

Black College Student-Athletes' Discrimination Experiences, Social Support, & Identity Across Institution Types

Morgan E. Moseley

May 2026

Director of Thesis: Dr. E. Whitney G. Moore

Major Department: Kinesiology

Abstract

This study aimed to examine the impact of multiple spheres of social influence relating to Black Division I collegiate student-athletes' identity characteristics and the relationship of these influences on cultivating a more holistic individual. Within this study, holism refers to the presence of multiple identity domains, including athletic, academic, and career-related aspects, rather than a singular emphasis on the athletic role. Identity is heavily influenced and constantly changing based on the individuals' social environment, yet there has been limited research that has quantitatively examined how multiple influences operate across institution types, particularly for Black student-athletes.

Participants included Black Division I student-athletes ($n = 346$) representing historically Black colleges and universities (HBCUs), predominantly White non-Power 4 institutions (PWI non-P4), and Power 4 PWIs (PWI-4). Measures assessed team motivational climate (task- and ego-involving and caring), perceived social support (athletic department staff, faculty, and peers), and experiences of daily discrimination, as well as outcomes of athletic identity, academic identity, and occupational engagement. Correlational analyses and one-way ANOVAs were conducted to examine relationships among variables and differences across institution types.

Results indicated that task-involving climates and perceived support, particularly from faculty and athletics staff, were positively associated with academic identity and occupational engagement, whereas ego-involving climates and experiences of discrimination were negatively associated with supportive environments and identity outcomes. Additionally, meaningful differences emerged across institution types. Student-athletes at HBCUs generally reported more

supportive social environments and greater engagement in non-athletic identity domains, while those at PWI institutions reported comparatively lower sources of perceived support and higher experiences of discrimination.

These findings emphasize the importance of considering both athletic and non-athletic environments in understanding Black student-athletes' development. Institutional context appears to play a critical role in shaping access to support and opportunities for identity exploration. Implications suggest fostering task-involving climates, strengthening faculty and athletics department support, and addressing broader campus climate factors may enhance holistic identity development and support career exploration beyond sport.

Keywords: Black student-athletes, Identity exploration, Social support, Discrimination experiences, Motivational climate, Institutional contexts, Career/occupational engagement

Black College Student-Athletes' Discrimination Experiences, Social Support, & Identity Across
Institution Types

A Thesis Presented to the Faculty of the Department of Kinesiology

East Carolina University

In Partial Fulfillment of the Requirements for the Degree

Kinesiology, M.S.

Concentration: Sport and Exercise Psychology

By

Morgan Moseley

May 2026

Director of Thesis: Dr. E. Whitney G. Moore, PhD

Thesis Committee Members:

Dr. Tom Raedeke, PhD

Dr. Christine Habeeb, PhD

Dr. Amber McEachern, PhD

© Morgan E. Moseley, 2026

Table of Contents

Introduction.....	1
Institutional Types	4
Predominantly White Institutions (PWIs)	4
Name, Image, and Likeness (NIL)	7
Literature Review.....	10
Identity	11
Athletic Identity.....	13
Identity & Social Support.....	14
Proximal Influencers	15
Coaches and Teammates.....	15
Intermediate Influencers.....	18
Athletic Department Personnel	18
Faculty & Non-Athlete Peers	19
Distal Influencers	19
Campus Experience	19
Historically Black Colleges and Universities (HBCUs).....	20
Black Women Student-Athletes.....	21
Research Design & Methods	25
Participants	25
Table 1: Study Demographics.....	26
Procedures	28
Data Collection and Recruitment	28
Figure 1: Recruitment Flow Chart	30
Survey Measures.....	31
Athletic & Academic Identity.....	31
Occupational Engagement.....	31
Motivational Climate.....	32
Caring Climate.....	32
Social Influence.....	32

Daily Discrimination	33
Data Screening and Preparation	34
Data Analysis.....	35
Power Analysis for Sample Size	35
Results.....	37
Reliability	37
Table 2: Cronbach’s Alpha and Confidence Intervals	37
Descriptive Statistics	37
Table 3: Means, SD, Observed Ranges, ANOVAs	39
Aim #1: Relationships Among Social Influences, Identity, and Career Exploration.....	40
Hypothesis 1a	40
Hypothesis 1b	41
Additional Notable Findings	41
Table 4: Correlation Tables	42
Aim #2: Differences in Correlation Strength Across Institution Types	43
Aim #3: Mean Differences by Institution Type.....	44
Discussion	46
Implication	53
Limitations and Future Direction	56
Conclusion.....	58
References.....	60
Appendices.....	70
Appendix A: IRB Documentation	71
Appendix B: Inclusion Demographics	71
Appendix C: People in my Life (PIML) Scale adapted for context.....	76
Appendix D: Daily Discrimination Scale.....	80
Appendix E: Academic & Athletic Identity Scale.....	82
Appendix F: Student Occupational Engagement Scale (OES)	83
Appendix G: Caring Climate Scale.....	84
Appendix H: Perceived Motivational Climate in Sport Questionnaire (PMCSQ)	85

Introduction

Emerging research suggests that many educational, athletic, and social systems may inadequately support the holistic personal and cognitive development of Black youth during the transition from adolescence to young adulthood. From an early age, many Black youths report a strong identification with the athlete role, an identity that may extend into collegiate Division I participation (Bell and Beamon, 2006). This early identification does not occur in isolation but is shaped by broader structural inequalities within educational systems. Black youth often experience unequal access to academic resources, underfunded schools, and fewer highly qualified instructors compared to students in more affluent and predominantly White districts (Simiyu, 2012). These disparities, which disproportionately affect Black boys, may narrow perceived pathways to upward mobility.

Within this context, the athletic and entertainment industries are frequently used as viable routes to high socioeconomic status, particularly given the limited representation of Black individuals in traditionally high-prestige professions such as medicine, law, and engineering (Edwards, 2000). Harrison (2000) argued that this dynamic reinforces a set of socially constructed pathways for Black youth, including an athlete, an entertainer, or a criminal.

At the collegiate level, these narratives intersect with the structures of institutions that may prioritize athletic performance over holistic development. Research on college athletics suggests that Black student-athletes' educational and developmental experiences are often based upon campus climate and broader systemic factors within the institutions (Comeaux and Grummert, 2020). While much of this research has focused on Black men, it is critical to examine whether similar dynamics shape the experiences of Black women student-athletes.

Additional research including Black women is necessary to more fully understand how race, gender, and institutional contexts interact to influence identity exploration and opportunities.

In the Black community, athletics is seen as a mobility vehicle for Black youth to reach success in their professional careers (Edwards, 1988). Black parents encourage their children to participate in sports more than their White counterparts (Edwards, 2000). But it is not only parents who push their children to pursue careers in sport, as peers, teachers, and coaches do as well (Edwards, 2000). The media contributes to this push toward athletic and entertainment industries with the display of Black success being around athletics and music (Edwards, 2000; Simiyu, 2012). There is more of a display of professional Black athletes than high prestige Black role models, such as Black doctors, politicians, and lawyers (Simiyu, 2012). Being an athlete is promoted as easily accessible and as the “promise land” for Black youth (Harrison, 2000). Research has suggested that athleticism is often socially constructed as a prominent dimension of Black masculinity, which may contribute to increased encouragement of Black men toward sport participation (Harrison, 2000).

In some communities, athletic achievement may receive greater social reinforcement than academic or extracurricular exploration, potentially limiting opportunities for the development of diverse identities beyond sport (Beamon, 2008). Many Black youths just get by in their education by meeting minimum GPA requirements as well as all requirements to being admitted into colleges and universities. These youth do whatever needs to be done to pass a class rather than fully immersing themselves in their academics (Beamon and Bell, 2006). This underdevelopment is reinforced at Division I level institutions with coaches and admissions having a lack of focus on academics even during the recruiting process (Adams et al., 2006; Edwards, 1988). The

neglect and lack of focus on academic success sets Black collegiate athletes up for failure due to their under-preparation prior to college.

The concept of the “triple tragedy”, introduced by Dr. Harry Edwards, describes a sociocultural cycle in which many Black youths are encouraged to pursue sports as a primary path for social mobility, often at the expense of other developmental exploration. Edwards (1988) argued that this process of triple tragedy involves three challenges: the overestimation of athletic professional opportunity, the underdevelopment of academic and vocational identities, and increased vulnerability at the termination of athletic careers, which leave individuals with limited preparation for other pathways and careers. Even with Black families being more inclined to push their children towards a professional career in athletics, the reality is that less than two percent of collegiate athletes make it to the professional level of athletics for any duration (Edwards, 2000). From the high school level, about 7% of men’s athletics proceeds to the collegiate level overall and about 9% of women’s athletics (NCAA, 2024). From the collegiate level, the NCAA reports that about 3% of collegiate athletes go on to the professional levels overall (NCAA, 2024). To break that down even further, about 1.1% of men’s basketball, 0.9% of women’s basketball, and about 1.5% of football make it to the major pro leagues from college (NCAA, 2024). This obsessive pursuit of sport puts Black individuals at a disadvantage in their development academically, socially, economically, and in their identity development. This disadvantage not only affects them throughout their collegiate careers but also post career termination when athletics are no longer a viable option for these individuals.

Institutional Types

Predominantly White Institutions (PWIs)

There is a stereotypical image of Black individuals of intellectual inferiority and athletic superiority (Anthony and Swank, 2018). This stereotype has stood true for over a century, and Black individuals are treated according to this label throughout their lives, particularly Black males. Historically, Black students at Predominantly White Institutions (PWIs) have reported experiences of cultural marginalization, racial exclusion, and institutional climates that often overlook or misunderstand their lived experiences. Black students are in the minority on PWI campuses; typically, comprising less than 10% of the overall student body, but over 50% of the athletes (Anthony and Swank, 2018). There is much inequity on campuses of higher education today for this specific population with institutional racism alarmingly still present (Simiyu, 2012). Institutional racism is on display through the stereotypes and assumptions of low intellect from peers and professors along with policies created by the institutions that are disadvantageous for the Black students (Simiyu, 2012). For example, some students may be guided away from more challenging academic tracks due to bias, experience subtle racial comments in the classroom, or have less access to support resources. Black students face discrimination daily through those policies, stereotypes, and occasional open acts of racism.

For most Black students, attendance at a PWI is a culture shock that in turn causes feelings of isolation, detachment, and stress (Rodgers, 2024). In the United States, while no longer segregated by law, communities have developed with division along cultural and socioeconomic lines (e.g., “China Town”, “Little Italy”) resulting in many Black students attending primary and secondary schools where they are in the majority before attending PWI post-secondary institutions. The predominance of White cultural norms at PWIs can create environments that feel unwelcoming for Black students, contributing to greater feelings of

isolation. Many Black students are faced with the dilemma of adapting to the dominant culture, which can be seen as letting the Black culture down, or rejecting the dominant culture and excluding themselves from the college experience.

For Black athletes, they experience an even tougher time than their non-athlete Black students on PWI campuses. They not only face daily discrimination and institutional racism, but they also face stereotypes from being an athlete as well. Many studies have shown that athletes felt as though they were treated differently by faculty because of their race as well as athletic status (Beamon, 2014; Comeaux, 2010; Comeaux and Harrison, 2007; Higginbotham et al., 2021; Simiyu, 2012). They have also reported that they received lower grades and were accused of cheating more than any other population (Simiyu, 2012). It is not normal for Black athletes to achieve in the classroom without suspicion of cheating. It has been found that Black athletes are on probation, suspension, and ineligible more than their white counterparts (Beamon and Bell, 2006). This causes decreased participation in the classroom setting and decreased motivation toward the student part of being a student-athlete. In 1984, Edwards used the term “Dumb Jock” as a summary description of how athletes are viewed on college campuses.

Black athletes also receive backlash from their Black counterparts that further reinforce their disparities in the classroom. It has become “cool to fail” among Black athletes (Fordham, 1985). There is a negative connotation for a Black athlete to embrace their academic endeavors, resulting in them being called a “nerd” (Simiyu, 2012). Most of this population have a single-minded pursuit of excellence in athletics that it is normal to just get by in their educational obligation to maintain their eligibility (Edwards, 2000; Simiyu, 2012). It is accepted that athletics comes first, and academics comes second (Beamon, 2008).

For sports including basketball and football, athletes are not required to graduate in their pursuit of professional athletics. For college football, an athlete only needs three years removed from high school to become eligible for the National Football League (NFL) draft (*The Rules of the NFL Draft* | *NFL Football Operations*, n.d.). For men's college basketball, there is a "one and done" rule which requires athletes to complete only one year of college before becoming eligible to enter their name into the National Basketball Association (NBA) draft (Sykes, 2025). With these rules, it is not the focus of many high-powered universities to push their athletes toward academic excellence or graduation when there are career aspirations for professional sports. For women, there is more of an emphasis on academics given the lack of professional opportunities as well as the rules for the Women's National Basketball Association (WNBA) of the player being at least a graduating-senior or twenty-two years of age. A major gap in the literature is the lack of research on Black women athletes, and this is in part due to the more limited professional athletic opportunities (Anthony and Swank, 2018).

Outside of winning, schools recruit the best athletes to generate revenue and increase the visibility of the university (Beamon, 2008). Many former Black collegiate athletes reported the benefits of their full scholarship does not compare to the revenue that is brought to the school through athletics (Beamon, 2008). Although similar concerns have been raised by all athletes across revenue sports, some scholars suggest that these dynamics may have different implications for Black athletes, given their overrepresented in these sports. Athletics is used to increase the recruitment of students to universities as well as the money from alumni. Beamon put it best that "Black athletes are profitable but do not profit off their own talents" (2008, p.384). However, most of this research was done before the recent creation of profitability for collegiate athletes' name, image, and likeness (NIL), which allows athletes to gain personal

profit from their achievements and status as an athlete (Staff, 2022). This is a new approach implemented in summer 2021 that has not reached all athletes of the NCAA. Sanders (2024) has found that the percentage of football athletes receiving deals was 37.2%, men's basketball at 15.4%, and finally women's basketball at 7.7%. These deals not only contain monetary value but also valuable accommodations (i.e., leased vehicles, apparels, and discounted pricing). It is not yet known how the potential for collegiate athletes to profit off their NIL may change the already existing pressures on Black youth to become collegiate athletes.

Name, Image, and Likeness (NIL)

The NIL policies went into effect in June of 2021 for all student-athletes in the NCAA and this policy allows student-athletes to receive compensation off their personal brands which include social media endorsements, sponsorships, appearances, and merchandise sales (Kunkel et al., 2021). Although this legislation allows athletes to be compensated for their time and dedication to their sports and institutions, the access to NIL opportunities is still far from equal (Gonzalez, 2025). Athletes who participate in high-profile sports, attend Power-4 institutions, and have larger social media following typically receive larger deals and opportunities (Young, 2025). These athletes include a large majority of Black male athletes in football and basketball (Young, 2025). Black female athletes still face many disparities in equal access to NIL opportunities (Gonzalez, 2025). With greater NIL engagement, there become greater time allocation toward one's sporting endeavors and visibility to the public (Taylor, 2018). On top of the time and dedication that collegiate athletes were putting into their respective sports, they also must manage their personal brand and academics. With the newness of these policies, there is little research that exist on the effect of NIL on Black student-athletes' psychosocial development, academic engagement, or career planning (Young, 2025). There is even less about

how the institutional type (HBCU, PWI, PWI-4) would influence the effects on Black student-athletes' holistic development. Although not the focus of the current research study, NIL is an area that should be further explored to enhance the collegiate experience of Black student-athletes.

