
St. Francis (N.Y.)	Northeast
St. John's (N.Y.)	Big East
St. Mary's (Calif.)	West Coast

Stanford	Pac-12
Stephen F. Austin	Southland
Stetson	Atlantic Sun
Stony Brook	America East
Syracuse	Big East
TCU	Mountain West
Temple	Atlantic 10
Tennessee	Southeastern
Tennessee State	OVC
Tennessee Tech	OVC
Texas	Big 12
Texas A&M	Big 12
Texas Southern	Southwestern
Texas State	Southland
Texas Tech	Big 12
Texas-Arlington	Southland
Texas-Pan American	Great West
Toledo	Mid-American
Towson	Colonial
Troy	Sun Belt
Tulane	Conference USA
Tulsa	Conference USA
UAB	Conference USA
UALR	Sun Belt
UC Davis	Big West
UC Irvine	Big West
UC Riverside	Big West
UC Santa Barbara	Big West
UCF	Conference USA
UCLA	Pac-12
UMBC	America East
UMKC	Summit
UNC Asheville	Big South
UNC Greensboro	Southern
UNC Wilmington	Colonial
UNI	Missouri Valley
UNLV	Mountain West
UT Martin	OVC
Utah	Pac-12
Utah State	Western Athletic
Utah Valley	Great West
UTEP	Conference USA
UTSA	Southland
Valparaiso	Horizon
Vanderbilt	Southeastern
VCU	Colonial

Vermont	America East
Villanova	Big East
Virginia	Atlantic Coast
Virginia Tech	Atlantic Coast
Wagner	Northeast
Wake Forest	Atlantic Coast
Washington	Pac-12
Washington State	Pac-12
Weber State	Big Sky
West Virginia	Big East
Western Carolina	Southern
Western Illinois	Summit
Western Kentucky	Sun Belt
Western Michigan	Mid-American
Wichita State	Missouri Valley
William & Mary	Colonial
Winthrop	Big South
Wisconsin	Big Ten
Wofford	Southern
Wright State	Horizon
Wyoming	Mountain West
Xavier	Atlantic 10
Yale	Ivy
Youngstown State	Horizon

APPENDIX B. Survey Instruments

Coaches Leadership Survey

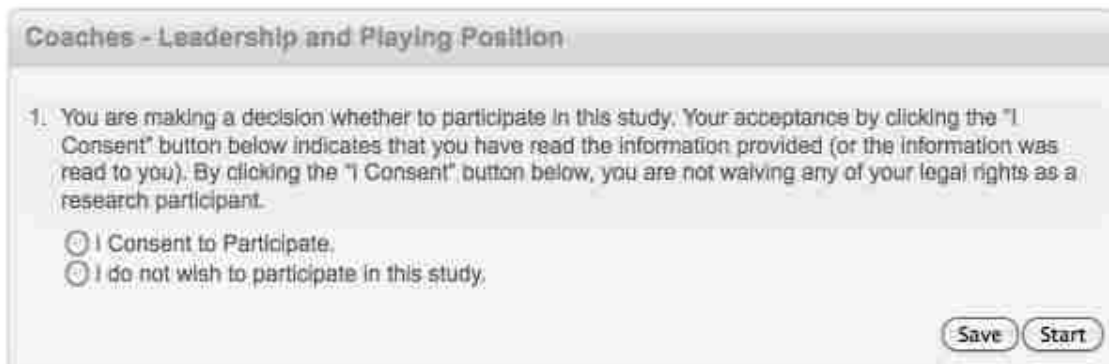
(As it appeared when accessed online.)

Screen#0. Participant Agreement



The screenshot shows a web page for a survey. At the top, there is a navigation bar with "Home", "About", and "Prezi" links. A search bar is located in the top right corner with the text "GOT NEXT" and a "Search" button. Below the navigation bar, the main content area is titled "Survey" and "Participant Agreement". A large white box in the center contains the text "Embedded PDF of IRB Approved Consent Agreement Form". Below this box, there is a section titled "CONSENT" with the following text: "You are making a decision whether to participate in this study. By clicking the button to continue, you are giving your consent to participate in this study. If you agree, please click the button below." There are two buttons: a blue button labeled "I am a Coach" and a red button labeled "I am a Student-Athlete".

Screen#1.



The screenshot shows a survey question titled "Coaches - Leadership and Playing Position". The question text is: "1. You are making a decision whether to participate in this study. Your acceptance by clicking the 'I Consent' button below indicates that you have read the information provided (or the information was read to you). By clicking the 'I Consent' button below, you are not waiving any of your legal rights as a research participant." There are two radio button options: "I Consent to Participate." and "I do not wish to participate in this study." At the bottom right, there are two buttons: "Save" and "Start".

Screen#2.

Coaches - Leadership and Playing Position

2. Please enter the name of the college/university where you are currently employed:

3. What is your current position on the coaching staff?

- Head Coach
 Associate/Co-Head Coach
 Head Assistant Coach
 Assistant Coach
 Graduate Assistant Coach
 Director of Basketball Operations
 Other:

4. Please rank your top six (6) job duties in order of most responsibility (1 is highest, 6 is lowest).

	1	2	3	4	5	6
Academic Mentoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Booster Club/Alumni Interaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community Service/Outreach Activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competition Scheduling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conditioning/Strength Training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Film Exchange	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fundraising	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Game Day Preparation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Player Development (Guards)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Player Development (Posts/Forwards)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recruiting Coordinator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Travel Arrangements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you have chosen "Other", please specify:

Back

Save

Next

Screen#3.

Coaches - Leadership and Playing Position

Current Status

5. How many years have you spent in your current coaching position with this team?

6. How many years have you spent on-staff with your team's current head coach? (This total includes any coaching stints at other colleges/universities in addition to your current school.)

7. Which best describes your team's head coach?

Female

Male

8. Which term best describes the race/ethnicity of your team's head coach? (Select all that apply.)

American Indian/Alaska Native

Asian

Black/African American

Hispanic/Latino

Pacific Islander

White/Caucasian

Other:

Screen#4.

Coaches - Leadership and Playing Position

Coaching Experience

9. How many years have you spent in the following positions during your career in women's basketball?

High School Coach	<input type="text"/>
AAU/BCI/Club Coach	<input type="text"/>
Junior/Community College Coach	<input type="text"/>
Graduate Assistant Coach	<input type="text"/>
Director of Basketball Operations	<input type="text"/>
Division-III College/University Assistant Coach	<input type="text"/>
Division-III College/University Head Coach	<input type="text"/>
Division-II College/University Assistant Coach	<input type="text"/>
Division-II College/University Head Coach	<input type="text"/>
Division-I College/University Assistant Coach	<input type="text"/>
Division-I College/University Head Coach	<input type="text"/>

10. Do you intend to become a head basketball coach at the Division-I college/university level in the future?

Yes
 No

Screen#5.

Coaches - Leadership and Playing Position

11. You selected "No" for Division-I Head Coach intention. Why not?

*Q11 branches from Q10 only if the respondent answered 'No'.

Screen#6.

Coaches - Leadership and Playing Position

Current Status

12. Who do you credit as being the most influential person in helping you become a college basketball coach?

- a Parent
- a Former Teacher
- a Former Coach (a coach you played for)
- a Coach that is/was a Colleague (a coach you worked with)
- a Friend
- Other:

13. While you were a player, did you plan on becoming a basketball coach at the college/university level?

- Yes
- No, I did not consider coaching as a career option.
- I do not recall.

Screen#7.

Coaches - Leadership and Playing Position

14. You selected "No" for coaching intention as a player. Why not?

*Q14 branches from Q13 only if the respondent answered 'No'.

Screen#8.