Existing research provides important but incomplete insight into the experiences of college student-athletes, particularly regarding motivational climates, identity exploration, and discrimination. Poux and Fry's work on motivational climates offers a foundation for understanding how task- and ego-involving environments relate to psychosocial outcomes, yet these findings have not been examined within the context of Black Division I student-athletes (2015). Similarly, Hinderlie and Kenny's research on belonging and adjustment among college students highlights the importance of supportive environments, but their work does not address the unique racialized and athletic experiences of Black student-athletes (2002). Additionally, although discrimination has been widely documented as a key factor shaping the experiences of Black individuals in higher education, quantitative research has not explored how these dynamics may differ across institution types. To date, no studies have systematically compared Black student-athletes at HBCUs, PWI Power-4 institutions, and PWI Non-Power-4 institutions, leaving questions about whether institutional context meaningfully shapes climate, support, identity, or discrimination experiences. Further, much of the existing literature has disproportionately focused on male athletes, in part due to the concentration of revenue-generating and professional sport opportunities among men. With the recent expansion of professional pathways for women, there is a growing need to address this gender imbalance in quantitative sport-psychology research. The present study responds to these gaps by examining these constructs across institution types and by including both male and female Black Division I

student-athletes. To build a foundation for these gaps, the subsequent literature review provides a detailed examination of prior work on motivational climates, belonging, discrimination, and the influence of institutional type.

Literature Review

In many Black communities, athletics is often viewed as a primary pathway for social mobility and long-term success among Black youth (Edwards, 1988). However, Division I student-athletes typically devote 30–40 hours per week to sport-related activities while also maintaining full-time academic status. These extensive demands leave limited time and opportunity for identity exploration outside of the athletic role (Beamon, 2011; Bimper and Harrison, 2011; Meggyesy, 2000; Melendez, 2008). This pattern reflects what Edwards (1988) termed the “triple tragedy,” in which the singular pursuit of athletic success can hinder the development of academic, social, and economic competencies, as well as broader identity formation.

Institutional context further shapes the experiences of Black student-athletes. Qualitative research has demonstrated meaningful differences in Black students’ experiences based on institutional type (Cooper, 2014). Historically Black Colleges and Universities (HBCUs) are mission-driven to cultivate students’ diverse experiences, social networks, and career exploration opportunities (Cooper, 2014; Rogers, 2024). In contrast, at many Primarily White Institutions (PWIs), athletic schedules are intentionally structured to maintain athletes’ focus on sport participation (Beamon, 2008). Compounding this structural dynamic, Black men and women student-athletes represent approximately 6.5% of the overall student population (Anthony and Swank, 2018) while comprising a substantial proportion of revenue-sport participants (Simiyu, 2012). This underrepresentation may further shape their developmental experiences within these institutional contexts.

From a social-ecological perspective, individual development is influenced by personal characteristics as well as interactions across multiple environmental systems (Stokols, 1996). For

Black student-athletes, these systems include proximal influences (e.g., teammates, coaches), intermediate influences (e.g., athletic department support staff, instructors, non-athlete peers), and distal influences (e.g., campus climate and institutional type). Experiences may differ across these contexts; for example, Black student-athletes may encounter discrimination in academic settings while receiving strong support within athletic spaces, or vice versa (Beamon, 2014). Despite these layered influences, limited research has examined women athletes, compared institution types (PWI Power-4, PWI non-Power-4, HBCU), or utilized sufficiently large samples to allow for quantitative analyses and generalizable conclusions.

Thus, the present study seeks to investigate how these multilevel environmental influences support or constrain Black student-athletes' identity exploration, as reflected in their academic identity, athletic identity, and career exploration.

Identity

Identity is an evolving and dynamic understanding of who one is, both individually and as a member of social groups (Edison et al., 2021). This process is grounded in Erikson's theory of psychosocial development, which positions identity formation as a central task of adolescence and emerging adulthood (Syed and McLean, 2017). According to Erikson (1968), individuals progress through eight psychosocial stages, with the stage of *identity versus role confusion*, typically occurring between ages 18 and 24, requiring exploration of values, beliefs, career aspirations, and social roles to establish a coherent sense of self. Successful navigation of this stage leads to identity achievement, characterized by intentional and stable commitments, whereas limited exploration may result in confusion or instability. The social environment plays a significant role in shaping this process (Edison et al., 2021), making Erikson's framework especially relevant for Black collegiate student-athletes whose development is influenced by

competing expectations from academic institutions, athletic culture, and racialized stereotypes (Beamon, 2014; Beamon and Bell, 2006). For many Black athletes, particularly those in revenue-generating sports, the intense emphasis on athletic performance can restrict opportunities to explore alternative roles, increasing the likelihood of identity foreclosure, or premature commitment to the athlete role without adequate exploration of academic, career, or social identities (Marcia, 1966; Murphy et al., 1996).

Building on Erikson's model, James Marcia (1966) outlined four identity statuses in the identity status theory based on exploration and commitment: diffusion, foreclosure, moratorium, and identity achievement. Identity diffusion is when "an individual possesses a lack of commitment to one identity and is satisfied with floating between others" (Marcia, 1966, p. 552). Identity foreclosure is when "an individual commits to an identity without proper exploration of other identities" (Marcia, 1966, p. 552). An individual with the moratorium identity status is "actively dealing with a crisis and attempting to commit to one singular identity" (Marcia, 1966, p. 552). Finally, identity achievement is when "an individual has gone through some type of crisis and has done the proper exploration of other identities before committing to one" (Marcia, 1966, p. 551). In this phase, the social environment as well as the demands of their environment play a large role in the pre-mature commitment to one identity (Marcia, 1966). This study seeks to explore the social influences from the athletic and broader university domains on the identity of Black student-athletes.

When applied to this study, identity theory helps frame how athletes' interactions with coaches, teammates, academic mentors, and campus environments contribute to or hinder the development of a multidimensional identity. At institutions where the athletic role is prioritized over holistic development, particularly at Power-4 PWIs, student-athletes may struggle to

achieve an academic or career identity. In contrast, settings like HBCUs, which often emphasize cultural uplift and community belonging, may create more supportive environments for identity achievement. This study draws from Erikson's framework to investigate how different institutional and social influences support or inhibit identity exploration among Black student-athletes, with particular attention to differences by institution type.

Athletic Identity

A large part of most individual's identity development occurs when they are in college around the ages of 18 to 22 (Houle et al., 2010). College is a time for exploration and questioning of one's beliefs and values. The core mission of the National Collegiate Athletic Association is to develop individuals as both students and athletes in preparation for life after their collegiate endeavors (*Mission and Priorities*, 2021). For athletes, exploration can be difficult due to the demanding schedules and time commitments they must have to their sport at the Division I level (Poux and Fry, 2015). Due to the lack of exploration from athletes, they begin to foreclose on their athletic identity, while other identities become underdeveloped (Poux and Fry, 2015; Murphy et al., 1996). According to Brewer et al (1993), athletic identity is the degree to which one identifies with their athletic role. When individuals identify strongly with their athletic role, they devote special attention to their respective sports compared to their other engagements including their academic commitment (Edison et al., 2021). The sports culture promotes the foreclosure around athletics which is reinforced through the constant exposure to teammates and coaches through practices, strength and conditioning sessions, and team events daily (Poux and Fry, 2015). Houle et al. (2010) also found the social environment of college sports plays a large role in the athletic identity reinforcement with high social status through their

athletic image. Strong athletic identities have been found to be inversely related to post-sport career planning and maturity before retirement (Murphy et al., 1996).

The lack of exploration causes the athletes to lag in career development and plans in relation to their non-athlete counterparts. The time demands and commitments inhibit athletes from really exploring who they want to be which can also account for the lag in their exploratory behavior (Murphy et al., 1996). Due to strong athletic identities as well, student-athletes may inhibit themselves from exploring because they may see it as a threat to their sense of self and who they are (Murphy et al., 1996). It has been found in several studies that student-athletes are isolated from the mainstream college activities which further promote their identity foreclosure and their opportunities to explore (Beamon, 2012; Murphy et al., 1996). Collectively, these findings suggest that the social and structural realities of collegiate sports can shape identity exploration in ways that prioritize athletic roles while constraining exploration of alternative personal and career pathways.

Identity & Social Support

Social support has been found to play a large role in the achievements of collegiate student-athletes both on and off the sporting fields (Beamon and Bell, 2006; Poux and Fry, 2015). Social support also plays a large role in identity formation by expectations, providing feedback, and opportunities that influence how student-athletes understand themselves (Kroger, 2017). It is important to examine the social influences and support for these student-athletes to understand how they identify and adapt to their environment. Studies have either examined the influences on student-athletes as a whole or with specific populations, which include Black men (Beamon, 2012). Social influences, including peers, coaches, family, and mentors, are particularly important in shaping identity development for student-athletes (Brewer et al., 1993),

and Black athletes often navigate these relationships within the additional context of racial stereotypes and cultural expectations, which can uniquely impact their personal, academic, and athletic growth (Beamon, 2008; Comeaux, 2010). Black women have not been heavily researched in this specific aspect of social support; in this current study, there will be a focus on equally recruiting both men and women Black student-athletes.

Proximal Influencers

Coaches and Teammates

Athletes at the collegiate level spend a vast majority of their time with their teammates and coaches in practices, weight-lifting sessions, travel, and other various team activities. With so much of their time spent with this group, they hold a great influence on the experience and development of everyone. In research done by Poux and Fry (2015), it has been found that creating a positive and supportive environment fosters the holistic development of student-athletes. The motivational climate can be particularly important and effective in motivational responses of athletes (Poux and Fry, 2015). Thus, we seek to examine in this study the task-involving, ego-involving, and caring climates.

The Achievement Goal Theory (AGT), originally developed by Nicholls et al.(1989) and Ames (1992), provides a framework in understanding how the motivational climate in an environment can influence an individual's intrinsic motivation. Motivational climates can affect an individual's behavior, engagement, and identity development both within and outside the sports setting (Ames, 1992; Newton et al., 2000). The two AGT climates are task-involving and ego-involving. A task-involving climate is an environment where personal effort, improvement, and mastery are emphasized (Poux and Fry, 2015). In this setting it is encouraged to learn from mistakes, and the focus is personal improvement. Individuals in a task-involving climate give

more effort, take on new challenges, have higher self-esteem, and more self-confidence (Fontana et al., 2017). In an ego-involving climate, the focus is winning by any means. This means that the environment is more outcome-oriented and mistakes are considered punishment, not a learning experience (Poux and Fry, 2015). Individuals in this environment are more likely to put in less effort and energy, they also are more likely to shy away from challenges and participate in cheating (Fontana et al., 2017). Within collegiate athletics, motivational climate is not simply about performance; it shapes how student-athletes come to understand who they are. From a social-ecological perspective, identity develops through ongoing interaction with one's environment (Stokols, 1996). For Division I student-athletes, that environment is largely structured by coaches and teammates, who establish the norms, expectations, and values that shape daily experiences. Over time, these environments can influence which aspects of identity are reinforced and which are minimized.

Research supports this connection between climate and identity-related outcomes. Poux and Fry (2015) found that athletes who perceived a task-involving climate reported higher intrinsic motivation, greater persistence, stronger academic engagement, and more balanced identity development. Conversely, perceptions of an ego-involving climate were associated with lower academic motivation and higher levels of athletic identity foreclosure (Poux and Fry, 2015). Because individuals interpret and respond to their environments based on this perceived motivation, climate becomes a meaningful determinant of their overall experience and identity formation (Fontana et al., 2017).

For Black student-athletes, the motivational climate of their environment may be more important for having a positive influence on both their performance and holistic development. Because many environments perpetuate the stereotype that Black athletes are athletically

superior but intellectually inferior, these athletes may come to view their self-worth primarily through an athletic lens, restricting their development outside of sport (Sailes, 1993). This is where identity foreclosure is most prevalent among these demographics, as the lack of support in exploring career and academic opportunities restricts development beyond athletics (Murphy et al., 1996; Beamon, 2012). Given Poux and Fry's (2015) findings, a task-involving sport climate may help counter or buffer negative stereotype messaging Black student-athletes may receive outside of sport. This study will explore how the task- and ego-involving climates may differ in magnitude and relationship with academic identity and career exploration across institutional types for Black student-athletes.

Another aspect of the environment is the caring climate, which has been defined as "an environment in which all members are treated with mutual respect and kindness and there is a sense of comfort and value" (Newton et al., 2007). Fry et al. (2012) found the greater youth athletes' perceptions of a caring climate, more comfortable they felt in being themselves and expressing their feelings and emotions. Furthermore, Newton et al. (2007) stated that learning in a caring environment provides security and safety to fully develop an individual's unique capabilities and strengths. According to Noddings (2005), a caring environment is essential for achievements and life experiences. Researchers have supported that creating a caring and task-involving environment is ideal and supportive for student-athletes (Poux and Fry, 2015). Specifically, Poux and Fry (2015) found positive correlations between athletic identity, career decision self-efficacy, plus occupational engagement and exploration with both task-involving and caring climates. In that same study there were negative correlations between perceptions of an ego-involving climate and career self-efficacy, occupational engagement and exploration, task-involving climates, and caring climates (Poux and Fry, 2015). There was a positive but non-

significant correlation between athletic identity and an ego-involving climate (Poux and Fry, 2015). We seek to examine similar relationships among the variables used by Poux and Fry (2015), but we also look to explore how the results differ among the Black student-athletes at differing institution types.

Intermediate Influencers

The People In My Life scale was created by Harter (1983) to explore how individuals perceive their support and how significant others attribute to their sense of self. The original construction of this scale was devised to explore the influence of parents, teachers, classmates, and close friends on adolescents (Harter, 1983). Hinderlie and Kenny (2002) used this scale for Black students on PWI campuses. However, this scale has not been used specifically with the student-athlete population. For this specific population of Black student-athletes, this research will explore the influence from both athletic influences and non-athletic influences. These influences can be seen in layers with the intermediate athletic sources of influence from the support staff of the Athletics Department support as well as from the non-athletic sources of influence of non-athlete peers, student organizations, and instructors.

Athletic Department Personnel

Brewer et al. (2010) has found that any endeavor that conflicts or is perceived as a threat to the pursuit of athletics can be highly unsupported by the athlete and even further perhaps the athletic department. The athletic campus includes coaches, academic support staff, administrators, and athletic directors. Individuals in those positions are willing to sacrifice the focus on academics for athletics (Beamon, 2008). For example, athletes have reported in a qualitative study by Beamon (2008) that they were limited in their choices for academic majors. They were pointed toward “athlete-friendly” and “easy to pass” concentrations to keep them

eligible and ensure their academics did not conflict with their athletic obligations (Beamon, 2008). It has also been reported that athletic departments and coaches intentionally set out schedules for athletes that leave little time for anything else both personally and athletically (Beamon, 2008). With so much focus on athletics, it becomes difficult to create an identity other than being an athlete; thus, neglecting the full college experience. There is little known through research about how these ideals around student-athletes differ at the Power 4 levels versus the mid-major levels for PWIs as well as HBCUs.

Faculty & Non-Athlete Peers

When examining Black students' (n = 186) adaptation to college life at PWIs, Hinderlie and Kenny (2002) found that academic, social, and personal-emotional adjustment was significantly and positively associated with support from peers, student organizations, and instructors.

Specifically, students who reported stronger connections with peers and faculty experienced higher levels of academic engagement, greater confidence in their ability to navigate college demands, and improved psychological well-being. Support from student organizations, such as cultural or social groups, provided additional resources for coping with the challenges of a predominantly White campus environment, including feelings of isolation or marginalization. However, Hinderlie and Kenny's study focused broadly on Black students and did not examine student-athletes as a distinct population, whose schedules, athletic commitments, and exposure to stereotype-driven expectations may shape these relationships differently.