Coaches - Leadership and Playing Position

Playing Experience

15. How many years experience have you had as a professional basketball player in the U.S. and/or internationally?

In the United States

Internationally

16. How many post-season NCAA Basketball Championship tournaments did you participate in as a player? (This does not include WNIT or NIT.)

None

1

2

3

4

Other

17. Which, if any, of the following team leadership positions did you hold during your collegiate playing career? (Select all that apply.)

Most Valuable Player (MVP)

Starter

Student Athlete Advisory Committee (SAAC) Representative

Captain/Co-Captain

Not Applicable (N/A)

Other:

18. Were you classified as an International Player during your collegiate playing career?

Yes

No

Screen#9.

Coaches - Leadership and Playing Position

Playing Experience

19. Which was the **primary** position that you played during your college basketball career?

- 1 - Point Guard
- 2 - Shooting Guard
- 3 - Off Guard/Small Foward
- 4 - Power Forward
- 5 - Center

20. In which Division was your college/university Alma Mater classified during the final year of your collegiate playing career? (Please select one of the following options.)

- NCAA Division-I
- NCAA Division-II
- NCAA Division-III
- Other:

Screen#10.

Coaches - Leadership and Playing Position

The following questions refer to the status of your team's captain positions. Please answer them in consideration of your team's activities for last season.

Team Captains

21. How were your team's captain(s) determined for last season?

- Appointed by the coaching staff
- Elected by the team
- Other

22. How many team captains did your team have last season?

- 0
- 1
- 2
- 3
- 4 or more

23. Which position did each of your team captains play last season?

	1 - Point Guard	2 - Shooting Guard	3 - Off Guard/Small Forward	4 - Power Forward	5 - Center
Team Captain 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Team Captain 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Team Captain 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Team Captain 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Team Captain 5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Back Save Next

Screen#11.

Coaches - Leadership and Playing Position

Demographics

24. Please indicate how you self-identify (Select all that apply):

- American Indian/Alaska Native
- Asian
- Black/African American
- Hispanic/Latino
- Pacific Islander
- White/Caucasian
- Other:

25. Please indicate how **others** are most likely to classify your race/ethnicity (Select all that apply):

- American Indian/Alaska Native
- Asian
- Black/African American
- Hispanic/Latino
- Pacific Islander
- White/Caucasian
- Other:

26. Are you...?

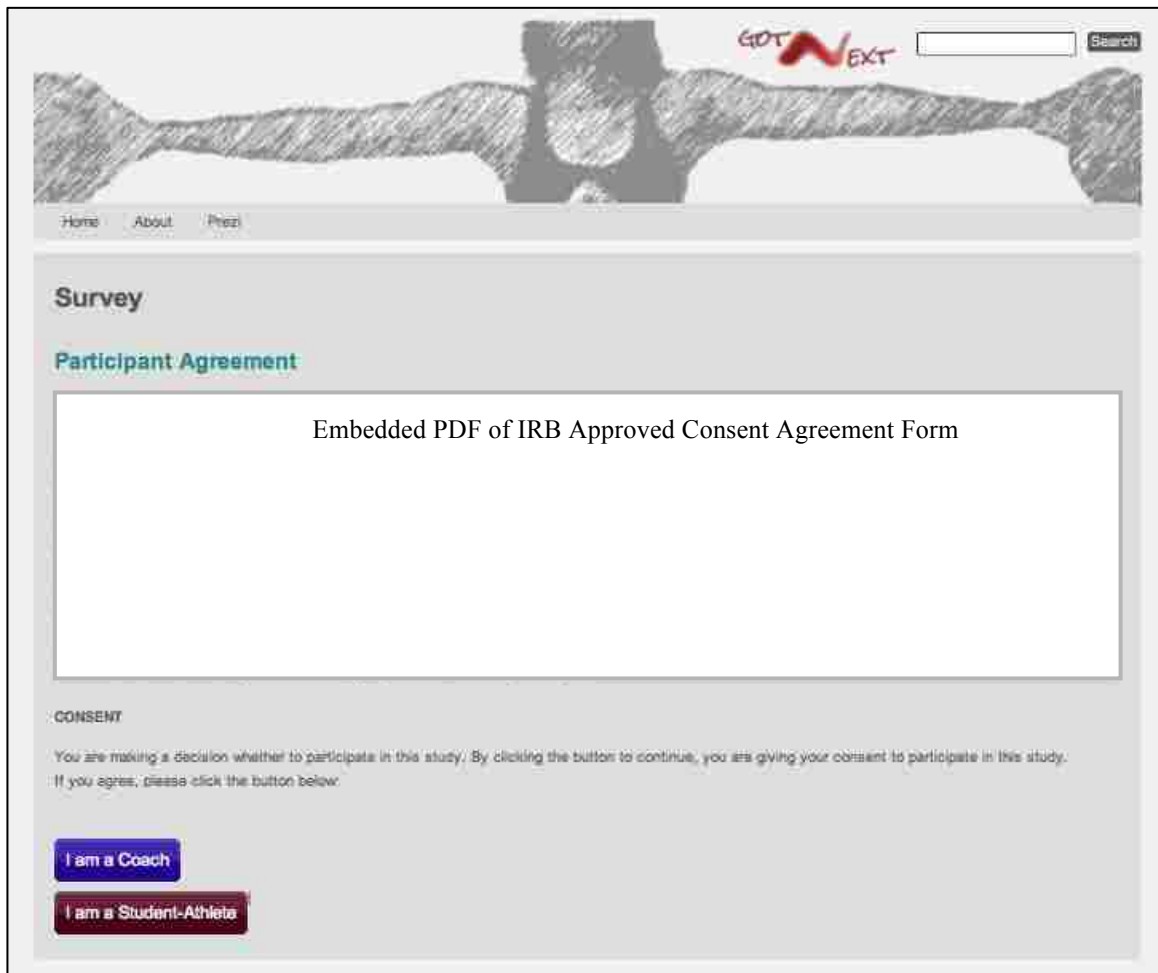
- Female
- Male

27. What is the highest level of education that you have completed?

- Bachelor's Degree (BA, BS)
- Master's Degree (MA, MS)
- Doctoral Degree (Ed.D, Ph.D)
- Professional Degree (JD, MD)

Student-Athletes Leadership Survey

Screen#0. Participant Agreement



GOT NEXT

Home About Prezi

Survey

Participant Agreement

Embedded PDF of IRB Approved Consent Agreement Form

CONSENT

You are making a decision whether to participate in this study. By clicking the button to continue, you are giving your consent to participate in this study. If you agree, please click the button below:

[I am a Coach](#)

[I am a Student-Athlete](#)

Screen#1.



Student Athletes - Leadership and Playing Position

1. You are making a decision whether to participate in this study. Your acceptance by clicking the "I Consent" button below indicates that you have read the information provided (or the information was read to you). By clicking the "I Consent" button below, you are not waiving any of your legal rights as a research participant.

I Consent to Participate and Confirm that I am 18 or older,

I do not wish to participate in this study.

[Save](#) [Start](#)

Screen#2.

Student Athletes - Leadership and Playing Position

2. Please enter the name of the college/university that you currently attend:

3. Which of the following best describes your eligibility level?

Freshman
 Sophomore
 Junior
 Senior
 5th-Year

4. Are you a member of the team as a scholarship athlete?

Yes, Full Athletic Scholarship
 Yes, Partial Athletic Scholarship
 No

5. Are you eligible for any of the following funding assistance?

Federal Pell Grant
 NCAA Special Assistance Fund
 None of the Above
 Other

Screen#3.