Distal Influencers

Campus Experience

The diversity of a college campus has a major impact on the success and experience for Black students (Rodgers, 2024). It has been reported that Black athletes on the campuses of PWIs experience an unwelcoming environment, facing discrimination and oppression daily

(Clopton, 2011). A campus climate encompasses the beliefs, attitudes, and behaviors of faculty, administrators, staff, and students on campus (Rodgers, 2024). To capture this distal sphere of influence I will measure Black student-athletes experiences of discrimination on campus.

Historically Black Colleges and Universities (HBCUs)

The establishment of HBCUs was based on providing Black Americans with educational opportunities as well as skills for survival that were being neglected due to segregation (Cooper et al., 2014). The first HBCU was Cheyney University of Pennsylvania, which was founded in the pre-Civil War and Emancipation era in 1837. Not only were Black Americans excluded from educational opportunities in higher education but also from athletic participation. HBCUs established their own respective conferences for the opportunity to compete given the exclusion from the National Collegiate Athletic Association when it was established in 1906 (Cooper et al., 2014). The NCAA members were exclusively PWIs. The goal in the creation of sports at HBCUs was to foster an environment for holistic development of their athletes as well as the students by creating an uplifting culture for their school communities (Cooper et al., 2014). HBCUs were dominant in the sporting realm for many years with all the top Black athletes attending these types of institutions and not PWIs. The dominance of Black athletes at HBCUs changed with the ruling of Brown v. Board of Education in 1954 which then gave the Black American population access to higher education at PWIs (Cheeks and Carter-Francique, 2015). Many elite Black athletes began attending PWIs not necessarily for better cultural or educational opportunities, but due to the lack of financial resources that began to plague HBCUs (Cheeks and

Carter-Francique, 2015). These institutions began facing significant challenges as state and federal funding declined, limiting the financial resources available to support their operations (Cooper et al., 2014). PWIs began to take the talents of Black athletes out of HBCUs

with better facilities, scholarship money, exposure, and overall budgets (Cooper et al., 2014). HBCUs were just unable to compete financially with PWIs to keep the Black athletes at their institutions. What hurts them even more is much of their revenue toward the school came from success in athletics. Despite the lack of athletic dominance, HBCUs are still centered around creating a cultural uplifting environment for their students (Cheeks and Carter-Francique, 2015).

In addition to HBCUs being attended by the minority population, they are also led by Black leaders from administrators to education to athletics (Cooper et al., 2014). At PWIs, students of color are more likely to encounter Black Americans working as service workers than as a leader in the school community or in high profile positions (Rodgers, 2024). College students need to feel a sense of belonging to cultivate success in their environment (Rodgers, 2024). Black students lose that sense of belonging at PWIs by being isolated due to racial discrimination on their respective campuses. Rodgers (2024) also reported that students who experience discrimination lose their confidence, and this results in depressive symptoms and low performance in the classroom. Furthermore, students reported to have an overall better experience than those who attended PWIs (Cheeks and Carter-Francique, 2015). Thus, there can be both implicit and overt messaging to Black students at HBCUs which is positive and supports their academic identity and career exploration.

Black Women Student-Athletes

In literature surrounding Black collegiate student-athletes, the majority focuses on Black men and little focuses specifically on Black women (Bernhard, 2014). This demographic is typically researched under the category of Black student-athlete or women athletes overall (Bernhard, 2014). This literature gap is also due to the category being omitted completely due to small sample sizes (Anthony and Swank, 2018). In the literature, there is a one-size-fits-all

narrative which gives little representation to Black women student-athletes. The Black women student-athletes experience has been coined “double jeopardy” which refer to the two oppressed identities of being both Black and a woman (Anthony and Swank, 2018). Black women athletes face a unique type of discrimination due to these two identities. These athletes are not only exposed to the discrimination by race and gender on the campuses of PWIs, but also in the White and male-dominated sport culture (Bernhard, 2014; Bruening et al., 2005). The intersection of their racial and gender identities contributes to Black women’s student-athlete experience (Bruening et al., 2005). The current literature has tended to not specify the competitive level of PWIs (i.e., PWI Power-4 vs PWI non-Power 4 PWIs), which may influence how the institution type and campus experience differ for Black student-athletes at PWIs in comparison to HBCUs. Therefore, my study aims to target recruitment of participants by gender identity and define institution type by PWI-4, PWI non-Power 4, and HBCUs to better distinguish campus experiences of Black student-athletes.

It is known that women student-athletes have fewer professional athlete opportunities than men (Anthony and Swank, 2018), which may also contribute to the significant literature gap. With the lack of opportunities in professional sports, it may be assumed that women would not identify heavily with their athletic roles, but Anthony and Swank (2018) found that Black women identified with their athletic role as much as their men counterparts. This shows Black women athletes need to be included in the literature as much as men. There is currently a lack of literature examining how the climates of differing institutional types either support or fail to support the endeavors of their Black women athletes. This study seeks to address this significant representation gap of Black women student-athletes in the literature by incorporating a large, diverse sample of Black student-athletes across multiple institutional types. Through this

approach, we aim to better understand the development of Black women student-athletes' athletic and academic identities, as well as their career exploration.

Thus, the purpose of this study was to investigate the relationships between social environmental factors (perceived support, motivational climate, and discrimination) and student-athletes' identity (academic and athletic) and career exploration, as well as to examine differences in these variables across institution types (Power 4 PWIs, non-Power 4 PWIs, and HBCUs).

Specific Aims

In one study of Black college students at PWIs, Hinderlie and Kenny (2002) found receiving positive social support from peers, student organizations, and instructors was positively associated with adjustments to college academically, socially, and emotionally. Further, Poux and Fry (2015) found college student-athletes' career engagement and athletic identity were positively associated with experiencing a caring, task-involving climate on their team. Thus, the purpose of this study is to examine how the different spheres of social influence around Black athletes – coaches and teammates; Athletic Department (AD) personnel (e.g., strength and conditioning coaches; academic advisors); faculty and non-athlete peers; and broader campus – relate to their identity exploration (i.e., athletic and academic) and career exploration.

Aim #1 (Influence Correlations): Assess the significance and strength of the correlations between the different sources of social influence on athletes' identity experience and career exploration within institution (PWI Power-4, PWI non-Power-4, HBCU) groups.

Hypothesis 1a: Academic identity experience and career exploration will be positively associated with caring, task-involving team climates, support from AD personnel, non-athlete peers, student organizations, and instructors.

Hypothesis 1b: Academic identity experience and career exploration will be negatively associated with ego-involving team climate and everyday discrimination experiences on campus; athletic identity development will be positively associated with ego-involving climate.

Aim #2 (Explore Moderation by Institution): Examine how institution type (HBCU vs PWI non-Power-4 vs PWI Power-4) moderate correlations.

Aim #3 (Explore Mean Differences by Institution): Explore how athletes' mean levels differ by institution type (HBCU vs non-Power-4 vs PWI Power-4).

Hypotheses were only proposed for Aim 1 because prior research has already established consistent relationships among the key variables examined. These correlations have been documented across multiple studies, providing a strong enough empirical foundation to justify directional predictions. In contrast, Aims 2 and 3 focus on institution type as a potential moderator of relationships and mean differences across institution types, which are areas where the existing literature is extremely limited. Previous studies have predominantly been qualitative or quantitative with predominantly White participants; thus, this study will be the first to explore whether the strength of these relationships differs between HBCUs, PWI Power-4s, and PWI Non-Power-4s, as well as if there are mean level differences of these constructs across institution types.

Research Design & Methods

Participants

A total of 346 NCAA Division I student-athletes participated in the study. Eligibility criteria required that all participants self-identify as Black/African American, be at least 18 years old, currently enrolled at a U.S. higher education institution and actively participating on a Division I athletic team. All participants met these criteria. Although every participant identified as Black/African American, several also reported additional racial or ethnic identities, reflecting the diversity within the Black student-athlete population. Additional identities included Asian American ($n = 2$), Hispanic/Latinx ($n = 16$), Middle Eastern ($n = 1$), Native American ($n = 4$), and White ($n = 29$). No participant identified solely with a non-Black- racial group.

The sample included 142 men (41%) and 203 women (59%). Participants represented a range of institutional contexts, including PWI-P4 (28%, $n = 98$), PWI Non-4 (42%, $n = 144$), and HBCUs (30%, $n = 102$). Student-athletes competed across a wide variety of Division I sports. The largest sport groups were women's basketball (16.5%, $n = 57$), women's track and field/cross-country (16.8%, $n = 58$), football (13.9%, $n = 48$), men's track and field/cross-country (11.3%, $n = 39$), and women's volleyball (10.6%, $n = 37$). Additional representation included men's basketball (7.5%, $n = 26$), men's soccer (5.2%, $n = 18$), women's soccer (4.3%, $n = 15$), softball (4.3%, $n = 15$), baseball (1.2%, $n = 4$), women's lacrosse (0.95%, $n = 3$), men's wrestling (0.95%, $n = 3$), women's rowing (0.63%, $n = 2$), women's bowling (0.63%, $n = 2$), women's gymnastics (2.0%, $n = 7$), and women's swim/dive (0.63%, $n = 2$). Several sports had one participant each, including women's golf, women's dance, women's field hockey, men's gymnastics, and women's rugby. This sample reflects substantial gender, institutional, and sport diversity within the population of Black Division I student-athletes- and provides a broad representation of both revenue and non-revenue sports across the NCAA Division I landscape.

Table 1: Study Demographics

	<i>n</i>	%
Institution Type		
PWI Power 4 athletes	98	28
PWI Non-Power 4 athletes	144	42
HBCU athletes	102	30
Gender		
Men	142	41
Women	203	59
Age		
18	28	9.2
19	46	15.1
20	63	20.7
21	76	25.0
22	54	17.8
23	23	7.6
24	13	4.3
25	1	0.3
Race/Ethnicity		
Black or African American	346	100
Bi-racial/Multi-racial	52	15
Asian or Asian American	2	4
Hispanic/Latinx	16	31
Middle Eastern or North African	1	2
Native American or Alaska Native	4	8
White	29	56
Academic year of study		
1	42	13
2	69	21
3	65	20
4	89	27
5	39	12
6	19	6
7	3	1
Years on team		
1	125	39.1
2	79	24.7
3	52	16.3
4	49	15.3
5	9	2.8
6	5	1.6
7	1	0.3
Years with current coach		
1	148	46

2	90	28
3	50	15.5
4	29	9
5	3	0.9
6	1	0.3
7	1	0.3
Sport		
Men's Basketball	26	7.5
Women's Basketball	57	16.5
Men's Track and Field/Cross Country	39	11.3
Women's Track and Field/Cross Country	58	16.8
Football	48	13.9
Men's Soccer	18	5.2
Women's Soccer	15	4.3
Women's Lacrosse	3	0.9
Men's Lacrosse	1	0.3
Baseball	4	1.2
Softball	15	4.3
Women's Swim and Dive	2	0.6
Women's Golf	1	0.3
Women's Rowing	2	0.6
Women's Bowling	2	0.6
Men's Wrestling	3	0.9
Men's Cheer	1	0.3
Women's Cheer	1	0.3
Men's Volleyball	2	0.6
Women's Volleyball	37	10.7
Women's Dance	1	0.3
Women's Field Hockey	1	0.3
Men's Gymnastics	1	0.3
Women's Gymnastics	7	2.0
Women's Rugby	1	0.3
Transferred Schools?		
Yes	134	41
No	191	58
Prefer not to say	3	1
Scholarship status		
Full scholarship	213	65
Partial scholarship, more than 50%	37	11
Partial scholarship, less than 50%	33	10
No athletic scholarship	29	9
Academic scholarship	14	4
Starter status		
Start the game	180	55

Do not start, play over 50%	34	10
Do not start, play under 50%	34	10
Redshirt	26	8
Other	55	17
Sexual Orientation		
Asexual	16	4.7
Bisexual	25	7.4
Gay	4	1.2
Heterosexual	264	77.9
Lesbian	19	5.6
Questioning	1	0.3
Prefer Not to Say	10	2.9

***Note:** Most track athletes selected “Other” because starter status does not clearly translate to track and field. As a result, we were unable to accurately report their status using the provided options.*

Procedures

Data Collection and Recruitment

Data was collected using an online survey administered through Qualtrics. Recruitment was conducted using a combination of direct sampling and snowball sampling to reach Division I Black student-athletes across the United States. The majority of participants were recruited directly through Instagram, with additional participants obtained through snowball sampling via social media posts and in-person recruitment.

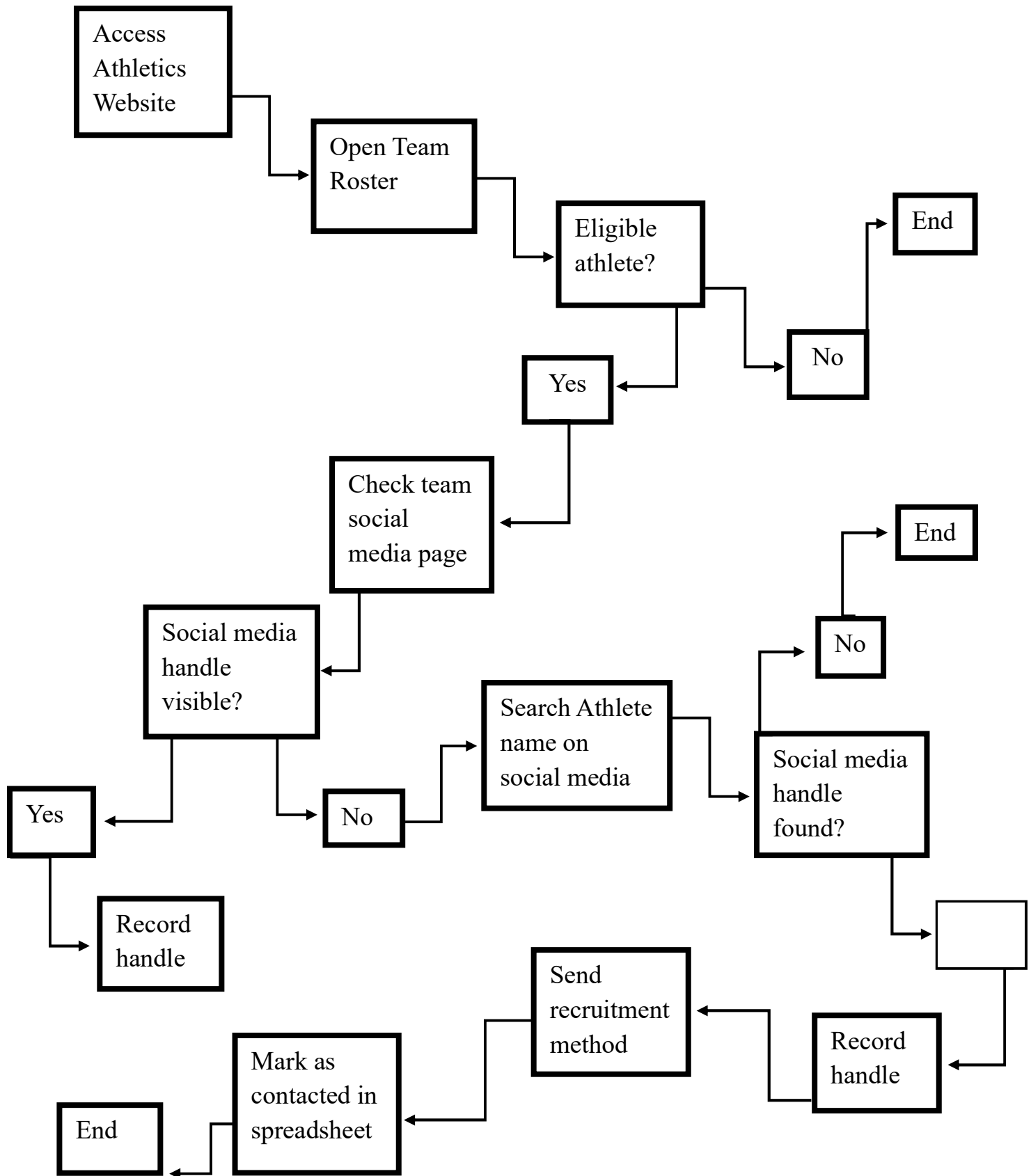
Direct recruitment involved sending individualized Instagram direct messages to potential participants. The principal investigator identified potentially eligible athletes using publicly available information, including NCAA Division I team rosters and athlete profiles posted on institutional athletic department websites. Publicly available Instagram handles were compiled into a secure list for the sole purpose of distributing recruitment invitations. No private, restricted, or password protected- information was accessed during this process. To expand the reach of the study, the principal investigator also shared public Instagram posts and stories

containing the survey link. These posts encouraged athletes to share the study with teammates or peers, facilitating snowball sampling and increasing representation across sports and institutions.