Student Athletes - Leadership and Playing Position

6. Please indicate how many of your team's games you started last season.

Number of games your team played last year:

Number of games you started last year:

7. Which was your **primary** playing position last season?

1 - Point Guard

2 - Shooting Guard

3 - Off Guard/Small Forward

4 - Power Forward

5 - Center

8. Which, if any, was the position you played **in addition to** your primary position last season?

1 - Point Guard

2 - Shooting Guard

3 - Off Guard/Small Forward

4 - Power Forward

5 - Center

Screen#4.

Student Athletes - Leadership and Playing Position

9. Were you the captain or co-captain of your team last season?

Yes, Captain
 Yes, Co-Captain
 No

10. Which, if any, of the following team leadership positions have you held during your collegiate playing career? (Select all that apply.)

	Previous Collegiate Seasons	This Current Season
Most Valuable Player (MVP)	<input type="checkbox"/>	<input type="checkbox"/>
Starter	<input type="checkbox"/>	<input type="checkbox"/>
Student Athlete Advisory Council (SAAC) Representative	<input type="checkbox"/>	<input type="checkbox"/>
Captain/Co-Captain	<input type="checkbox"/>	<input type="checkbox"/>
None of the Above	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="text"/>	<input type="text"/>

Other:

11. Please select any of the following on-court specialized roles that you have on your team: (Select all that apply.)

3-point Shooter
 Defensive Stopper
 Primary Baseline/Sideline Inbouncer
 Not Applicable (N/A)
 Other:

Screen#5.

Student Athletes - Leadership and Playing Position

12. Please indicate if you are inactive this season for any reason:

- Academic Leave
- Medical/Injury Leave
- Red Shirt
- Not Applicable (N/A)
- Other:

13. Do you intend on becoming a women's basketball coach at the Division-I college/university level in the future?

- Yes
- No
- I have not considered it as a career option.

14. Do you intend on becoming a girl's or women's basketball coach at any of the following levels? (Select all that apply.)

- Yes, Division-II
- Yes, Division-III
- Yes, Junior or Community College
- Yes, High School/Interscholastic
- Yes, Youth (Middle, Elementary, etc.)
- Yes, Club (AAU/BCI/Summer League, etc.)
- No, Not at all.

Screen#6.

Student Athletes - Leadership and Playing Position

15. You selected "(SA - DI Coach Intent)" for college/university coaching intention. Why not?

16. You selected "(SA - Other Coach Intent)" for college/university coaching intention. Why not?

Screen#7.

Student Athletes - Leadership and Playing Position

17. Which term best describes the race/ethnicity of your team's head coach? (Select all that apply.)

- American Indian/Alaska Native
- Asian
- Black/African American
- Hispanic/Latino
- Pacific Islander
- White/Caucasian
- Other:

18. Which best describes your team's head coach?

- Female
- Male

Screen#8.

Student Athletes - Leadership and Playing Position

19. How were your team's captain(s) determined for last season?

Appointed by the coaching staff
 Elected by the team
 Other

20. How many team captains did your team have last season?

0
 1
 2
 3
 4 or more

21. Which position did each of your team captains play?

	1 - Point Guard	2 - Shooting Guard	3 - Off Guard/Small Forward	4 - Power Forward	5 - Center
Team Captain 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Team Captain 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Team Captain 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Team Captain 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Team Captain 5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Screen#9.

Student Athletes - Leadership and Playing Position

22. Please indicate how you self-identify (Select all that apply):

- American Indian/Alaska Native
- Asian
- Black/African American
- Hispanic/Latino
- Pacific Islander
- White/Caucasian
- Other:

23. Please indicate how **others** are most likely to classify your race/ethnicity (Select all that apply):

- American Indian/Alaska Native
- Asian
- Black/African American
- Hispanic/Latino
- Pacific Islander
- White/Caucasian
- Other:

24. Are you an international student?

- Yes
- No

Screen#10.

Student Athletes - Leadership and Playing Position

25. Which term best describes the area where the high school you graduated from was located:

Rural
 City/Urban
 Suburb
 Other:

26. What type of high school did you graduate from?

Charter
 Private
 Public
 BIE (Bureau of Indian Education)
 Other:

27. What is the Zip Code of the home you lived in as a high school senior?

Zip Code

Screen#11.

Student Athletes - Leadership and Playing Position

28. Please select the option that best matches the total household income of your family during your final year of high school:

Please Select...

29. What was the total number of persons living in your household during your final year of high school? [This total includes yourself and your parent(s)/guardian(s).]

30. Please select the option that best describes the status of your household during your final year of high school:

Single-Parent (Mother Only)
 Single-Parent (Father Only)
 Single-Guardian (Someone other than a parent)
 Two-Parent (Mother and Father)
 Two-Parent (Other)
 Two-Guardian (Persons other than parents)
 Blended-Family (Parents and Step-Parents)
 Other

Screen#12.

Student Athletes - Leadership and Playing Position

31. Please indicate the profession and highest level of completed education for your parent(s), step-parent(s), and guardian(s) below:

Guardian Type	Profession	Highest Education Completed	If Other for Guardian Type, Please Explain
Please Select... ▾	<input type="text"/>	Please Select... ▾	<input type="text"/>
Please Select... ▾	<input type="text"/>	Please Select... ▾	<input type="text"/>
Please Select... ▾	<input type="text"/>	Please Select... ▾	<input type="text"/>
Please Select... ▾	<input type="text"/>	Please Select... ▾	<input type="text"/>
Please Select... ▾	<input type="text"/>	Please Select... ▾	<input type="text"/>
Please Select... ▾	<input type="text"/>	Please Select... ▾	<input type="text"/>

Screen#13.

Student Athletes - Leadership and Playing Position

Your High School Career

32. Which was your **primary** playing position on your high school basketball team during your final season?

1 - Point Guard
 2 - Shooting Guard
 3 - Off Guard/Small Foward
 4 - Power Forward
 5 - Center

33. Please select which, if any, of the following positions that you held while participating on your high school basketball team: (Select all that apply.)

Game Starter
 Most Valuable Player (MVP)
 Team Captain
 None of the Above

34. Which best describes the race/ethnicity of your high school basketball team's head coach?

American Indian/Alaska Native
 Asian
 Black/African American
 Hispanic/Latino
 Pacific Islander
 White/Caucasian
 Other:

Student Athletes - Leadership and Playing Position

Your Preparation Activities

35. Which of the following preparation activities did you participate in to develop your basketball skills?
(Select all that apply.)

- High School Sponsored Skills Camp
- College/University Team Sponsored Skills Camp
- One-on-One Personal Skills Training
- Weight Training
- AAU/BCI/Club Team
- Summer League
- Not Applicable (N/A)
- Other:

36. Please select the organized sports that you have participated in before your first year of college
(please include the ages of participation after the sport):

*For the purposes of this question, an organized sport is one where you received instruction or guidance from a coach and/or trainer.

	Age Started	Age Stopped
Please Select... ▾	<input type="text"/>	<input type="text"/>
Please Select... ▾	<input type="text"/>	<input type="text"/>
Please Select... ▾	<input type="text"/>	<input type="text"/>
Please Select... ▾	<input type="text"/>	<input type="text"/>
Please Select... ▾	<input type="text"/>	<input type="text"/>
Please Select... ▾	<input type="text"/>	<input type="text"/>
Please Select... ▾	<input type="text"/>	<input type="text"/>
Please Select... ▾	<input type="text"/>	<input type="text"/>
Please Select... ▾	<input type="text"/>	<input type="text"/>
Please Select... ▾	<input type="text"/>	<input type="text"/>

If you have chosen "Other", please specify:

Screen#15.

Student Athletes - Leadership and Playing Position

37. Which type of school were you attending before enrolling at your current college/university?

- High School
- Junior/Community College
- Division II College/University
- Division III College/University
- different Division I College/University
- International School

Screen#16.

Student Athletes - Leadership and Playing Position

38. Which position(s) did you play at the (Previous School) you attended? (Select all that apply.)

- 1 - Point Guard
- 2 - Shooting Guard
- 3 - Off Guard/Small Foward
- 4 - Power Forward
- 5 - Center

39. Who is your favorite basketball player?

APPENDIX C. IRB Documentation

IRB Approval Letter



THE UNIVERSITY of
NEW MEXICO

Main Campus Institutional Review Board

Human Research Protections Office

MSC08 4560

1 University of New Mexico~Albuquerque, NM 87131-0001

<http://hsc.unm.edu/som/research/HRRC/>

29-May-2012

Responsible Faculty: Annie Clement

Investigator: Sonja N. Robinson

Dept/College: Health Exercise & Sports Science

SUBJECT: IRB Approval of Research - Initial Review - Modification

Protocol #: 12-159

Project Title: Leadership in Division I Women's Basketball Study

Type of Review: Expedited Review

Approval Date: 29-May-2012

Expiration Date: 28-May-2013

The Main Campus Institutional Review Board has reviewed and approved the above referenced protocol. It has been approved based on the review of the following:

1. Expedited Review Study Application submitted 04/09/2012;
2. Investigator's Protocol submitted 04/09/2012;
3. UNM Consent Form (Cover Letter for Anonymous Surveys) version 05/10/2012;
4. Recruitment Materials: Packet Letter (Coaches), Packet Letter (SIDs), Email Letter (Coaches), Email Letter (SIDs), Coaches Reminder Email #1, Coaches Reminder Email #2, "Leadership in D-1 Women's Basketball" recruitment postcards, and "Leadership in D-1 Women's Basketball" recruitment flyer - all submitted 04/09/2012;
5. Study Instruments: Coaches Leadership Survey and Student-Athlete Leadership Survey - both submitted 05/14/2012.

Consent Decision:

Waived the requirement to obtain a signed consent form

HIPAA Authorization Addendum not applicable

If a consent is required, we have attached a date stamped consent that must be used for consenting participants during the above noted approval period.

If HIPAA authorization is required, the HIPAA authorization version noted above should be signed in conjunction with the consent form.

As the principal investigator of this study, you assume the following responsibilities:

- CONSENT: To ensure that ethical and legal informed consent has been obtained from all research participants.
- RENEWAL: To submit a progress report to the IRB at least 45 days prior to the end of the approval period in order for this study to be considered for continuation.
- ADVERSE EVENTS: To report any adverse events or reactions to the IRB immediately.
- MODIFICATIONS: To submit any changes to the protocol, such as procedures, consent/assent forms, addition of subjects, or study design to the IRB as an Amendment for review and approval.
- COMPLETION: To close your study when the study is concluded and all data has been de-identified (with no link to identifiers) by submitting a Closure Report.

Please reference the protocol number and study title in all documents and correspondence related to this protocol.

Sincerely,

J. Scott Tonigan, PhD
Chair
Main Campus IRB

* Under the provisions of this institution's Federal Wide Assurance (FWA0004690), the Main Campus IRB has determined that this proposal provides adequate safeguards for protecting the rights and welfare of the subjects involved in the study and is in compliance with HHS Regulations (45 CFR 46).

Informed Consent Agreement

University of New Mexico

Informed Consent Cover Letter for Anonymous Surveys

STUDY TITLE Leadership in Division I Women's Basketball

Sonja Robinson, Doctoral Candidate, and Dr. Annie Clement, Faculty Advisor, from the Department of Health, Exercise and Sports Sciences, Sport Administration Program, are conducting a research study. The purpose of the study is to examine the relationships between individual background, playing position, and leadership development for coaches and student-athletes in Division I Women's Basketball. You are being asked to participate in this study because you have been identified as being either a current coach or player at a NCAA Division I institution.

If you are over the age of 18, your participation will involve the completion of an online questionnaire that will ask you about your experiences and tenure as a basketball player and/or coach. The survey should take between 10-20 minutes to complete. Your involvement in the study is voluntary, and you may choose not to participate. There are no names or identifying information associated with this survey. The survey includes questions such as "Which was the primary position that you played during your last college basketball season?". You can refuse to answer any of the questions at any time. The risks associated with your participation are minimal and you may exit the survey process at any time without penalty. All data will be kept for seven years in a locked and encrypted file in Sonja Robinson's office and then destroyed.

The findings from this project will provide information on the study of leadership development and recruitment in women's collegiate sport. In addition, this research could provide data on how sport organizations can foster environments and programming to strengthen the development of coaching careers for student-athletes. If published, results will be presented in summary form only.

If you have any questions about this research project, please feel free to call Sonja Robinson at (505) 307-0915. If you have questions regarding your legal rights as a research subject, you may call the UNM Human Research Protections Office at (505) 272-1129.

By following the web url link provided below, you will be agreeing to participate in the above described research study.

Thank you for your consideration.

Sincerely,

Researcher's Name

Sonja Robinson
Doctoral Candidate, Sport Administration
Health, Exercise and Sports Sciences
University of New Mexico

HRPO #: 12-159

Page 1 of 1

Version: 05/10/2012

APPROVED: 29-May-2012

OFFICIAL USE ONLY

EXPIRES: 28-May-2013



UNM | Human Research Protections Office

The University of New Mexico Institutional Review Board (HRR/MCIRB)

APPENDIX D. Communication Materials

Letter Addressed To Coaching Staff In Packet

Sonja N. Robinson

Doctoral Candidate, Sport Administration, University of New Mexico

XXXX XXXXXXXXX – Albuquerque, NM XXXXX

Tel. (____) ____ - ____ – Eml. XXXXX@unm.edu

Women's Basketball Office
XXXXX University Athletics
XXXXX

Dear Coach XXXX and Staff,

My name is Sonja Robinson and I am a doctoral candidate at the University of New Mexico working on my dissertation project under the supervision of my committee chair, Dr. Annie Clement. As a former basketball player at the University of Minnesota (1995-1999), I have continued to have interests in the leadership development processes that happen in teams since my playing days.

For my dissertation study, I am studying leadership development and recruitment in Division-I Women's Basketball. Specifically, I intend to explore the relationships among aspects of an individual's personal background and career development and extracurricular activities, and how they influence the positions those individuals achieve as players and coaches.

I have developed two online surveys for my study. One aimed to coaches in Division-I Women's Basketball, and the other to student-athletes in Division-I Women's Basketball. The surveys are short, taking between 10 to 20 minutes to complete, and the questions ask general information about the coach's and player's background, playing experience, team roles, responsibilities, and leadership activities. The surveys do not ask for any names or other identifying information.

I am sending this letter and the accompanying packet to request your team's participation in my study. The packet includes a flyer and a set of postcards, all which have the web address for access to the surveys. I would appreciate if you would distribute the postcards to all of the players and coaches on your team (including any individuals affiliated with your team as Director of Basketball Operations, Graduate and Volunteer Assistants).

In addition, I will be sending this information to you via an email. If you and your team are willing to participate in my study, please forward the email and the information to each of your staff members and your women's basketball players. If you have any questions, or would like to discuss any details of the study further, please feel free to contact me by phone at (505) 307-0915, or by email at snjrobin@unm.edu. I look forward to hearing from you.

I greatly appreciate your time and participation!

Sonja Robinson

E-Mail Introduction to the Study

Greetings!

Dear Coach XXXX,

My name is Sonja Robinson and I am a doctoral candidate at the University of New Mexico working on my dissertation project under the supervision of my committee chair, Dr. Annie Clement. As a former basketball player at the University of Minnesota (1995-1999), I have continued to have interests in the leadership development processes that happen in teams since my playing days.