At the end of the survey, participants were given the option to enter a drawing for a gift card (\$25 value) as an incentive with 1 in 30 odds of receiving a gift card. To enter the drawing, participants provided an email address through a separate form to ensure that identifying information could not be connected to their survey responses. Incentive-related data were stored separately from research data and used solely for administering the drawing.

The recruitment procedures used in this study represent an adjustment from initial efforts that relied primarily on flyer distribution through social media and networking. This initial approach yielded minimal engagement and proved to be insufficient for reaching the specific population of Division I Black student-athletes. In response to these limitations, a more targeted recruitment process was developed, as illustrated in Figure 1 below. This revised approach began with identifying eligible athletes through official athletics rosters, followed by locating accurate social media handles via team social media pages primarily on Instagram or manual searches when necessary. Once verified, athletes were contacted directly through individualized messages delivered via social media platforms. The PI was contacted by some potential participants to confirm the message was not spam or from a bot by confirming her identity through video message responses before they participated. As the survey itself was anonymous due to software limitations at the home institution, it was not possible to do targeted repeat reminder messaging via social media. Using this method, approximately 10,000 athletes were contacted nationwide, resulting in 346 participants who completed the survey. This individualized, direct-contact strategy markedly improved accessibility to the intended population and produced a significantly higher response rate (3.5%) compared to the broad, low-yield nature of flyer posting.

Figure 1: Recruitment Flow Chart



Survey Measures

The survey first presented demographic items including gender identity, sport, NCAA Division, NCAA Conference, school name, starter status (starter, non-starter play 50+%, non-starter play <50%), scholarship status (0-25%, 25-50%, 50-75%, full), years on team, academic year, athletic year, and involvement in organizations (athlete and non-athlete) on campus. All the following measures have previously been used to reliably assess the variables of interest with college students, if not student-athletes.

Athletic & Academic Identity. To assess the student-athletes' athletic and academic identity levels, we used the Athletic & Academic Identity Scale (AAIS). There are 11 items between two main subscales, with 6 items for athletic identity and 5 items pertaining to academic identity. Following the question "How central to your sense of who you are in each of the following attributes?", participants respond to items, such as the sample items "Being a good athlete" (athletic identity) and "Being a capable student" (academic identity). The items are answered on a 6-point scale (1 = not central to my sense of self, 6 = very central to my sense of self), which are averaged for reporting. The higher the score, the more central the statement is to the identity of the subject. Yukhymenko-Lescroart (2014) had high reliability for college student-athletes for both academic ($\alpha = .93$) and athletic ($\alpha = .93$) identities. This measure has been found to display validity with collegiate student-athletes (Yukhymenko-Lescroart, 2014).

Occupational Engagement. To measure student-athletes' exploration of career opportunities, we used the student Occupational Engagement Scale (OES). The OES contains 9 items which was created by Cox et al. (2015). A sample item for this scale is "I talk about my career choices with family or friends." The items are answered on a 5-point scale (1 = not at all like me, 5 = very much like me), which are averaged for reporting. The higher the score, the more the items pertain to the student-athlete actively engaging in exploration of career

opportunities. Poux and Fry (2015) showed good reliability ($\alpha = .88$) using the OES with college student-athletes and validity with positive correlations with caring and task-involving climates.

Motivational Climate. To measure the immediate influence of sport environment, we used Perceived Motivational Climate in Sport Questionnaire (PMCSQ) to assess the student-athletes' perception of their team motivational climate as task-involving and/or ego-involving. This scale was developed by Seifriz, Duda, and Chi (1992). This 21-item scale consists of 12 items pertaining to task-involving and 9 items for ego-involving. The athletes respond on a 5-point scale (1= strongly disagree, 5= strongly agree). A sample item for this scale for "On this team, trying hard is rewarded" (task-involving) and "On this team, coaches favor some athletes over others" (ego-involving). Responses are averaged for the task-involving and ego-involving variables, respectively. Poux and Fry (2015) showed high reliability and validity for climate scores using these measures with college student-athletes: task-involving ($\alpha = .74$) and ego-involving ($\alpha = .82$).

Caring Climate. To measure the immediate sport environment influence, we also used the Caring Climate Scale (CCS) created by Newton et al. (2007). This is a 13-item scale. The items are rated on a 5-point scale (1=strongly disagree, 5=strongly agree) which will be averaged for reporting. The item responses are averaged for the variable score. A sample item for this scale "On this team, coaches care about the athletes". This scale has shown high reliability and validity of $\alpha = .92$ with youth by Newton et al. (2007) and $\alpha = .95$ when used by Poux and Fry (2015) with student-athletes.

Social Influence. To measure the social support surrounding collegiate athletes, this study used the People in My Life scale (PIML) originally developed by Harter (1983). Although the scale was first designed to assess the social systems influencing children's development,

Hinderlie and Kenny (2002) adapted the items for college students to measure support from peers, student organizations, and instructors. Their adapted version demonstrated strong score reliability ($\alpha = .76-.91$). Building on this work, the present study used the Hinderlie and Kenny items to assess three non-sport sources of support relevant to student-athlete development and further adapted the scale to capture perceived support from athletic department support staff (e.g., strength and conditioning coaches, athletic trainers, advisors, and life-skills personnel). The final adaptation included 16 items across three subscales: athletic department support staff, non-athletic university friends, and faculty members.

Each item presents two contrasting statements (e.g., “Some athletes have a non-athletic university friend they can tell problems to” vs. “Other athletes don’t have a non-athletic university friend they can tell problems to”). Participants first choose the statement that best fits them and then indicate whether it is “really true for me” or “sort of true for me,” producing a 4-point response format. Items reflecting lower support were reverse-scored so that higher values consistently represent greater perceived support. After reverse scoring, responses were averaged for each subscale, with scores closer to 4 indicating higher levels of perceived support.

Daily Discrimination. Finally, to examine the broadest layer of influence on the athletes, we assessed the student-athletes’ perception of being treated unfairly across campus with the Everyday Discrimination Scale (EDS) to capture how much they feel a part of the general campus community through their daily interactions. This is a 10-item scale rated on a 6-point scale (1 = Never, 6 = Almost Every day). A sample item for this scale is “You are treated with less courtesy than other people are”. The responses for this scale will be averaged for reporting. While we found no prior research using this measure in relation to campuses or athletes, it has demonstrated acceptable reliability ($\alpha = .77$) with adults (Sternthal et al., 2011).

Data Screening and Preparation

Prior to conducting the primary analyses, preliminary data preparation included examination of descriptive statistics (means, standard deviations, variance, skewness, and kurtosis) to evaluate data quality and provide an overview of the sample. All variables were screened for missing values and potential outliers. Outliers were identified using standard screening procedures and were examined for accuracy prior to analysis.

All variables were examined for normality using skewness and kurtosis values, as well as visual inspection of histograms. The majority of variables met acceptable standards (skewness between -2 and $+2$; kurtosis between -7 and $+7$). However, one item from the Everyday Discrimination scale demonstrated significant non-normality (skewness = 3.36; kurtosis = 12.07). This item assessed severe and low-frequency experiences (i.e., being threatened or assaulted), and the observed distribution was consistent with expectations, as most participants reported low or no occurrence of such events. As a result, the item was retained to preserve the conceptual integrity of the scale. Overall, these procedures indicated that assumptions were reasonably met for subsequent parametric analyses.

Missing data were assessed across the full dataset to determine the extent and patterns of missingness. Overall, 13.67% of the data were missing across the entire dataset; approximately 82% of participants provided complete responses across all variables. Examination of missingness patterns did not indicate any consistent patterns across institution types or key study variables. To address missing data, the Expectation-Maximization (EM) algorithm in SPSS was used to estimate missing values and generate a complete dataset. The EM approach was selected because it provides accurate estimates when data are missing at random (Moore, 2025). The completed dataset was exported and used for all subsequent analyses conducted in Excel.

Data Analysis

To address Aim #1, Pearson-product correlations were calculated separately within each institution type to examine the magnitude and direction of relationship between social influence variables, identity, climates, and career exploration. The statistical significance will be determined using an alpha level of .05. The correlations will be interpreted using the correlation coefficients for weak ($r = .10$), moderate ($r = .30$), and strong ($r = .50$). An effect size of $r = .30$ or higher was considered meaningful in this study.

For Aim #2, differences in the strength of correlations across institution types (HBCU vs PWI Non-4 vs PWI-4) were evaluated by comparing correlation coefficients and their associated 95% confidence intervals. Confidence intervals were used to assess whether the relationships found in Aim #1 varied meaningfully across groups, with group point estimates not in other group's confidence intervals interpreted as differences in magnitude.

To address Aim #3, one-way analyses of variance (ANOVA) were conducted to examine mean differences across institution types for motivational climate, social support, identity, engagement, and discrimination variables. Prior to the ANOVA testing, homogeneity of variances was assessed using Levene's test. When this assumption was violated, Welch's F-test was used to determine significance. Effect size for omnibus tests was calculated using omega squared (ω^2). Post hoc comparisons were conducted using independent sample t-tests to determine where the differences fall, and effect sizes were calculated using Cohen's d to assess the significance of the group differences with Bonferroni adjustment.

Power Analysis for Sample Size

For Aim #1 (Significant Correlations), previous research (Hinderlie and Kenny, 2002; Poux and Fry, 2015) has primarily supported moderate relationships ($r = 0.30$ to 0.40) existing between the social levels of team climate and on-campus social supports (e.g., friends, student

organizations, instructors) with individual level development (e.g., identity, adjustment, exploration). Therefore, we conducted power analyses in G*Power to determine that to find a correlation of .30 significant with an alpha level of .05 and power level of .80, we would need a minimum per group sample size of 82. However, we then conducted a follow-up analysis to determine the sample size necessary to address Aim #2, which hypothesized that group would moderate the magnitude of these correlations. Comparing two groups of 82 (164 combined) each would only be sensitive enough to identify a difference of $r = .45$ significant. Further examination identified that with a combined sample size of 200 ($n = 100/\text{group}$) would enable finding differences in correlations of $r = .20$ significant.

Aim #3 is to test for significant mean differences between the groups, which align with the Aim #2 sensitivity analysis, having a group size of 100 would also support being able to find pairwise Cohen's d effect sizes of 0.40 significant ($\alpha = .05$, $\text{power} = .80$). As Aims 2 and 3 have not been examined before, they are more exploratory in nature, which is why a moderate effect was deemed an appropriate effect to power for significance testing.

Results

Reliability

Cronbach's alpha (α) and corresponding 95% confidence intervals (95%CI) for all study variables are presented in Table 2. Overall, most variables demonstrated acceptable levels of reliability across institution types. However, the faculty support variable of PIML demonstrated lower reliability in PWI Power-4 and PWI Non-Power-4 institutions compared to the other variables. This suggests that responses to faculty support items were less consistent within these groups. Given the lower reliability that was observed for this variable, caution should be used when interpreting correlations involving faculty support, as the reduced consistency may weaken the observed relationships. This may also partially explain the weaker correlations involving faculty support across some analyses.

Table 2: Cronbach's Alpha and Confidence Intervals

	PWI-4			PWI Non- 4			HBCUs		
	95% CI			95% CI			95% CI		
	α	LL	UL	α	LL	UL	α	LL	UL
Caring Climate	0.93	0.902	0.947	0.95	0.931	0.958	0.94	0.915	0.953
Task-Involving Climate	0.81	0.741	0.860	0.81	0.763	0.857	0.72	0.629	0.797
Ego Involving Involving	0.79	0.718	0.846	0.84	0.799	0.878	0.76	0.677	1.225
Academic Identity	0.91	0.876	0.935	0.70	0.642	0.761	0.95	0.926	0.961
Athletic Identity	0.83	0.769	0.878	0.84	0.800	0.881	0.90	0.870	0.930
Daily Discrimination	0.84	0.792	0.887	0.91	0.881	0.928	0.89	0.855	0.920
Occupational Engagement	0.85	0.793	0.888	0.83	0.780	0.867	0.81	0.746	0.861
Non-Athletic University Friend	0.81	0.741	0.863	0.78	0.723	0.836	0.76	0.671	0.824
Faculty Support	0.50	0.307	0.646	0.50	0.353	0.626	0.60	0.457	0.718
Athletic Department Support	0.69	0.586	0.781	0.75	0.684	0.812	0.84	0.783	0.883

Descriptive Statistics

Descriptive statistics for all primary study variables, including means, standard deviations, and observed ranges are presented in Table 3. Overall, participants reported moderate to high levels of task-involving and caring climates, suggesting that many student-athletes perceived their environments as emphasizing effort, improvement, and care. In contrast, perceptions of an ego-involving climate demonstrated greater variability, indicating that some

athletes experienced more performance and comparison-based environments than others. Perceptions of social support varied across institutional domains, with faculty support and athletic department support demonstrating notable variability across institution types, while non-athletic university friend support was consistently reported at lower levels. Experiences of daily discrimination were present across all institution types, although there were differences in magnitude, this may suggest that institutional context may shape how frequently these experiences occur.