For my dissertation study, I am studying leadership development and recruitment in Division-I Women's Basketball. Specifically, I intend to explore the relationships among aspects of an individual's personal background and career development and extracurricular activities, and how they influence the positions those individuals achieve as players and coaches.

I have developed two online surveys for my study. One aimed to all coaches in Division-I Women's Basketball, and the other to all student-athletes in Division-I Women's Basketball. The surveys are short, taking between 10 to 20 minutes to complete, and the questions ask general information about the coach's and player's background, playing experience, team roles, responsibilities, and leadership activities. The surveys do not ask for any names or other identifying information.

I am sending this email to request your team's participation in my study. I am the only person who will have access to the survey responses and participation is voluntary.

The link to the study is as follows: <http://---/survey>

In addition, I have sent an introduction letter and a packet to your office. Please let me know if you did not receive it. If you and your team are willing to participate in my study, please forward this email and the information to each of your staff members and your women's basketball players.

If you have any questions, or would like to discuss any details of the study further, please feel free to contact me by phone at (____) ____-____, or by email at XXXX@unm.edu. I look forward to hearing from you.

I greatly appreciate your time and participation!

Thank you,
Sonja N. Robinson
Ph.D. Candidate, Sport Administration
Health, Exercise and Sports Sciences
University of New Mexico

Again, the link to the study is as follows: <http://---/survey/>

E-Mailed Follow-Up to the Study, 1st Reminder

Greetings!

Two weeks ago I sent you the link to a survey seeking your input for my dissertation study on leadership development and recruitment in Division-I Women's Basketball. This email is just to remind you that the surveys are still open if you have not yet had a chance to participate.

If you have already completed the survey, please accept my sincere thanks and appreciation for your time! Please forward this email to your staff and players as a reminder as well. The link to the survey is below:

<http://---/survey>

Thank you,
Sonja N. Robinson
Ph.D. Candidate, Sport Administration
Health, Exercise and Sports Sciences
University of New Mexico
Phone: () -
Email: XXXX@unm.edu

E-Mailed Follow-Up to the Study, Final Reminder

Greetings Again!

Three weeks ago I sent you the link to a survey seeking your input for my dissertation study on leadership development and recruitment in Division-I Women's Basketball. I am sending this email as a final reminder about the study, as surveys will close at the end of this week.

If you have already completed the survey, please accept my sincere thanks and appreciation for your time! Please forward this email to your staff and players as a reminder as well. Once again, the link to the survey is below:

<http://---/survey>

Thank you,
Sonja N. Robinson
Ph.D. Candidate, Sport Administration
Health, Exercise and Sports Sciences
University of New Mexico
Phone: () -
Email: XXXX@unm.edu

E-Mail Introduction to the Study, Sent to Team SID

Subject: Dissertation Survey: Leadership in Women's Basketball
Greetings!

My name is Sonja Robinson and I am a doctoral candidate at the University of New Mexico working on my dissertation project under the supervision of my committee chair, Dr. Annie Clement. As a former basketball player at the University of Minnesota (1995-1999), I have continued to have interests in the leadership development processes that happen in teams since my playing days.

For my dissertation study, I am studying leadership development and recruitment in Division-I Women's Basketball. Specifically, I intend to explore the relationships among aspects of an individual's personal background and career development and extracurricular activities, and how they influence the positions those individuals achieve as players and coaches.

I have developed two online surveys for my study. One aimed to all coaches in Division-I Women's Basketball, and the other to all student-athletes in Division-I Women's Basketball. The surveys are short, taking between 10 to 20 minutes to complete, and the questions ask general information about the coach's and player's background, playing experience, team roles, responsibilities, and leadership activities. The surveys do not ask for any names or other identifying information.

I am sending this letter to you to inform you of the project and to let you know that I have also sent a similar letter and an accompanying packet to the Women's Basketball Staff. The letter is sent to request the Women's Basketball team's participation in my study. The packet includes a flyer and a set of postcards, all which have the web address for access to the surveys. In the letter, I ask the coaching staff to distribute the postcards to all of the players and coaches on the team (including any individuals affiliated with the team as Director of Basketball Operations, Graduate and Volunteer Assistants).

If you have any questions, or would like to discuss any details of the study further, please feel free to contact me by phone at (____) ____ - ____, or by email at XXXX@unm.edu. I look forward to hearing from you.

Thank you for your time!

The link to the study is as follows: <http://----/survey>

Sonja Robinson
PhD Candidate, Sport Administration

Flyer

LEADERSHIP IN D-I WOMEN'S BASKETBALL

You are being asked to participate in a dissertation study on leadership development and recruitment in Division I Women's Basketball.

Participation is completely voluntary and all of your answers will be kept confidential. The survey is accessible online at the address below and will take between 10 to 20 minutes to fill out.

If you have any questions, all contact information is shown below.

Thank you in advance for your time and participation!

[http://\[redacted\]survey/](http://[redacted]survey/)

Leadership in D-I Women's Basketball Study

What: My study explores the relationships among aspects of an individual's personal background, career development activities, extracurricular activities, and leadership positions both on and off the court.

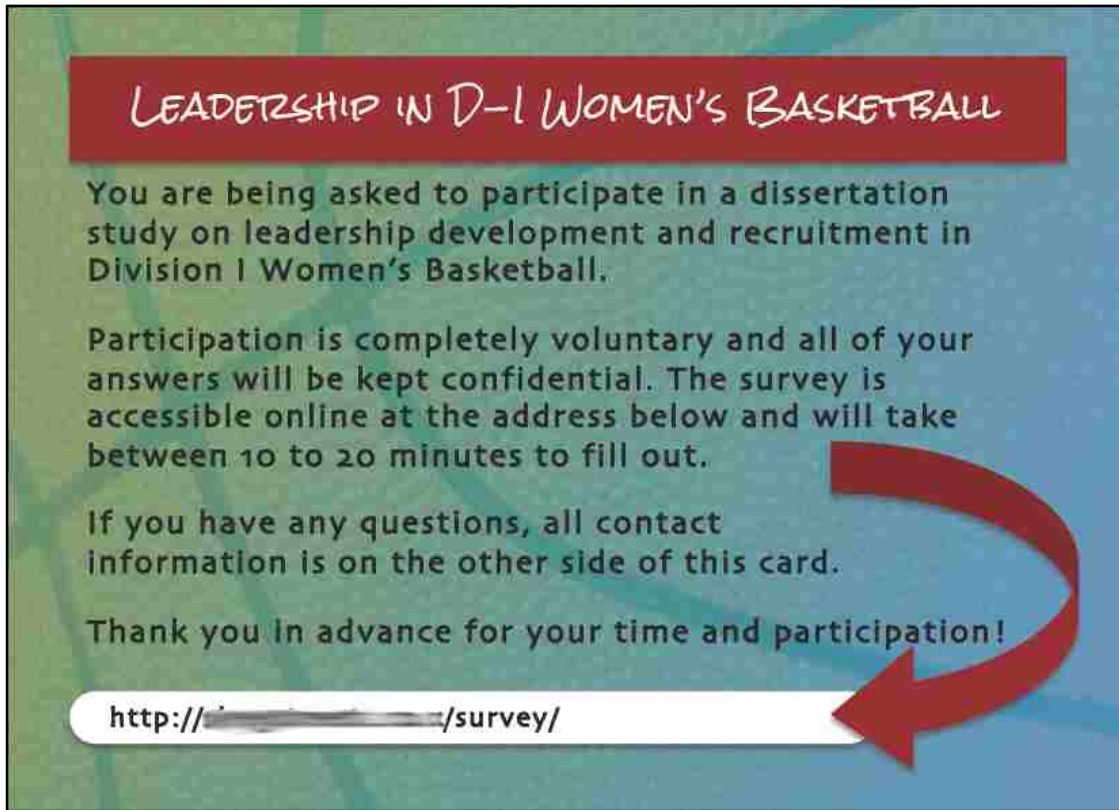
Who: I am sending participant invitations to all Division I Women's Basketball players and coaches.

Action: Please consider being part of this voluntary study and complete the online survey.

Any Questions? Please contact Sonja Robinson, Ph.D. Student, at (505) [redacted]@unm.edu or Dr. Annie Clement, Sport Administration Program Faculty, Health, Exercise and Sports Sciences, (505) [redacted]@unm.edu

University of New Mexico IRB Approval #12-159

Postcard



LEADERSHIP IN D-I WOMEN'S BASKETBALL


You are being asked to participate in a dissertation study on leadership development and recruitment in Division I Women's Basketball.

Participation is completely voluntary and all of your answers will be kept confidential. The survey is accessible online at the address below and will take between 10 to 20 minutes to fill out.

If you have any questions, all contact information is on the other side of this card.

Thank you in advance for your time and participation!

[http://\[redacted\]/survey/](http://[redacted]/survey/)




Leadership In D-I Women's Basketball Study

What: My study explores the relationships among aspects of an individual's personal background, career development activities, extracurricular activities, and leadership positions both on and off the court.

Who: I am sending participant invitations to all Division I Women's Basketball players and coaches.

Action: Please consider being part of this voluntary study and complete the online survey.

Any Questions? Please contact Sonja Robinson, Ph.D. Student, at (505) [redacted], [redacted]@unm.edu or Dr. Annie Clement, Sport Administration Program Faculty, Health, Exercise and Sports Sciences, (505) [redacted], [redacted]@unm.edu



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APPENDIX E. Codebook

Coaches' Survey

VARIABLE	DESCRIPTION	MEASURES/ VALUES
cRESPID	RespondentID	Unique Value
cWHITE	Is White	[0] No [1] Yes
FEMALE	Is Female	[0] No [1] Yes
STAFFPOS	Title of Current Position	[1] Head Coach [2] Associate/ Co-Head Coach [3] Head Assistant Coach [4] Assistant Coach [5] Graduate Assistant/ Director of Operations
JOBVALUE	Coaching Staff Position Value (Based on Title and Rank)	Number
HDCOACH	Is Head Coach	[0] No [1] Yes
ALMATER	Alma Mater	[0] Did not play [1] NCAA Division-I [2] NCAA Division-II [3] NCAA Division-III [4] NAIA [5] NJCAA [6] AIAW
cCAPTAIN	Was a Team Captain as a Collegiate Player	[0] No [1] Yes
cMVP	Was MVP as Collegiate Player	[0] No [1] Yes
cSTARTER	Was Starter as Collegiate Player	[0] No [1] Yes
cSAAC	Represented the Team with SAAC as a Player	[0] No [1] Yes
NCAAT	Participated in NCAA Post-Season as a Player	[0] No [1] Yes
cDIINTENT	Intended to Pursue Coaching at the D-I Level as a Player	[0] No [1] Yes
cPLAYPOS	Former Playing Position	[1] Point Guard [2] Shooting Guard [3] Off Guard/Small Forward [4] Power Forward [5] Center [6] Did Not Play

PRO	Participated in Professional Sports either in US or Abroad as a Player	[0] No [1] Yes
MENTOR	Person with the Most Influence on Decision to Coach	[1] A Family Member [2] A Friend [3] A Former Teacher [4] A Former Coach [5] A Colleague [6] Self
EDULEVEL	Highest Level of Education Completed	[1] Bachelor's Degree [2] Master's Degree [3] Professional Degree
DIYEARS	Years Coaching Women's Basketball at D-I Level	Number
CARYEARS	Years Coaching Women's/Girl's Basketball Overall	Number
GRADAST	Has Career Experience as a Graduate Assistant	[0] No [1] Yes
GRADDBO	Has Career Experience as a Graduate Assistant and Director of Basketball Operations	[0] No [1] Yes
cHDCSMRC	Head Coach is the Same Race/Ethnicity	[0] No [1] Yes
cHDCSMSX	Head Coach is the Same Sex	[0] No [1] Yes

Student-Athletes' Survey

VARIABLE	DESCRIPTION	MEASURES/ VALUES
sRESPID	Respondent ID	Unique Value
sWHITE	Is White	[0] No [1] Yes
CLASSLVL	Educational Class Status	[1] Freshman [2] Sophomore [3] Junior [4] Senior [5] Fifth Year
sPLAYPOS	Former Playing Position	[1] Point Guard [2] Shooting Guard [3] Off Guard/Small Forward [4] Power Forward [5] Center
GUARD	Former Playing Position was a Guard (Positions 1-3)	[0] No [1] Yes
SESSCORE	Socioeconomic Status Valuation	Number

TWOPARENT	Household Led by Two Parents/ Guardians	[0] No [1] Yes
JOBVALUE	Coaching Staff Position Value (Based on Title and Rank)	Number
HDCOACH	Is Head Coach	[0] No [1] Yes
FUNDING	Eligible For Special Funding Above and Beyond the Scholarship (I.E., Pell Grant)	[0] No [1] Yes
SCHLARSHP	Full Scholarship	[0] No [1] Yes
PARENTED	Average Parent Education (In Years)	Number
PARENTOCC	Average Parent Occupation Zone	Number
ZIPINCOME	Neighborhood Score; Median Income By Zip Code (in Thousands)	Number
HSINCOME	Household Income (in Thousands)	Number
QUINTILE	Quintile Level of Household Income ^a	[1] < 20,262 [2] 20,263 – 38,520 [3] 38,521 – 62,434 [4] 62,435 – 101,582 [5] > 101,582
ACCESS	Access Score Valuation	Number
HSSUBURB	Lived in a Suburb During High School	[0] No [1] Yes
HSPRIVATE	Attended a Private High School	[0] No [1] Yes
HSCAMP	Participated In High School Basketball Camps	[0] No [1] Yes
CGCAMP	Participated In University Sponsored Basketball Camps	[0] No [1] Yes
PRSNLTRN	Participated in One-On-One/ Personal Basketball Training	[0] No [1] Yes
WGTRN	Participated in Weight Training	[0] No [1] Yes
AAUBCI	Participated in AAU Or BCI Basketball Club Teams	[0] No [1] Yes
SUMMR	Participated in Basketball Summer Leagues	[0] No [1] Yes
BSKBAGE	Age Started Playing Basketball	[1] Pre-K (ages 1-5) [2] Elementary (6-10) [3] Middle School (11-13) [4] High School (14-18)

PRVSCH	Matriculation Pathway; Previous Institution	[1] High School [2] International School [3] Junior/ Community College [4] Division-I University [5] Division-II University [6] Division-III University
PATHHS	Previous Institution was a High School	[0] No [1] Yes
PATHJC	Previous Institution was a Junior/ Community College	[0] No [1] Yes
PATHD2D3	Previous Institution was a Division-II/ Division-III University	[0] No [1] Yes
PATHD1X	Previous Institution was a Division-I University	[0] No [1] Yes
PERCCLUB	Percentage of Pre-College Years Playing Country Club Sports	Number
sCAPTAIN	Was a Team Captain in Previous Collegiate Seasons	[0] No [1] Yes
ISCAPTAIN	Currently a Team Captain	[0] No [1] Yes
PRVMVP	Was MVP in Previous Collegiate Seasons	[0] No [1] Yes
PRVSTRT	Was Starter in Previous Collegiate Seasons	[0] No [1] Yes
PRVSAAC	Represented the Team for SAAC in Previous Collegiate Seasons	[0] No [1] Yes
CURSAAC	Currently Team's SAAC Representative	[0] No [1] Yes
sD1INTENT	Intent to Pursue Coaching at the D-I Level in Future	[0] No [1] Yes
CENTRALGRU	Grusky Centrality Valuation	Number
sHDCSMRC	Head Coach is the Same Race/Ethnicity	[0] No [1] Yes
sHDCSMSX	Head Coach is the Same Sex	[0] No [1] Yes

^aSource: U.S. Census Bureau. (2012). Current Population Survey, Annual Social and Economic Supplements: Table H-1 Income limits for each fifth and top 5 percent of all households. <http://www.census.gov/hhes/www/income/data/historical/household/>.