Table 3: Means, SD, Observed Ranges, ANOVAs

	Overall			PWI-4			PWI Non-Power 4			HBCUs			ANOVA		
	M	SD	(min-max)	M	SD	(min-max)	M	SD	(min-max)	M	SD	(min-max)	F	<i>p</i>	ω^2
Caring Climate	3.88	0.71	1-5	4.12a	0.58	2.67-5	3.82b	0.75	1-5	3.75b	0.70	1.42-5	7.57	<.001	0.04
Task-Involving Climate	3.85	0.56	1-5	3.93	0.56	2-5	3.79	0.61	1-5	3.86	0.47	2.33-4.89	1.78	0.171	0.005
Ego Involving Involving	3.48	0.6	1-4.92	3.35a	0.58	1.67-4.25	3.47a	0.65	1-4.67	3.61b	0.51	2.58-4.92	4.51	0.012	0.021
Academic Identity	4.88	0.99	1.6-6	4.92	0.86	2.6-6	4.84	0.99	1.6-6	4.93	1.12	1.6-6	0.30	0.741	-0.004
Athletic Identity	5.3	0.73	1-6	5.45a	6.00	2.5-6	5.30a	0.68	3-6	5.14b	0.87	1-6	4.48	0.012	0.021
Daily Discrimination	1.95	0.83	.68-5.8	1.91	0.69	.99-4.3	2.10	0.91	1-5.8	1.78	0.79	.68-5.1	4.51	0.012	0.021
Occupational Engagement	3.67	0.63	1.33-5	3.63	0.64	1.44-5	3.70	0.62	2.11-5	3.67	0.63	1.33-5	0.31	0.735	-0.004
Non-Athletic University Friend	2.73	0.73	.81-4	2.84	0.73	1.17-4	2.67	0.75	.81-4	2.72	0.70	1-4	1.40	0.247	0.002
Faculty Support	3.29	0.55	1.57-4	3.51a	0.44	2.25-4	3.25b	0.55	1.73-4	3.15b	0.60	1.57-4	11.16	<.001	0.058
Athletic Department Support	3.13	0.63	1-4	3.34a	0.50	2.17-4.23	3.10b	0.61	1-4	2.95b	0.73	1-4	9.64	<.001	0.050

Note. Minimum and maximum values in the table are the observed values. For significant F-tests, the pairwise differences are denoted across groups with letters (a,b,c). When the omnibus ANOVA test was nonsignificant, then no values have a letter indicating no significant differences across the three institutions.

Aim #1: Relationships Among Social Influences, Identity, and Career Exploration

Aim #1 examined the magnitude and statistical significance of the relationships between multiple sources of social influences, motivational climates, identity experiences, career exploration, as well as daily discrimination experiences within each institution type. It was hypothesized that academic identity and occupational engagement would be positively associated with caring and task-involving climates and social support variables (*Hypothesis 1a*) and negatively associated with an ego-involving climate and daily discrimination. Additionally, athletic identity was expected to be positively associated with an ego-involving climate (*Hypothesis 1b*). Pearson product-moment correlations were conducted separately by institution type, and coefficients were interpreted using established criteria (weak = .10, moderate = .30, strong = .50). Correlations are found in Table 4.

Hypothesis 1a

Consistent with Hypothesis 1a, supportive climates and social support variables were generally associated with more positive career-related outcomes, while daily discrimination and ego-involving climate were associated with less favorable outcomes. A strong positive relationship was observed between task-involving and caring climate ($r = .66-.69, p < .001$), indicating substantial overlap between these variables. Task-involving climate was positively and significantly ($p < .01$) associated with athletic identity ($r = .05-.31$), faculty support ($r = .18-.27$), and AD support ($r = .26-.33$), while faculty support was significantly ($p < .01$) positively associated with occupational engagement ($r = .16-.28$). Task-involving climate was also significantly ($p < .01$) positively associated with occupational engagement ($r = .14-.33$) and AD support ($r = .26-.33$), while occupational engagement was positively associated with both academic identity ($r = .13-.28$) and athletic identity ($r = -.03-.31$). Additionally, non-athletic peer support was significant ($p < .001$) positively associated with occupational engagement ($r = .18-$

.31). Significant ($p < .01$), positive relationships were also observed for caring climate with AD support and ($r = .27-.42$) and faculty support ($r = .20-.29$).

Daily discrimination demonstrated significant ($p < .001$), moderate negative relationships with caring climate ($r = -.33$ to $-.39$), faculty support ($r = -.30$ to $-.33$), AD support ($r = -.27$ to $-.41$), and task-involving climate ($r = -.39$ to $-.45$). Ego-involving climate was significantly ($p < .001$), negatively associated with caring climate ($r = -.30$ to $-.41$), task-involving climate ($r = -.22$ to $-.36$, $p < .05$), faculty support ($r = -.26$ to $-.28$), and AD support ($r = -.29$ to $-.31$).

Hypothesis 1b

Limited support was found for *Hypothesis 1b*, as the expected positive relationship between ego-involving climate and athletic identity was not observed as significant across the institution types: PWI P4 ($r = -.03$), PWI Non-P4 ($r = -.05$), and HBCU ($r = .02$). Ego-involving climate was significantly ($p < .05$) negatively associated with caring climate ($r = -.20$ to $-.41$) and support variables, including faculty support ($r = -.26$ to $-.28$) and AD support ($r = -.29$ to $-.31$), suggesting that more performance-focused environments were linked to less supportive experiences. Ego-involving climate also demonstrated a significant, positive relationship with daily discrimination in HBCU contexts ($r = .33$, $p < .001$).

Additional Notable Findings

Several additional relationships emerged that were not explicitly specified in the hypotheses. Athletic identity was positively associated with academic identity ($r = .16-.46$). Additionally, daily discrimination was negatively associated with athletic identity ($r = -.15$ to $-.29$). Relationships involving academic identity were generally weak across variables, indicating limited connections with social and environmental factors.

Table 4: Correlation Tables

PWI-4	n	1	2	3	4	5	6	7	8	9	10
1. Caring Climate	93										
2. Task-Involving Climate	93	0.66**									
3. Ego Involving Involving	93	-0.41**	-0.36**								
4. Academic Identity	93	-0.01	-0.02	0.07							
5. Athletic Identity	93	0.22*	0.31**	-0.03	0.16						
6. Daily Discrimination	93	-0.39**	-0.45**	0.13	-0.15	-0.15					
7. Engagement	93	0.14	0.14	-0.22*	0.13	0.05	-0.06				
8. Peer Support	93	0.05	0.06	-0.03	0.15	-0.20	-0.04	0.24*			
9. Faculty Support	93	0.22*	0.27*	-0.26*	0.10	0.10	-0.33**	0.28*	0.25*		
10. AD Support	93	0.27**	0.27**	-0.29**	0.09	0.10	-0.27**	0.12	-0.01	0.47**	
PWI Non-Power 4	n	1	2	3	4	5	6	7	8	9	10
1. Caring Climate	138										
2. Task-Involving Climate	138	0.69**									
3. Ego Involving Involving	138	-0.20*	-0.04								
4. Academic Identity	138	0.02	0.04	0.11							
5. Athletic Identity	138	0.10	0.05	-0.05	0.23**						
6. Daily Discrimination	138	-0.37**	-0.39**	0.11	-0.22**	-0.15					
7. Engagement	138	0.16	0.23**	0.07	0.21*	-0.03	-0.06				
8. Peer Support	138	-0.04	0.11	-0.16	0.07	-0.12	-0.10	0.31**			
9. Faculty Support	138	0.29**	0.18*	-0.08	0.11	0.01	-0.30**	0.16	0.13		
10. AD Support	138	0.36**	0.26**	-0.21*	0.06	0.17	-0.42	0.06	0.09	0.49**	
HBCU	n	1	2	3	4	5	6	7	8	9	10
1. Caring Climate	97										
2. Task-Involving Climate	97	0.61**									
3. Ego Involving Involving	97	-0.30**	-0.22*								
4. Academic Identity	97	-0.02	0.02	0.07							
5. Athletic Identity	97	0.13	0.06	0.02	0.46**						
6. Daily Discrimination	97	-0.33**	-0.24*	0.33**	-0.16	-0.29**					
7. Engagement	97	0.10	0.33**	-0.02	0.28**	0.31**	-0.03				
8. Peer Support	97	-0.13	0.03	-0.10	0.14	-0.004	-0.07	0.18			
9. Faculty Support	97	0.20	0.27**	-0.28**	0.07	0.18	-0.31**	0.17	0.17		
10. AD Support	97	0.42**	0.33**	-0.31**	-0.01	0.08	-0.18	0.02	-0.10	0.27**	

Note.

Significance of correlations are designated with * $p < .05$ and ** $p < .001$.

Aim #2: Differences in Correlation Strength Across Institution Types

Aim #2 examined whether the strength of relationships between social influence variables and identity-related outcomes differed across institution types. Differences in correlation strength were evaluated by comparing whether correlation coefficient values fell within the corresponding 95% CI of the other institution types. Overall, patterns of relationships were largely consistent in direction across institution types as illustrated above; however, variation in magnitude was observed. Most relationships did not demonstrate significant differences, as correlation coefficients fell within each other's confidence intervals, indicating that the strength of these relationships were comparable across groups.

The following significant differences were identified across institution types. The relationship between ego-involving climate and daily discrimination was significantly stronger in HBCU contexts ($r = .33$, 95% CI [.139, .496]) compared to PWI Power-4 institutions ($r = .13$, 95% CI [-.073, .327]). Similarly, the relationship between academic identity and athletic identity was significantly stronger for HBCU athletes ($r = .46$, 95% CI [.29, .606]) compared to both PWI Power-4 ($r = .16$, 95% CI [-.050, .348]) and PWI Non-Power 4 athletes ($r = .23$, 95% CI [.066, .383]). Additional differences were observed in relationships involving identity and engagement.

Differences were also observed in relationships involving motivational climate and discrimination. The relationship between task-involving climate and daily discrimination was significantly stronger in PWI Power-4 institutions ($r = -.45$, 95% CI [-.599, -.271]) compared to HBCU contexts ($r = -.24$, 95% CI [-.417, -.039]). Additionally, a significant difference was observed between PWI Power-4 and PWI Non-Power 4 institutions in the relationship between caring climate and ego-involving climate, with a stronger negative relationship among PWI

Power-4 athletes ($r = -.41$, 95% CI $[-.567, -.226]$) compared to PWI Non-Power 4 athletes ($r = -.20$, 95% CI $[-.354, -.033]$).

Finally, differences were observed in support-related relationships. The relationship between faculty support and AD support was significantly stronger for both PWI Power-4 ($r = .47$, 95% CI $[.291, .612]$) and PWI Non-Power 4 athletes ($r = .49$, 95% CI $[.353, .608]$) compared to HBCU athletes ($r = .27$, 95% CI $[.075, .446]$), with no significant difference between the two PWI groups. Additionally, the relationship between daily discrimination and AD support was significantly stronger in PWI Non-Power 4 institutions ($r = -.42$, 95% CI $[-.543, -.265]$) compared to HBCU contexts ($r = -.18$, 95% CI $[-.367, .019]$).

These findings indicate that, although many relationships were consistent across institution types, several key differences emerged, particularly in relationships involving identity, engagement, and perceptions of support.

Aim #3: Mean Differences by Institution Type

Aim #3 examined whether mean levels of motivational climate, social support, identity, and discrimination differed across institution types using analyses of variance (ANOVA). Results indicated significant differences across several key variables by institution type, as shown in Table 3 above. With the most notable differences observed in perceptions of support.

A significant difference by institution type was found for caring climate ($F(2, 325) = 7.57$, $p < .001$, $\omega^2 = .039$), indicating a small effect size. Follow-up comparisons revealed that student-athletes at PWI Power-4 institutions reported significantly higher perceptions of caring climate compared to both PWI Non-Power 4 institutions ($p = .002$, $d = 0.43$) and HBCUs ($p < .001$, $d = 0.57$). Ego-involving climate also significantly differed by institution type, ($F(2, 325) = 4.51$, $p = .012$, $\omega^2 = .021$), reflecting a small effect size. Student-athletes at PWI Power-4

institutions reported significantly lower levels of ego-involving climate compared to those at HBCUs ($p = .001$, $d = -.47$), suggesting that performance-oriented environments may be less prominent within PWI Power-4 settings.

For variables that violated the assumption of homogeneity of variance ($p < .05$), Welch's ANOVA was conducted. These variables include athletic identity, daily discrimination, faculty support, and AD support. Athletic identity differed significantly across institution types, ($F(2, 198) = 4.28$, $p = .01$, $\omega^2 = .021$), indicating a small effect size. Pairwise comparisons indicated that student-athletes at PWI Power-4 institutions reported significantly higher athletic identity compared to those at HBCUs ($p = .004$, $d = .42$). Daily discrimination also differed significantly across institution types, ($F(2, 210) = 4.17$, $p = .02$, $\omega^2 = .021$), reflecting a small effect size. Student-athletes at PWI Non-Power 4 institutions reported significantly higher levels of discrimination compared to those at HBCUs ($p = .003$, $d = .40$).

In contrast to the small effects observed for climate, identity, and discrimination variables, institution type demonstrated a more substantial effect on support-related variables. Faculty support differed significantly across groups, ($F(2, 204) = 13.12$, $p = .001$, $\omega^2 = .058$), representing a medium effect size. Student-athletes at PWI Power-4 institutions reported significantly higher levels of faculty support compared to both PWI Non-Power 4 institutions ($p < .001$, $d = .51$) and HBCUs ($p < .001$, $d = .68$). Similarly, AD support differed significantly across institution types, ($F(2, 202) = 10.72$, $p = .001$, $\omega^2 = .050$), also indicating a medium effect size. Student-athletes at PWI Power-4 institutions reported significantly higher AD support compared to both PWI Non-Power-4 ($p = .001$, $d = .43$) and HBCU ($p < .001$, $d = .63$) institutions.

Discussion

The purpose of this study was to examine how social environmental factors, specifically perceived support, motivational climate, and experiences of discrimination, relate to student-athletes' identity (academic and athletic) and career exploration, as well as to determine how these variables differ across institution types. Overall, the findings highlight the importance of the social environment in shaping student-athlete development, while also demonstrating that these relationships are not the same across institutional contexts. Findings also align with the social ecological perspective that emphasizes the role of the environment in shaping behavior and development (Fleury and Lee, 2006; Stokols, 1996).

Across all institution types, supportive environments were generally associated with more positive outcomes, including greater perceived support and higher levels of occupational engagement. In contrast, discrimination showed consistently negative relationships across variables, reinforcing its role as a significant barrier to development. These results support research that documents the prevalence of discrimination in the experiences of Black student-athletes (Beamon, 2014; Clopton, 2011). The findings are also consistent with literature highlighting the developmental outcomes of chronic discrimination (Lawrence et al., 2022). Taken together, these findings reinforce that supportive environments promote positive developmental outcomes, whereas discrimination remains a critical barrier to the holistic growth of Black student-athletes.

While some relationships were consistent across institutions, others varied in strength depending on context. Notably, identity emerged as one of the most-context dependent constructs, suggesting that how student-athletes understand themselves is strongly influenced by their environment. This finding strongly aligns with identity development theory, which

emphasizes that identity formation is influenced by social interactions and environmental contexts (Erikson, 1968; Kroger, 2017). Overall, these results highlight that identity development is highly sensitive to institutional context, emphasizing the importance of environment in shaping how student-athletes understand and define themselves.

Overall results for Aim #1 provided partial support for both hypotheses. Supportive climates and social support variables were generally associated with more positive outcomes, while discrimination was consistently associated with negative outcomes. However, relationships involving academic identity and ego-involving climate were less consistent across the institution types. Consistent with *Hypothesis 1a*, several positive relationships were observed between supportive environmental factors, identity, and career-related outcomes. These results extend prior research demonstrating the role of social support in aiding in the adjustment and development among Black young adults to college life (Carter-Francique et al., 2015; Hinderlie and Kenny, 2002). Task-involving and caring climates were positively associated with multiple variables of support, including faculty and AD support, particularly with PWI Power-4 and Non-Power 4 institutions. These findings also align with the Achievement Goal Theory, suggesting that environments emphasizing effort, improvement, and care foster more adaptive outcomes (Ames, 1992), as well as research indicating that caring climates are linked to psychological well-being and positive interpersonal experiences (Newton et al., 2007; Noddings 2005; Poux and Fry, 2015). Taken together, these patterns suggest that increased institutional resources and external pressures may be contributing to more intentional efforts toward supporting student-athletes' holistic development at these institutions.