APPENDIX F. Summary of Hypotheses and Tests

RQ1. What is the impact of demographic, experiential, and contextual factors on the attainment of coaching positions in Division-I Women's Basketball?

Null Hypothesis	Statistical Test	Result
H1 ₀ . The position that a coach played in college is not associated with the likelihood of that individual being found in a Division-I Women's Basketball coaching position.		
	Chi-Square Test for Independence	Reject.
	$\chi^2 (5, n = 148) = 39.22, p < .001$	
H2 ₀ . The race/ethnicity of the coach is not associated with the former playing position of the coach.		
	Multinomial Logistic Regression	Reject.
	Model 1.	
H3 ₀ . The sex of the coach is not associated with the former playing position of the coach.		
	Multinomial Logistic Regression	Reject.
	Model 2.	
H4 ₀ . The race/ethnicity of the coach is not associated with the position value the coach has within the team's staff.		
	Biserial Correlation	Fail to Reject.
H5 ₀ . The sex of the coach is not associated with the position value the coach has within the team's staff.		
	Biserial Correlation	Fail to Reject.
H6 ₀ . The homologous race/ethnicity of the head coach is not associated with the individual's likelihood to be assigned to a certain position.		
	Biserial Correlation	Reject.
	$r_{W,81} = .195, p = .081; r_{NW,36} = -.310, p = .065$	
H7 ₀ . The homologous sex of the head coach is not associated with the individual's likelihood to be assigned to a certain position.		
	Biserial Correlation	Fail to Reject.

RQ2. What is the impact of demographic, experiential, and contextual factors on the assignment of playing positions in Division-I Women's Basketball?

Null Hypothesis	Statistical Test	Result
H8 ₀ . The race/ethnicity of the student-athlete is not associated with the individual's current playing position.		
	Chi-Square Test of Independence	Fail to Reject.
	$\chi^2(4, 165) = 1.674, p = .795$	
H9 ₀ . The race/ethnicity of the student-athlete is not associated with the likelihood that the individual will be a member of a women's basketball team at the Division-I level.		
	Chi-Square Goodness-of-Fit	Reject.
	$\chi^2(1, 163) = 3.930, p = .047$	
H10 ₀ . The socioeconomic status of the student-athlete is not associated with the likelihood that the individual will be a member of a women's basketball team at the Division-I level.		
	Chi-Square Goodness-of-Fit	Reject.
	$\chi^2(4, 173) = 9.688, p = .046$	
H11 ₀ . The race/ethnicity of the student-athlete is not associated with the individual's likelihood to be assigned to a certain position.		
	Ordinal Logistic Regression	Fail to Reject.
	Model 1.	
H12 ₀ . The race/ethnicity and socioeconomic status of the student-athlete is not associated with the individual's likelihood to be assigned to a certain position.		
	Ordinal Logistic Regression	Reject.
	Model 2.	
H13 ₀ . The race/ethnicity, socioeconomic status, and access level of the student-athlete is not associated with the individual's likelihood to be assigned to a certain position		
	Ordinal Logistic Regression	Reject.
	Model 3.	
H14 ₀ . The homologous race/ethnicity of the head coach is not associated with the individual's likelihood to be assigned to a certain position.		
	Ordinal Logistic Regression	Fail to Reject.
	Model 5.	
H15 ₀ . The homologous sex of the head coach is not associated with the individual's likelihood to be assigned to a certain position.		
	Ordinal Logistic Regression	Fail to Reject.
	Model 5.	
H16 ₀ . There is no relationship between the centrality of a student-athlete's position and the individual's demographic, experiential, or contextual status.		
	Pearson Correlation	Fail to Reject.
	$r_{NW}(64) = .232, p = .065, z_{obs} = 1.63$	With Notes.

APPENDIX G. Variable Construction

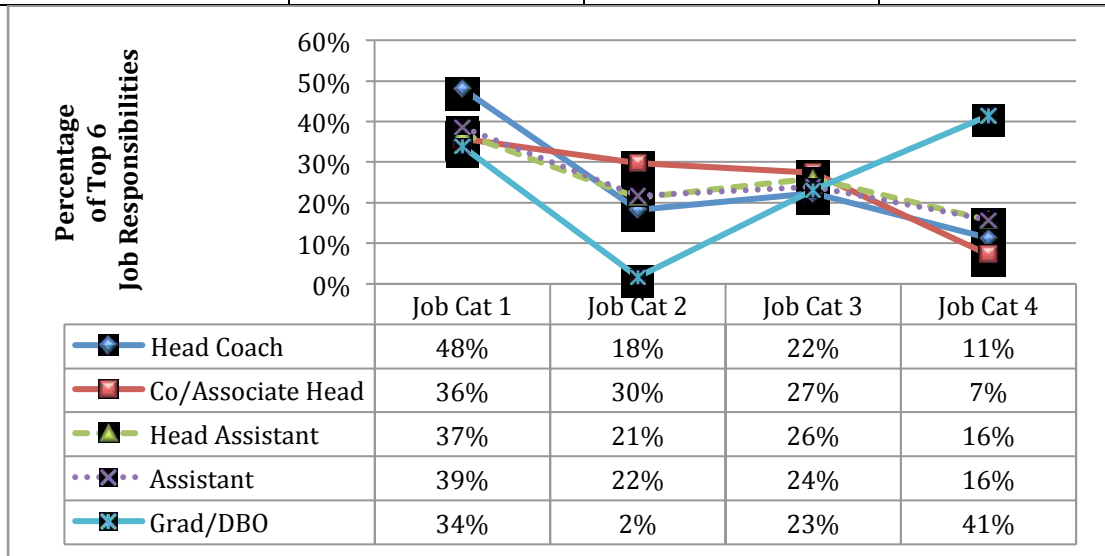
Coaches' Survey

<u>Variable</u>	<u>Type</u>	<u>Description</u>	<u>Calculation</u>
JOBVALUE	Dependent	Coaching Staff Position Value (Based on Title and Rank)	$= [[(STAFFVALU) + (PERCJOB1*4) + (PERCJOB2*3) + (PERCJOB3*2) + (PERCJOB4*1)] / 9] *100$ <p>i.e., Total Points Possible $= [(5 + 1.0*4 + 0*3 + 0*2 + 0*1) / 9] *100 = 100$</p>
STAFFVALU	Factor	Value of Job Title	$= [(6) - STAFFPOS]$ <p>i.e., Head Coach = (6) – (1) = 5.0 Co-Head Coach = (6) - (2) = 4.0 Grad Assistant = (6) - (5) = 1.0</p>
PERCJOB1	Factor	Percentage of Job Duties in Category 1: Program Management	$= (\#Cat1 \text{ Duties}) / (\#Total \text{ Duties})$
PERCJOB2	Factor	Percentage of Job Duties in Category 2: Athlete Development On-Court	$= (\#Cat2 \text{ Duties}) / (\#Total \text{ Duties})$
PERCJOB3	Factor	Percentage of Job Duties in Category 3: Athlete Development Off-Court	$= (\#Cat3 \text{ Duties}) / (\#Total \text{ Duties})$
PERCJOB4	Factor	Percentage of Job Duties in Category 4: Clerical and Other	$= (\#Cat4 \text{ Duties}) / (\#Total \text{ Duties})$

The construction of the JOBVALUE variable uses a weighted factor of the percentage of reported job responsibilities from four categories. The averages of each of the categories were calculated for each rank of staff position, from the highest/ most central (Head Coach) to the lowest/ least central (Graduate Assistant/Director of Basketball Operations). The chose weights applied in the final calculation were based on the category order achieved by the top most position (Head Coaches). That order was as follows:

Job Category 1: Program Management; Job Category 3: Work with Athletes: On-Court; Job Category 2: Work with Athletes: Off-Court; and Job Category 4: Clerical/Administrative/Other.