Additionally, perceived support, particularly faculty support and non-athletic peer support, demonstrated positive relationships with occupational engagement. This finding

highlights the importance of relationships outside of sport in facilitating career exploration and preparation. Student-athletes who feel supported across multiple domains may be more likely to engage in career-related behaviors and consider identities beyond athletics, contributing to a more holistic sense of self. These findings align with prior research indicating that Black students who report stronger connections with peers and faculty also experience higher levels of academic engagement (Cox et al., 2015; Comeaux and Harrison, 2007; Hinderlie and Kenny, 2002). Collectively, this body of work reinforces the critical role of social support in promoting both academic and personal development among student-athletes.

Student-athletes at Power-4 PWIs reported higher levels of faculty and Athletic Department support, with moderate effect sizes. These differences may reflect greater institutional resources, staffing, and investment in student-athlete services, including access to dedicated academic support personnel and structured programming, which is consistent with literature suggesting that resource-rich athletic departments often provide more formalized and visible support systems (Carter-Francique, 2015; Comeaux, 2010). In contrast, while HBCUs may have fewer specialized staff or formalized academic support resources within athletics, support may be experienced differently. Research on HBCU environments highlights the importance of relational, community support, including strong connections with faculty and peers that contribute to student development (Cooper and Hawkins, 2012). The integration between academic and athletic environments at HBCUs may be more cohesive, allowing student-athletes to build stronger relationships with faculty and campus communities. This integrated approach may contribute to a more holistic support system, even in the absence of comparable funding and resources (Joseph, 2013; Cooper et al., 2014). In all, These differences

suggest that while support exists across contexts, the way it is structured and experienced may vary meaningfully by institution type.

Notably, the role of athletics department (AD) support appeared to differ across institutional contexts, suggesting that structural factors and resource availability may influence how support is experienced. While the strength of these relationships varied, their direction remained consistent across groups. This pattern indicates that institutional context may not determine whether supportive relationships exist, but rather the degree to which they are accessible, impactful, and consistently experienced by student-athletes.

Together, these findings suggest that environments with emphasis on effort, improvement, and support are linked to more positive identity and career exploration outcomes, reinforcing the role of climate and support in shaping student-athlete outcomes. However, relationships between support variables and academic identity were generally weak across institution types, which indicates only partial support for this aspect of Hypothesis 1a. These relationships were smaller in magnitude compared to prior research (Hinderlie and Kenny, 2002), which has demonstrated stronger associations between social support and academic outcomes. Prior literature has similarly found that strong athletic identity can limit engagement with academic identity and exploration (Brewer et al., 1993; Yukhymenko-Lescroart, 2014). Thus, our results lend further support that academic identity being influenced by factors outside of the athletic environment and/or student-athletes perceive their academic and athletic identities as separate.

Consistent with *Hypothesis 1b*, daily discrimination demonstrated consistent negative relationships with caring climate, task-involving climate, faculty support, and AD support across all institution types. These findings suggest that experiences of discrimination disrupt the social

environment and may hinder both perceived support and developmental outcomes, consistent with prior work on the experiences of Black student-athletes in collegiate settings (Melendez, 2008; Cooper, 2012). Furthermore, relationships involving discrimination were stronger among Power 4 institutions, suggesting that there still remain differences in experience at institutions that are predominantly White outside of athletics. These stronger relationships involving discrimination at Power 4 institutions may reflect the broader racial climate of predominantly White institutions, where student-athletes may face increased experiences of marginalization (Sailes, 1993; Higginbotham et al., 2022). Qualitative research by Beamon (2014) further supports this pattern, documenting how Black student-athletes often navigate environments where they feel isolated, stereotyped, and valued primarily for their athletic performance rather than their holistic being. These lived experiences provide important context for the current quantitative findings, suggesting that the negative correlations observed between discrimination and support-related variables may reflect broader systemic environments that limit access to meaningful support and identity development opportunities.

Similarly, ego-involving climate was negatively associated with caring climate and support variables across all institution types, indicating that environments centered on comparison and performance-based success may lower perceptions of support. This aligns with research linking ego-involving climates to increased pressure and less adaptive psychological outcomes (Seifriz et al., 1992). These climates may create pressure and competition that limit connection and hinder developmental processes. As hypothesized, ego-involving climate demonstrated a positive relationship with athletic identity suggesting that performance-oriented environments may reinforce identification with the athlete role. This is consistent with prior findings indicating that external evaluation and performance emphasis can strengthen athletic

identity of collegiate athletes (Poux and Fry, 2015; Beamon, 2012). Certain relationships were consistent across institution types, particularly those involving task-involving and caring climates, suggesting that some aspects of the student-athlete experience may be universal. However, other relationships varied in strength across institutional contexts.

Identity findings further emphasize the importance of context and environment, consistent with the framework created by Erik Erikson in his Theory of Psychosocial Development (Erikson, 1968). At PWI Power-4 institutions, caring climate was positively associated with athletic identity, suggesting that supportive environments may reinforce identification with the athlete role. In contrast, student-athletes at HBCUs demonstrated stronger relationships across both athletic and academic identity, indicating a more integrated sense of self. These findings align with literature suggesting that identity development is highly dependent on environment. HBCU contexts tend to foster greater identity integration and cultural affirmation, which supports more holistic development among student-athletes. In contrast, identity development at PWIs may be more contingent on the level and type of support available within the environment (Cooper and Hawkins, 2012; Bimper and Harrison, 2011; Cooper, 2014; Rogers, 2024). Taken together, these findings emphasize that institutional context plays a critical role in shaping identity development, with more affirming environments promoting a more integrated and holistic sense of self.

HBCUs reported lower levels of caring and higher ego-involving climates. This combination suggests that these environments may simultaneously promote support and performance, creating a collective emphasis on development and competitive success. On one hand, the presence of a caring climate may foster connection, encouragement, and a sense of being valued beyond performance (Newton et al., 2000; Poux and Fry, 2015). On the other hand,

an ego-involving climate emphasizes comparison, evaluation, and performance-based outcomes (Ames, 1992; Newton et al., 2007). Together, this dynamic may create a more complex and conflicting environment in which student-athletes experience both support and pressure. While this combination may enhance motivation and performance in certain contexts, it may also contribute to tension in how support is perceived and experienced. Student-athletes may feel encouraged and supported, yet at the same time evaluated against external standards, which could influence their sense of identity and overall development.

Student-athletes at non-Power 4 PWIs reported higher levels of perceived discrimination, whereas those at HBCUs reported lower levels. Additionally, student-athletes at HBCUs demonstrated stronger indicators of holistic development and identity integration. These patterns suggest that the broader institutional environment plays a critical role in shaping how student-athletes experience both inclusion and personal development. Within non-Power 4 PWIs, higher reported levels of discrimination may reflect environments in which student-athletes face greater challenges related to belonging and support. Such experiences can disrupt the social environment by limiting access to meaningful relationships and reducing perceptions of care and inclusion, which may, in turn, hinder identity exploration and engagement in non-athletic domains.

Notably, these findings also point to an important contribution to the literature, as non-Power 4 PWIs remain underexamined in research on student-athlete development. The present results suggest that Black student-athletes within these contexts may experience a greater sense of disconnect from their university community and fewer opportunities for holistic and multi-dimensional identity exploration. This disconnect may be attributed to both a lack of cultural alignment and emphasis on holistic development which is often associated with HBCUs, as well as fewer financial and personnel resources than those available at Power 4 institutions (*Finances*

of Intercollegiate Athletics Database, 2023). Collectively, these structural and cultural limitations may constrain access to supportive environments, ultimately impacting student-athletes' ability to engage beyond sport and develop a more integrated sense of self.

In contrast, the lower levels of discrimination reported at HBCUs, coupled with stronger identity integration, may reflect environments that support multiple aspects of student-athletes' identities. These settings may provide a greater sense of belonging and cultural alignment, allowing student-athletes to more fully integrate their academic and athletic roles. This more integrated experience may support holistic development, where student-athletes are able to engage more meaningfully across domains without feeling the need to separate or prioritize one identity over another, which is consistent with the mission of the HBCU culture (Cooper et al., 2014). Higher levels of discrimination reported at non-Power 4 PWIs, coupled with lower levels at HBCUs, further highlight the role of institutional context in shaping experiences of belonging. Lower levels of discrimination and stronger identity integration at HBCUs may reflect environments that support multiple dimensions of identity, allowing student-athletes to engage more holistically across domains (Cooper et al., 2014). Thus, while capturing many aspects of the social context in this study, there were clearly additional aspects of the HBCU experience we were unable to measure to fully represent the broader experience of being on an HBCU campus.

Implication

These findings suggest that athletic departments should prioritize the intentional development of task-involving and caring climates, as these environments are consistently associated with more positive developmental outcomes. Creating spaces that emphasize effort, improvement, and genuine care for student-athletes may not only enhance performance but also foster stronger perceptions of support and engagement beyond sport. Coaches and staff play a

critical role in shaping these environments through daily interactions, feedback, and team culture, highlighting the importance of training and education around climate-building practices (Noble et al., 2016).

Additionally, increasing support from faculty and athletics staff is necessary for promoting both academic engagement and career development. The relatively lower values observed among non-Power 4 institutions may, in part, reflect structural differences in available support, as these programs often operate with fewer financial and personnel resources compared to Power 4 institutions (*Finances of Intercollegiate Athletics Database*, 2023). These limitations may reduce access to academic resources, career development programming, and consistent collaboration between faculty and athletics staff. Institutions should prioritize strengthening partnerships between academic and athletic departments to ensure that student-athletes receive intentional and meaningful support across both contexts. This may include improving communication between faculty and athletic staff, expanding access to academic and career resources, and creating structured opportunities for student-athletes to engage in career development. Importantly, this support should extend beyond coaches to include academic advisors, faculty, and athletics department staff, all of whom contribute to the developmental environment as a whole. Mental performance consultants can further support these efforts by working with staff to foster caring, task-involving climates that emphasize personal growth, reinforce academic identity, and encourage engagement beyond sport.

Addressing discrimination remains essential, as negative experiences can disrupt the broader social climate and weaken perceptions of care, belonging, and support across the athletic environment. Importantly, these climates are shaped not only by coaches, but by the collective actions of all athletics department staff, including academic advisors, support personnel, and

administrators, who contribute to daily athlete experiences. Mental performance consultants can play a key role by working with all AD staff to intentionally foster caring, task-involving climates through strategies such as emphasizing effort and personal growth over outcomes, using inclusive and affirming communication, and creating consistent spaces where student-athletes feel heard, respected, and supported across multiple domains of their identity.

Finally, there is a need to more intentionally support identity development at PWIs, particularly by fostering environments that encourage integration between academic and athletic identities. This may involve creating structured opportunities for student-athletes to explore roles outside of sport, engage more fully with the broader campus community, and receive guidance in navigating multiple, and at times competing, identity domains. Prior research highlights the importance of campus involvement in shaping student engagement, particularly within racially distinct institutional contexts. For example, Patton and Bridges (2015) found that involvement in organizations such as Greek life was associated with increased engagement among Black students, with differences observed based on institutional racial composition. These findings suggest that environments that promote broader campus involvement, such as those more commonly found at HBCUs, may provide greater opportunities for identity exploration and integration, whereas more athlete-centered engagement at PWIs may limit these experiences. Emphasizing a more holistic developmental approach at PWIs, one that actively promotes cross-campus engagement, may help student-athletes cultivate a more balanced and integrated sense of self beyond their athletic role, ultimately supporting long-term well-being and career adaptability.

The finding that athletes at HBCUs reported lower caring climate and higher ego-involving climate was unexpected, especially given the broader reputation of HBCUs as

supportive and community-centered environments. McEachern's (2023) work helps explain why this pattern may occur. Her study shows that athletic departments at HBCUs often operate under significant structural pressures, including limited resources, heavier workloads, and systemic barriers faced by Black women leaders. These leadership challenges can shape the tone of the athletic environment, creating a trickle-down effect where climates feel more performance-driven and less relational, even if that does not reflect the overall culture of the institution. It is also possible that sport-specific norms at HBCUs differ from those at PWIs in ways this study did not capture, since our focus was limited to athletic climate rather than the broader campus environment. Importantly, McEachern highlights that HBCUs still provide strong cultural affirmation, community support, and identity-affirming experiences, which may buffer athletes from the negative effects typically associated with ego-involving climates. Thus, while the athletic climate findings were not what we anticipated, they do not necessarily indicate a less positive overall experience for athletes at HBCUs, particularly based on the higher correlation between academic and athletic identities. Future research should examine how athletic climate interacts with campus culture and leadership structures to better understand these institutional differences.

Limitations and Future Direction

Several limitations should be considered when interpreting these findings. First, the reliability of the faculty support measure was relatively low, which may have weakened the strength of observed relationships and limited the ability to fully capture the role of academic support within the student-athlete experience. The use of self-report measures introduces the potential for response bias, as participants may have responded in ways influenced by social desirability or personal perception rather than objective experience. While self-report data are

valuable for capturing lived experiences, they may not fully reflect the complexity of the environments being studied.

As this was the first time all these variables were being examined quantitatively, data were collected at a single point in time, so it is not possible to determine the directionality of relationships or how these variables may change over time. Future research should utilize longitudinal designs to better understand how relationships between social environmental factors, identity, and career development evolve over time. Examining these processes across different phases of the student-athlete experience may provide deeper insight into how environments influence development across a collegiate career. Additionally, exploring factors that promote a holistic sense of self, as well as potential barriers to identity development, may provide valuable insight into how to better support student-athletes both during and after their athletic careers. Expanding this work to include additional variables, such as gender, sport type, or level of competition, may also offer a more comprehensive understanding of these relationships.

The overall sample size was larger than prior studies examining some of these variables, and represented athletes from different institution types which improves generalizability. However, we did not have sufficient power to examine differences at the intersection of institution type and gender identity. Based on our a priori power analysis, the sample obtained was adequate for the study's primary aims but insufficient for fully powered intersectional analyses. Although the revised recruitment strategy, targeted outreach through roster verification and direct social media messaging, resulted in 346 participants out of approximately 10,000 athletes contacted, this number did not meet the threshold required to examine more complex interactions, such as those between gender and institution type. As such, any analyses involving

these intersections are considered exploratory, and future research with a larger sample will be necessary to investigate these multidimensional patterns. To further understand the differences identified in this study, in the future researchers may want to conduct a more detailed comparison of support systems across institutions. Specifically, in addition to exploring the presence of support, future studies should also examine the quality, accessibility, and structure of support systems within different institutional contexts.

Future research should also examine how Name, Image, and Likeness (NIL) opportunities and transfer-related experiences shape the climate, support, and identity development of Black Division I student-athletes. Because this study did not assess NIL involvement, it remains unclear whether access to NIL resources, such as financial compensation, branding support, or institutional guidance, may influence athletes' perceptions of support or contribute to differences across institution types. Similarly, transfer-related experiences were not fully captured, despite the increasing mobility of Division I athletes and the potential impact of transferring on belongingness, discrimination experiences, and perceptions of climate. As transfer rates continue to rise and NIL structures evolve, future quantitative and qualitative work should incorporate these factors to better understand how they interact with institutional context and athlete identity. Including these variables will provide a more complete picture of the structural and developmental factors shaping the experiences of Black student-athletes.