Job Category 1	Job Category 2	Job Category 3	Job Category 4
<ul style="list-style-type: none"> • Competition Scheduling • Fundraising • Game Day Prep • Recruiting/ Coordinator • CEO/ Team Development • Compliance • Head Coach Consultant • Practice Planning • Scouting 	<ul style="list-style-type: none"> • Post Player Development • Guard Development • Defensive Coordinator • Offensive Coordinator 	<ul style="list-style-type: none"> • Academic Mentoring • Community Service/ Outreach • Conditioning/ Strength Training • Admissions • Mentoring • Player Meetings 	<ul style="list-style-type: none"> • Booster Club/ Alumni • Film Exchange • Travel Arrangements • Budget • Equipment • Camps • Marketing/ Media • Relationship Building • Student Managers/ Practice Players • Travel Meals • Mailings • Miscellaneous/ Clerical



(Head Coaches reported that 48% of their top six responsibilities were in Category 1.)

Student-Athletes' Survey

<u>Variable</u>	<u>Type</u>	<u>Description</u>	<u>Calculation</u>
PERCCLUB	Independent	Percentage of Pre-College Years Playing Country Club Sports	$= (\text{\#Years in CC Sports}) / (\text{Total Years})$
SESSCORE	Independent	SES Score Valuation	$= [(\text{HSSUBURB} + \text{HSPRIVATE} + (\text{ZIPINCOME}/150.17) + (\text{HSINCOME}/125) + \text{TWOPARENT} + (\text{PARENTED}/21) + (\text{PARENTOCC}/5)) / 7] * 100$
ACCESS	Independent	Access Score Valuation	$= [(\text{PERCCLUB} + \text{HSCAMP} + \text{CGCAMP} + \text{PRSNLTRN} + \text{WGTRN} + \text{AAUBCI} + \text{SUMMR} + \text{BSKBYRS} + \text{PATHEDU}) / 9] * 100$
BSKBYRS	Factor		$= ((6) - \text{BSKBAGE}) / 5$ i.e., $\text{PreK} = (6) - (1) / 5 = 5 / 5 = 1.0$
CENTRALGRU	Dependent	Grusky Centrality Valuation	$= [(\text{TASK} + \text{PROXIM}) / 15] * 100$ i.e., Total Points Possible $= [(5 + 10) / 15] * 100 = 100$
TASK	Factor		$= (\text{GUARD} + \text{PRVMVP} + \text{PRVCAP} + \text{ISCAPTAIN} + \text{PRVSTR})$
PROXIM	Factor		$= (\text{sPOSVALU}) * 2$
sPOSVALU	Factor	Centrality of Playing Position	$= (6 - \text{PLAYPOS})$ i.e., Point Guard $= (6) - (1) = 5.0$ Forward/Post $= (6) - (4) = 2.0$

APPENDIX H. Interaction Process Analysis: Playing Positions and Centrality

The following images represent the continuous movements of each playing position during the course of a simple give-and-go offensive play (Hatchell & Thomas, 2006):



Figure H.1 Screenshot of the IPA Mobile Application

APPENDIX I. Supplemental Tables

Table I.1

Correlations between Grusky Position Centrality (CENTALGRU) and Socioeconomic Status (SESSCORE) Items

		CENTRALGRU (sWHITE = 1) (n = 62)	CENTRALGRU (sWHITE = 0) (n = 60)
HSSUBURB	Biserial Correlation	-.173	.038
	Sig. (2-tailed)	.178	.774
HSPRIVATE	Biserial Correlation	-.184	.256*
	Sig. (2-tailed)	.152	.048
HSPUBLIC	Biserial Correlation	.184	-.283*
	Sig. (2-tailed)	.152	.028
ZIPINCOME	Pearson Correlation	-.008	-.021
	Sig. (2-tailed)	.948	.874
HSINCOME	Pearson Correlation	.210	.121
	Sig. (2-tailed)	.101	.357
TWO PARENT	Biserial Correlation	.036	.026
	Sig. (2-tailed)	.779	.847
PARENTEDU	Pearson Correlation	.180	.141
	Sig. (2-tailed)	.160	.282
PARENTOCC	Pearson Correlation	.066	-.027
	Sig. (2-tailed)	.610	.825

Key: ~ p < .10; * p < .05; ** p < .01; *** p < .001

Table I.2

Correlations between Grusky Position Centrality (CENTALGRU) and Access Items

		CENTRALGRU (sWHITE = 1) (n = 48)	CENTRALGRU (sWHITE=0) (n = 64)
PERCCLUB	Pearson Correlation	.016	.037
	Sig. (2-tailed)	.914	.773
HSCAMP	Biserial Correlation	-.042	.113
	Sig. (2-tailed)	.776	.374
CGCAMP	Biserial Correlation	-.073	.201
	Sig. (2-tailed)	.622	.111
PRSNLTRN	Biserial Correlation	-.011	.222~
	Sig. (2-tailed)	.941	.078
WGTTRN	Biserial Correlation	-.171	.161
	Sig. (2-tailed)	.245	.204
AAUBCI	Biserial Correlation	.025	.042
	Sig. (2-tailed)	.864	.743
SUMMER	Biserial Correlation	-.006	.017
	Sig. (2-tailed)	.965	.893
BSKBAGE	Biserial Correlation	-.056	-.238~
	Sig. (2-tailed)	.706	.058
PATHHS	Biserial Correlation	-.042	-.075
	Sig. (2-tailed)	.777	.555
PATHJC	Biserial Correlation	-	-.047
	Sig. (2-tailed)		.710
PATHD2D3	Biserial Correlation	-	.018
	Sig. (2-tailed)		.889
PATHD1X	Biserial Correlation	.042	.135
	Sig. (2-tailed)	.777	.288

Key: ~ p < .10; * p < .05; ** p < .01; *** p < .001

Note. After listwise elimination, there were no White participants who were also transfer students from Junior Colleges (PATHJC) or Division-II/III (PATHD2D3) institutions. Thus, correlations were not estimated for those relationships.

Table I.3

Significant Correlations Between Grusky Position Centrality, SES, and Access Items by Racial/Ethnic Group

CENTRALGRU	SESSCORE	ACCESS	$r(N)$ (sWHITE = 1)	$r(N)$ (sWHITE=0)	z_{obs}
GUARD	PRSNLTRN		.084(71)	.236(94)*	.975
GUARD	BSKBAGE		.241(48)	.248(64)*	.038
PRVSAAC		PATHHS	-.102(70)	-.351(93)**	-1.638
PRVSAAC		PATHD1X	.148(70)	.320(93)**	1.131
CURSAAC		BSKBAGE	-.290(49)*	-.016(67)	1.627
ISCAPTAIN		BSKBAGE	-.097(48)	.254(66)*	1.829
PRVMVP		HSCAMP	-.041(73)	.228(99)*	1.738
PRVMVP	PARENTOC		.032(71)	.216(87)*	1.149

Key: ~ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

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