Conclusion

Overall, the findings suggest that while some relationships are consistent across contexts, others are highly dependent on the institutional environment. Identity emerged as the most context-sensitive variable, with clear differences in how it relates to climate and support. More

broadly, relationships involving task-involving climate and perceived support appeared relatively consistent across institution types, whereas those involving discrimination and identity were more strongly shaped by context. These patterns emphasize the role of institutional environments in shaping both student-athletes' lived experiences and their developmental outcomes. Notably, Power 4 PWIs were characterized by higher sources of support alongside more pronounced ego-involving climates, non-Power 4 PWIs reported higher levels of discrimination, and HBCUs demonstrated lower levels of discrimination and stronger identity integration. Taken together, these findings highlight the importance of considering institutional context when examining student-athlete development and reinforce the need for environments that promote both support and holistic identity development. Ultimately, these findings emphasize that student-athlete development is not solely an individual process, but one that is deeply shaped by the environments in which athletes are embedded.

References

- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of educational psychology*, 84(3), 261.
- Anthony, C. E., & Swank, J. M. (2018). Black college student-athletes: Examining the intersection of gender, and racial identity and athletic identity. *Journal for the Study of Sports and Athletes in Education*, 12(3), 179–199.
<https://doi.org/10.1080/19357397.2018.1525133>
- Beamon, K. (2008). "Used goods": Former African American college student-athletes' perception of exploitation by division I universities. *The Journal of Negro Education*, 352-364.
- Beamon, K. (2012). "I'm a Baller": Athletic Identity Foreclosure among African-American Former Student-Athletes. *Journal of African American Studies*, 16(2), 195–208.
<https://doi.org/10.1007/s12111-012-9211-8>
- Beamon, K. (2014). Racism and Stereotyping on Campus: Experiences of African American Male Student-Athletes. *The Journal of Negro Education*, 83(2), 121-134.
<https://www.proquest.com/scholarly-journals/racism-stereotyping-on-campus-experiences-african/docview/1558357460/se-2>
- Beamon, K., & Bell, P. (2011). A Dream Deferred. *Journal for the Study of Sports and Athletes in Education*, 5(1), 29–44. <https://doi.org/10.1179/ssa.2011.5.1.29>
- Beamon, K., & Bell, P. A. (2006). Academics versus athletics: An examination of the effects of background and socialization on African American male student-athletes. *The Social Science Journal*, 43(3), 393–403. <https://doi.org/10.1016/j.soscij.2006.04.009>

- Bernhard, L. M. (2014). "Nowhere for me to go:" Black Female Student-Athlete Experiences on a Predominantly White Campus. *Journal for the Study of Sports and Athletes in Education*, 8(2), 67–76. <https://doi.org/10.1179/1935739714Z.00000000019>
- Bimper, A. Y., & Harrison, L. (2011). Meet Me at the Crossroads: African American Athletic and Racial Identity. *Quest*, 63(3), 275–288. <https://doi.org/10.1080/00336297.2011.10483681>
- Brewer, B. W., Van Raalte, J. L., & Linder, D. E. (1993). Athletic identity: Hercules' muscles or Achilles heel?. *International journal of sport psychology*.
- Bruening, J. E., Armstrong, K. L., & Pastore, D. L. (2005). Listening to the Voices: The Experiences of African American Female Student Athletes. *Research Quarterly for Exercise and Sport*, 76(1), 82–100. <https://doi.org/10.1080/02701367.2005.10599264>
- Carter-Francique, A. R., Hart, A., & Cheeks, G. (2015). Examining the Value of Social Capital and Social Support for Black Student-Athletes' Academic Success. *Journal of African American Studies*, 19(2), 157–177. <https://doi.org/10.1007/s12111-015-9295-z>
- Clopton, A. W. (2011). Using Identities to Explore Social Capital Differences Among White and African American Student Athletes. *Journal of African American Studies*, 15(1), 58–73. <https://doi.org/10.1007/s12111-010-9121-6>
- Comeaux, E. (2010). Racial Differences in Faculty Perceptions of Collegiate Student-Athletes' Academic and Post-Undergraduate Achievements. *Sociology of Sport Journal*, 27(4), 390–412. <https://doi.org/10.1123/ssj.27.4.390>

- Comeaux, E., & Grummert, S. E. (2020). *Antiblackness in College Athletics: Facilitating High Impact Campus Engagement and Successful Career Transitions among Black Athletes*. 13.
- Comeaux, E., & Harrison, C. K. (2007). Faculty and male student athletes: Racial differences in the environmental predictors of academic achievement. *Race Ethnicity and Education*, 10(2), 199–214. <https://doi.org/10.1080/13613320701330726>
- Cooper, J. N., (2012). Personal Troubles and Public Issues: A Sociological Imagination of Black Athletes' Experiences at Predominantly White Institutions in the United States. *Sociology Mind*, 02(03), 261–271. <https://doi.org/10.4236/sm.2012.23035>
- Cooper, J. N., Cavin, J. K., & Cheeks, G. (2014). *The State of Intercollegiate Athletics at Historically Black Colleges and Universities (HBCUs): Past, Present, & Persistence*. 7.
- Cooper, J. N., & Hawkins, B. (2012). A Place of Opportunity: Black Male Student Athletes' Experiences at a Historically Black University. *Journal of Intercollegiate Sport*, 5(2), 170–188. <https://doi.org/10.1123/jis.5.2.170>
- Cox, D. W., Krieshok, T. S., Bjornsen, A. L., & Zumbo, B. D. (2015). Occupational Engagement Scale–Student: Development and Initial Validation. *Journal of Career Assessment*, 23(1), 107–116. <https://doi.org/10.1177/1069072714523090>
- Edison, B. R., Christino, M. A., & Rizzone, K. H. (2021). Athletic Identity in Youth Athletes: A Systematic Review of the Literature. *International Journal of Environmental Research and Public Health*, 18(14), 7331. <https://doi.org/10.3390/ijerph18147331>

- Edwards, H. (1984). The Black "Dumb Jock": An American Sports Tragedy. *College Board Review*, 131, 8-13.
- Edwards, H. (1988). The single-minded pursuit of sports fame and fortune is approaching an institutionalized triple tragedy in Black society. *Ebony*, 43(10), 138-140.
- Edwards, H. (2000). Crisis of black athletes on the eve of the 21st century. *Society*, 37(3), 9–13.
<https://doi.org/10.1007/BF02686167>
- Erikson, E. H. (1968). *Identity youth and crisis* (No. 7). WW Norton & company.
- Finances of Intercollegiate Athletics Database*. (2025, December). NCAA.org.
<https://www.ncaa.org/sports/2019/11/12/finances-of-intercollegiate-athletics-database.aspx>
- Fleury, J., & Lee, S. M. (2006). The Social Ecological Model and Physical Activity in African American Women. *American Journal of Community Psychology*, 37(1–2), 141–154.
<https://doi.org/10.1007/s10464-005-9002-7>
- Fontana, M. S., Fry, M. D., & Cramer, E. (2017). Exploring the Relationship Between Athletes' Perceptions of the Motivational Climate to Their Compassion, Self-Compassion, Shame, and Pride in Adult Recreational Sport. *Measurement in Physical Education and Exercise Science*, 21(2), 101–111. <https://doi.org/10.1080/1091367X.2017.1278698>
- Fordham, S. (1985). *Black Students' School Success Coping with the "Burden of 'Acting White.'"* Distributed by ERIC Clearinghouse. WorldCat.

- Fry, M., Duda, J., & Chi, L.-K. (1993). The Perceived Motivational Climate in Sport Questionnaire: Construct and Predictive Validity. *Journal of Sport & Exercise Psychology, 15*, 172–183. <https://doi.org/10.1123/jsep.15.2.172>
- Fry, M. D., Guivernau, M., Kim, M. S., Newton, M., Gano-Overway, L. A., & Magyar, T. M. (2012). Youth perceptions of a caring climate, emotional regulation, and psychological well-being. *Sport, Exercise, and Performance Psychology, 1*(1), 44.
- Gonzalez, R. L. (2025). *The Perceived Impact of Name, Image, and Likeness on Student-Athletes* (Doctoral dissertation).
- Grambeau, K. (2021). *Student-athlete perceptions of name, image, and likeness compensation*. The University of North Carolina at Chapel Hill.
- Harrison, C. K. (2000). Black athletes at the millennium. *Society, 37*(3), 35-39.
- Harter, S. (1983). Self-perception profile for children. *Hispanic Journal of Behavioral Sciences*.
- Harter, S. (2012). Self-perception profile for adolescents: Manual and questionnaires. *Denver, CO: University of Denver, Department of Psychology*, 31-45.
- Higginbotham, G. D., Shropshire, J., & Johnson, K. L. (2022). You Play a Sport, Right? A Persistent and Pernicious Intersectional Bias in Categorization of Students vs. Student-Athletes. *Personality and Social Psychology Bulletin, 48*(11), 1531–1547. <https://doi.org/10.1177/01461672211044067>
- Hinderlie, H. H., & Kenny, M. (2002). Attachment, social support, and college adjustment among Black students at predominantly White universities. *Journal of College Student Development*.

- Houle, J. L. W., Brewer, B. W., College, S., & Kluck, A. S. (n.d.). *Developmental Trends in Athletic Identity: A Two-Part Retrospective Study*.
- Huml, M. R., Bergman, M. J., Newell, E. M., & Hancock, M. G. (2019). From the playing field to the classroom: The academic challenges for NCAA Division I athletes. *Journal for the Study of Sports and Athletes in Education*, 13(2), 97–115.
<https://doi.org/10.1080/19357397.2019.1578609>
- Johnson, D. (2023). A field of dreams: How NIL changed the game for student athletes. *Journal of Financial Planning*, 36(5), 40-52.
- Joseph, J. (2013). The Impact of Historically Black Colleges and Universities on Doctoral Students. *New Directions for Higher Education*, 2013(163), 67–76.
<https://doi.org/10.1002/he.20066>
- Kroger, J. (2017). Identity Development in Adolescence and Adulthood. In J. Kroger, *Oxford Research Encyclopedia of Psychology*. Oxford University Press.
<https://doi.org/10.1093/acrefore/9780190236557.013.54>
- Kunkel, T., Baker, B. J., Baker, T. A., & Doyle, J. P. (2021). There is no nil in NIL: Examining the social media value of student-athletes' names, images, and likeness. *Sport Management Review*, 24(5), 839–861. <https://doi.org/10.1080/14413523.2021.1880154>
- Lawrence, J. A., Kawachi, I., White, K., Bassett, M. T., Priest, N., Masunga, J. G., Cory, H. J., Mita, C., & Williams, D. R. (2022). A systematic review and meta-analysis of the Everyday Discrimination Scale and biomarker outcomes. *Psychoneuroendocrinology*, 142, 105772. <https://doi.org/10.1016/j.psyneuen.2022.105772>

- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of personality and social psychology*, 3(5), 551.
- McEachern, A. D. (2023). *A Qualitative Descriptive Study: Resilience & Black Female Collegiate Sports Leaders* (Order No. 30531092). Available from ProQuest Dissertations & Theses Global. (2836140855). <https://www.proquest.com/dissertations-theses/qualitative-descriptive-study-resilience-amp/docview/2836140855/se-2>
- McQuown Linnemeyer, R., & Brown, C. (2010). Career Maturity and Foreclosure in Student Athletes, Fine Arts Students, and General College Students. *Journal of Career Development*, 37(3), 616–634. <https://doi.org/10.1177/0894845309357049>
- Meggyesy, D. (2000). Athletes in big-time college sport. *Society*, 37(3), 24.
- Melendez, M. C. (2008). Black Football Players on a Predominantly White College Campus: Psychosocial and Emotional Realities of the Black College Athlete Experience. *Journal of Black Psychology*, 34(4), 423–451. <https://doi.org/10.1177/0095798408319874>
- Mission and priorities*. NCAA.org. (2021). <https://www.ncaa.org/sports/2021/6/28/mission-and-priorities.aspx>
- Murphy, G. M., Petitpas, A. J., & Brewer, B. W. (1996). Identity Foreclosure, Athletic Identity, and Career Maturity in Intercollegiate Athletes. *The Sport Psychologist*, 10(3), 239–246. <https://doi.org/10.1123/tsp.10.3.239>
- NCAA. (2024, April 1). *Estimated probability of competing in college athletics*. NCAA.org; NCAA. <https://www.ncaa.org/sports/2015/3/2/estimated-probability-of-competing-in-college-athletics.aspx>

- Noble, J., Vermillion, M., & Foster, K. (2016). Coaching environments and student-athletes: Perceptions of support, climate and autonomy. *The Sport Journal*, 19(2), 1-9.
- Newton, M., Watson, D. L., Gano-Overway, L., Fry, M., Kim, M.-S., & Magyar, M. (2007). The Role of a Caring-Based Intervention in a Physical Activity Setting. *The Urban Review*, 39(3), 281–299. <https://doi.org/10.1007/s11256-007-0065-7>
- Newton, M., Duda, J. L., & Yin, Z. (2000). Examination of the psychometric properties of the Perceived Motivational Climate in Sport Questionnaire-2 in a sample of female athletes. *Journal of sports sciences*, 18(4), 275-290.
- Nicholls, J. G., Cheung, P. C., Lauer, J., & Patashnick, M. (1989). Individual differences in academic motivation: Perceived ability, goals, beliefs, and values. *Learning and individual differences*, 1(1), 63-84.
- Noddings, N. (2005). *Caring in education*.
- Patton, L. D., Bridges, B. K., & Flowers, L. A. (2011). Effects of Greek affiliation on African American students' engagement. *College Student Affairs Journal*, 29(2), 113-123.
- Poux, K. N., & Fry, M. D. (2015). Athletes' Perceptions of Their Team Motivational Climate, Career Exploration and Engagement, and Athletic Identity. *Journal of Clinical Sport Psychology*, 9(4), 360–372. <https://doi.org/10.1123/jcsp.2014-0050>
- Rodgers, J. (2024). *The Impact of Campus Climate on Black Women in Stem Who Attended HBCUs and Non-HBCUs* (Order No. 31240803). Available from ProQuest Dissertations & Theses Global. (3072248959). <https://www.proquest.com/dissertations-theses/impact-campus-climate-on-black-women-stem-who/docview/3072248959/se-2>

- Sailes, G. A. (1993). An investigation of campus stereotypes: The myth of Black athletic superiority and the dumb jock stereotype. *Sociology of Sport Journal*, 10(1), 88-97.
- Seifriz, J.J., Duda, J.L., & Chi, L. (1992). The relationship of perceived motivational climate to intrinsic motivation and beliefs about success in basketball. *Journal of Sport and Exercise Psychology*, 14(4), 375–391. <https://doi.org/10.1123/jsep.14.4.375>
- Simiyu, W. W. N. (2012). Challenges of being a Black student athlete on US college campuses.
- Staff, T. A. C. F. (2022, May 10). NIL explained (again): How we got here, and what comes next. *The New York Times*. <https://www.nytimes.com/athletic/3301694/2022/05/10/nil-ncaa-definition/>
- Sternthal, M. J., Slopen, N., & Williams, D. R. (2011). RACIAL DISPARITIES IN HEALTH: How Much Does Stress Really Matter? *Du Bois Review: Social Science Research on Race*, 8(1), 95–113. <https://doi.org/10.1017/S1742058X11000087>
- Stokols, D. (1996). Translating Social Ecological Theory into Guidelines for Community Health Promotion. *American Journal of Health Promotion*, 10(4), 282–298. <https://doi.org/10.4278/0890-1171-10.4.282>
- Syed, M., & McLean, K. C. (2017). Erikson’s theory of psychosocial development. *The SAGE encyclopedia of intellectual and developmental disorders*. London: SAGE.
- Sykes, M. (2025, March 18). *Rules for players declaring for the NBA Draft, explained*. For the Win. <https://ftw.usatoday.com/story/sports/ncaab/2025/03/18/march-madness-nba-draft-eligibility-rules/82374527007/>

Taylor, A. (2018). *The Cost of Visibility: How NIL & Prop Betting Are Exposing College Athletes to Growing Safety Threats - SLA Blog*. Sportslaw.org. <https://blog.sportslaw.org/posts/the-cost-of-visibility-how-nil-prop-betting-are-exposing-college-athletes-to-growing-safety-threats/>

The rules of the NFL Draft | NFL Football Operations. (n.d.). Operations.nfl.com.
<https://operations.nfl.com/journey-to-the-nfl/the-nfl-draft/the-rules-of-the-draft/>

Young, A. (2025). *Black Female Division I Athlete Experience in Nil Era of College Athletics* (Master's thesis, The University of North Carolina at Chapel Hill).

Yukhymenko-Lescroart, M. A. (2014). Students and athletes? Development of the Academic and Athletic Identity Scale (AAIS). *Sport, Exercise, and Performance Psychology*, 3(2), 89–101. <https://doi.org/10.1037/spy0000009>

Yukhymenko-Lescroart, M. A. (2024). Balancing academics and athletics: Examining academic and athletic identity profiles in a large sample of NCAA Division I college athletes. *Heliyon*, 10(21), e40075. <https://doi.org/10.1016/j.heliyon.2024.e40075>

Appendices

Appendix A: IRB Documentation



EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board
Willis Building · Mail Stop 682
600 Moye Boulevard · Greenville, NC 27834
Office 252-744-2914 · Fax 252-744-2284 ·
rede.ecu.edu/umcirb/

Notification of Exempt Certification

From: Social/Behavioral IRB
To: [Morgan Moseley](#)
CC: [E. Whitney Moore](#)
Date: 10/9/2025
Re: [UMCIRB 25-000423](#)
Black College Student-Athletes' Identity Exploration & Experiences Across Institution Types and Gender Identities

I am pleased to inform you that your research submission has been certified as exempt on 10/9/2025. This study is eligible for Exempt Certification under category # 2ab.

It is your responsibility to ensure that this research is conducted in the manner reported in your application and/or protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

Document	Description
Consent letter for exempt survey research (0.01)	Consent Forms

pirate.ecu.edu/App/sd/Doc/0/S1CJPNT5588V1BDAHQVP0LIG00/fromString.html

10:56 AM

epirate.ecu.edu/App/sd/Doc/0/S1CJPNT5588V1BDAHQVP0LIG00/fromString.html

Document	Description
demographics(0.01)	Data Collection Sheet
Email recruitment script(0.01)	Recruitment Documents/Scripts
full survey(0.01)	Surveys and Questionnaires
Social media script(0.02)	Recruitment Documents/Scripts
Starter/inclusion criteria survey(0.01)	Surveys and Questionnaires
Thesis Proposal(0.01)	Study Protocol or Grant Application

For research studies where a waiver or alteration of HIPAA Authorization has been approved, the IRB states that each of the waiver criteria in 45 CFR 164.512(i)(1)(i)(A) and (2)(i) through (v) have been met. Additionally, the elements of PHI to be collected as described in items 1 and 2 of the Application for Waiver of Authorization have been determined to be the minimal necessary for the specified research.

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

IRB00000705 East Carolina U IRB #1 (Biomedical) IORG0000418
IRB00003781 East Carolina U IRB #2 (Behavioral/SS) IORG0000418

Appendix B: Inclusion Demographics

Sport (please select the ONE sport with which you are most strongly affiliated at your school):

1. Football
2. Men's Basketball
3. Women's Basketball
4. Women's Track and Field/ Cross country
5. Men's Track and Field/Cross country
6. Men's Soccer
7. Women's Soccer
8. Women's Lacrosse
9. Men's Lacrosse
10. Baseball
11. Softball
12. Women's Swimming and Dive
13. Men's Swimming and Dive
14. Men's Golf
15. Women's Golf
16. Men's Tennis
17. Women's Tennis
18. Equestrian
19. Men's Rowing
20. Women's Rowing
21. Bowling
22. Men's Wrestling
23. Women's Wrestling
24. Men's Cheer

- 25. Women's Cheer
- 26. Men's Volleyball (outdoor and indoor)
- 27. Women's Volleyball (outdoor and indoor)
- 28. Stunt
- 29. Artistic Swimming
- 30. Dance
- 31. Other (SPECIFY)

Gender

☐ Man
☐ Woman
☐ Transgender Man
☐ Transgender Woman
☐ Non-binary
☐ Prefer not to share
☐ Prefer to self-identify

Race/Ethnicity: You may select more than one to represent specific bi/multi-racial identities. If one of your identities is not listed, select those that are plus specify in the next question textbox what was not listed. Thank you.

☐ Asian/Asian American
☐ Black/African American
☐ Hispanic/Latino/Latina
☐ Middle Eastern/North African
☐ Native American
☐ Native Hawaiian/Pacific Islanders
☐ White

If you would like, you may tell us how you self-identify for your race/ethnicity beyond the options listed above:

--

What Conference do you compete in?

--

From the list provided, please select the school you currently are attending.

--

Upon meeting inclusion criterion from the above demographics, these additional demographic items will be next:

What is your current age?

What is your current starter status on this year's team?

☐ Start the game

☐ Do not start, play over 50%

☐ Do not start, play under 50%

☐ Red Shirt

☐ Other

For the 2025-2026 academic year, what is your scholarship status?

☐ Full Scholarship

☐ Partial Scholarship, more than 50%

☐ Partial Scholarship, less than 50%

☐ No athletic scholarship

☐ academic scholarship

Including all junior colleges/colleges/universities you have attended, what is your current academic year of study?

How many years have you played for this team (including this year)?

How many years have you played for the current coach
(including this year)?

Have you transferred during college?

☐ Yes

☐ No

☐ Prefer not to answer

Sexual Orientation

☐ Asexual

☐ Bisexual

☐ Gay

☐ Heterosexual (Straight)

☐ Lesbian

☐ Pansexual

☐ Queer

☐ Questioning

☐ Prefer not to share

☐ Prefer to self-identify

Appendix C: People in my Life (PIML) Scale adapted for context

following Hinderlie & Kennedy (2002) based on

Harter, S. (2012). *SOCIAL SUPPORT SCALE FOR CHILDREN: MANUAL AND QUESTIONNAIRES*, University of Denver.

Instruction: First select which of the two statements which is true for you: left or right (as demonstrated in sample items below)

Key terms:

AD support staff: coaches, strength and conditioning coaches, athletic trainers, mental performance coaches and personnel

Close friends: friends and social organizations on campus outside of athletics (e.g., fraternities and sororities, language clubs, honors societies)

Faculty members: professors, teaching assistants, academic advisors

Peers: classmates outside of athletics

Example of Incorrect Response							
	Really true for me	Sort of true for me				Sort of true for me	Really true for me
	X		Some athletes like to do fun things with a lot of other people	BUT	Other athletes like to do fun things with just a few people	X	
Example of Correct Response							
	X		Some athletes like to do fun things with a lot of other people	BUT	Other athletes like to do fun things with just a few people		
OR							
			Some athletes like to do fun things with a lot of other people	BUT	Other athletes like to do fun things with just a few people	X	

	Really true for me	Sort of true for me		BUT		Sort of true for me	Really true for me
1			Some athletes have a close friend who they can tell problems to	BUT	Other athletes don't have a close friend who they can tell problems to		
2			Some athletes have AD support staff who don't really understand them	BUT	Other athletes have AD support staff who really do understand them		
3			Some athletes have peers who like them the way they are	BUT	Other athletes have peers who wish they were different		
4			Some athletes have a faculty member who helps them if they are upset or have a problem	BUT	Other kids don't have a faculty member who helps them if they are upset or have a problem		
5			Some athletes have AD support staff who don't seem to want to hear about their athlete's problems	BUT	Other athletes have AD support staff who do want to listen to their athlete's problems		
6			Some athletes have peers they can become friendly with	BUT	Other athletes don't have peers that they can become friendly with		
7			Some athletes don't have a faculty member who helps them to do their very best	BUT	Other kids do have a teacher who helps them to do their very best		

8			Some athletes have a close friend who really understands them	BUT	Other athletes don't have a close friend who really understands them		
9			Some athletes have AD Support Staff who care about their feelings	BUT	Other athletes have AD support staff who don't seem to care very much about their feelings		
10			Some athletes have peers who sometimes make fun of them	BUT	Other athletes don't have peers who make fun of them		
11			Some athletes do have a faculty member who cares about them	BUT	Other athletes don't have a faculty member who cares about them		
12			Some athletes have a close friend who they can talk to about things that bother them	BUT	Other athletes don't have a close friend who they can talk to about things that bother them		
13			Some athletes have AD support staff who treat their athlete like a person who really matters	BUT	Other athletes have AD support staff who don't usually treat their athlete like a person who matters		
14			Some athletes have peers who pay attention to what they say	BUT	Other athletes have peers who usually don't pay attention to what they say		
15			Some athletes don't have a faculty member who is fair to them	BUT	Other athletes do have a faculty member who is fair to them		
16			Some athletes don't have a close friend who they like to spend time with	BUT	Other athletes do have a close friend who they like to spend time with		

17			Some athletes have AD support staff who like them the way they are	BUT	Other athletes have AD support staff who wish their athletes were different		
18			Some athletes don't get asked to play in games with peers very often	BUT	Other athletes often get asked to play in games by their peers		
19			Some athletes don't have a faculty member who cares if they feel bad	BUT	Other athletes do have a faculty member who cares if they feel bad		
20			Some athletes don't have a close friend who really listens to what they say	BUT	Other athletes do have a close friend who really listens to what they say		
21			Some athletes have AD support staff who don't act like what their athletes do is important	BUT	Other athletes have AD support staff who do act like what their athletes do is important		
22			Some athletes often spend their free time being alone	BUT	Other athletes spend their free time hanging with their peers		
23			Some athletes have a faculty member who treats them like a person	BUT	Other athletes don't have a faculty member who treats them like a person		
24			Some athletes don't have a close friend who cares about their feelings	BUT	Other athletes do have a close friend who cares about their feelings		

Appendix D: Daily Discrimination Scale

Williams, D. R., Yu, Y., Jackson, J. S., & Anderson, N. B. (1997). [Racial Differences in Physical and Mental Health: Socioeconomic Status, Stress, and Discrimination](#). Journal of Health Psychology, 2 (3), 335-351.

Instructions: In your daily life on your University/College campus, how often have any of the following things happened to you?

Scale	1	2	3	4	5	6
	Never	Less than a year	A couple of times a year	A couple of times a month	At least once a week	Almost every day
1. You are treated with less courtesy than other people.						
2. You are treated with less respect than other people.						
3. You receive worse service than other people in restaurants or stores.						
4. People act as though they think you are not intelligent.						
5. People act as though they are afraid of you.						
6. People act as though they think you are dishonest.						
7. People act as though they are better than you.						
8. They call you names or insult you.						
9. You are threatened or assaulted.						

10. You receive worse service than other people from student support services and groups.						
---	--	--	--	--	--	--

Follow up question: What do you think is the main reason for these experiences?

1. Your Gender
2. Your Race
3. Your Education or Income Level
4. Athletic status
5. Other (SPECIFY):

Appendix E: Academic & Athletic Identity Scale

Yukhymenko–Lescroart, M. A. (2013). Students and Athletes? Development of the Academic and Athletic Identity Scale (AAIS). *Sport, Exercise, & Performance Psychology*, 3(2), 89-101. DOI: <http://dx.doi.org/10.1037/spy0000009>

Instructions: “How central to your sense of who you are is each of the following attributes?”

		not central to my sense of self (1)	2	3	4	5	very central to my sense of self (6)
1	Being a capable student						
2	Being satisfied with my academic work						
3	Doing well in school						
4	Getting good grades						
5	Having high GPA						
6	Being a capable athlete						
7	Being a good athlete						
8	Being athletic.						
9	Being proud to be an athlete						
10	Being satisfied with my athletic achievements						
11	Doing well during sport competitions						

Appendix F: Student Occupational Engagement Scale (OES)

Cox, D. W., Krieschok, T. S., Bjornsen, A. L., & Zumbo, B. D. (2015). Occupational Engagement Scale–Student: Development and Initial Validation. *Journal of Career Assessment*, 23(1), 107–116. <https://doi.org/10.1177/1069072714523090>

Instructions: How well does each statement describe you?

Student Occupational Engagement Scale

Strongly Disagree	Disagree	Not Sure	Agre e	Strong ly Agree
----------------------	----------	-------------	-----------	-----------------------

1. I talk about my career choices with family or friends.
2. I have contact with people in fields I find interesting.
3. I gain hands on experience that I might use in the future.
4. I volunteer in an area that I find interesting.
5. I attend presentations or talks related to a career I might find interesting.
6. I ask people in social settings about what they do for a living or what they are interested in doing.
7. I visit places I am interested in working so I can learn more about them.
8. I pursue opportunities in life because I just know they will come in handy.
9. I do lots of things that are interesting to me.

Appendix G: Caring Climate Scale

Newton, M., Fry, M., Watson, D., Gano-Overway, L., Kim, M.-S., & Magyar, M. (n.d.). *PSYCHOMETRIC PROPERTIES OF THE IN A PHYSICAL ACTIVITY SETTING*. *Revista de Psicología del Deporte*, 16(1), 67-84.

Instructions: On my team...

		Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1	Athletes are treated with respect					
2	Coaches respect athletes					
3	Coaches are kind to athletes					
4	Coaches care about athletes					
5	Athletes feel that they are treated fairly					
6	Coaches try to help athletes					
7	Coaches want to get to know all the athletes.					
8	Coaches listen to athletes.					
9	Teammates like athletes for who they are.					
10	Coaches accept athletes for who they are.					
11	Athletes feel comfortable.					
12	Athletes feel safe.					
13	Athletes feel welcome every day.					

Appendix H: Perceived Motivational Climate in Sport Questionnaire (PMCSQ)

Fry, M., Duda, J., & Chi, L.-K. (1993). The Perceived Motivational Climate in Sport Questionnaire: Construct and Predictive Validity. *Journal of Sport & Exercise Psychology*, 15, 172–183. <https://doi.org/10.1123/jsep.15.2.172>

Directions: As you read each of the following statements think about your experience with coaches and staff. Please choose the number on the 5-point scale listed below that best describes how you truly feel. There is no right or wrong answer, so please answer honestly.

On this team . . .

Strongly Disagree Disagree Not Sure Agree Strongly Agree

- 1 Athletes feel good when they do better than their teammates.
- 2 Trying hard is rewarded.
- 3 Athletes are punished for mistakes.
- 4 The coaches focus on skill improvement.
- 5 Athletes are taken out of the game/ off the field for mistakes.
- 6 Each athlete's improvement is important.

- 7 Out-playing teammates is important.
- 8 Athletes try to learn new skills.
- 9 Coaches pay most of their attention to “the stars”.
- 10 Athletes are encouraged to work on their weaknesses.
- 11 Doing better than others is important.
- 12 The coaches want athletes to try new skills.
- 13 The coaches favor some athletes over others.
- 14 Athletes like competing against good teams.
- 15 Athletes are encouraged to outplay other teammates.
- 16 All athletes play an important role on the team.
- 17 Every athlete wants to be the one with the most

points, goals, yards, best
time, etc.

- 18 All athletes get playing
time.
- 19 Only the top athletes “get
noticed”.
- 20 Athletes are afraid to
make mistakes.
- 21 Only a few athletes can be
the “stars”.