Student-Athlete Climate Study (SACS)
Final Report

Center for the Study of Higher Education
The Pennsylvania State University

Susan (Sue) Rankin
Dan Merson
Carl H. Sorgen
India McHale
Karla Loya
Leticia Oseguera

June 2011
Student-Athlete Climate Study (SACS)

Final Report

Center for the Study of Higher Education

The Pennsylvania State University

Susan (Sue) Rankin
Dan Merson
Carl H. Sorgen
India McHale
Karla Loya
Leticia Oseguera

June 2011

This project was supported by a grant from the National Collegiate Athletic Association (NCAA). Other contributors to this project included Mary Wilfert, Jan Bortner, and Brian Patchcoski.
## Table of Contents

**Executive Summary** .............................................................................................................................................. i

Sample Characteristics and Outcome Measures .................................................................................................. iii

Preliminary Differences in Academic Success, Athletic Success, and Athletic Identity

Outcome Measures by Selected Demographic Characteristics .................................................................................. vi

Student-Athlete Experiences with Harassment ........................................................................................................ vii

Climate and Its Influences on Educational and Sport-Related Outcomes ............................................................... ix

  Findings across subgroups ....................................................................................................................................... x

Summary .................................................................................................................................................................... xvii

**Introduction** .......................................................................................................................................................... 1

Research Team/Advisory Board .................................................................................................................................. 2

Impetus for the Study .................................................................................................................................................. 3

Purpose of the Study and Research Questions ......................................................................................................... 3

Report Organization .................................................................................................................................................... 4

**Review of the Literature** ....................................................................................................................................... 5

Campus Climate ........................................................................................................................................................ 7

  Campus climate and student outcomes ................................................................................................................ 8

  Differential perceptions of climate based upon social group membership ......................................................... 11

Student-Athletes’ Academic Success ......................................................................................................................... 13

Student-Athletes’ Athletic Success ............................................................................................................................. 16
Individual Demographics and Institutional Characteristics

Racial identity in intercollegiate athletics.

Gender identity in intercollegiate athletics.

Sexual identity in intercollegiate athletics.

Divisional status in intercollegiate athletics.

Featured and non-featured sport status in intercollegiate athletics.

Summary

Research Methodology

Research Design

Data collection and preparation

Conceptual framework

Survey instrument

Scales of interest

Scale Development

Factor extraction

Factor retention

Factor rotation and interpretation

Hierarchical factor analysis

Scale testing

Factor scale score calculations
Appendix A  Student-Athletics Climate Study (SACS) Survey Instrument ........................ 165

Appendix B Factor Items and Additional Harassment Information ................................. 200
Executive Summary

College campuses are complex social systems. They are defined by the relationships between faculty, staff, students, and alumni; institutional policies; structural frameworks; institutional missions, visions, and core values; institutional history and traditions; and larger social contexts (Hurtado, Milem, Clayton-Pedersen, & Allen, 1998). In the midst of this complexity and while acknowledging the unique demands faced by student-athletes, the National Collegiate Athletic Association (NCAA) has sought to ensure student-athlete well-being since the organization’s inception (Crowley, 2006).

The NCAA’s core purpose is to make the student-athlete’s athletic and educational experiences positive. The NCAA and its member institutions strive to meet these goals through the use of policies, procedures, and programs (initial eligibility standards, the Academic Performance Program, CHAMPS/Life Skills Program, etc.). In the same spirit, the NCAA has supported the Student-Athlete Climate Study (SACS), which aims to expand the knowledge base concerning student-athletes’ well-being through a comprehensive analysis of how student-athletes experience and perceive the climate on their campus, in intercollegiate athletics, and on their teams. Conducted by a team of researchers at The Pennsylvania State (Penn State) University’s Center for the Study of Higher Education, this study explores the relationship between student-athletes’ experiences and perceptions of climate with three outcomes: Academic Success, Athletic Success, and Athletic Identity. Climate is defined as the “current attitudes, behaviors, and standards of employees and students that concern the access for, inclusion of, and level of respect for individual and group needs, abilities, and potential” (Rankin & Reason, 2008, p. 264). Climate in this study was measured using seven scales: 1) Perceptions of respect, 2)
Perceptions of climate, 3) Personal comfort with teammate diversity, 4) Interactions with faculty; 5) Interactions with athletic personnel, 6) Perceptions of diversity leadership from athletic personnel, and 7) Perception of one’s athletic department addressing discrimination. The conceptual model used as the foundation for the SACS framework was based on work by Smith et al. (1997), Rankin (2003), and Rankin and Reason (2008) and was expanded to include additional characteristics unique to student-athletes’ experiences.

The 2008 pilot survey used questions from Rankin’s Campus Climate Survey (2003) as well as from the “It Takes a Team! Survey on Student-Athlete’s Perspectives on Lesbian and Gay Teammates and Coaches” developed by Pat Griffin (Griffin, Perrotti, Priest, & Muska, 2002). The research team piloted the survey at six institutions and garnered 1,332 respondents. Based on further review of the literature, consultation with experts in the fields of intercollegiate athletics and higher education, and analysis of pilot data (which included both quantitative and qualitative data), the research team modified the original instrument to include additional information about factors that relate to the climate for student-athletes, including more robust measures of our outcomes. The modified survey instrument also included space for student-athletes to provide recommendations to improve the climate. The final survey, which was distributed on-line, included 68 questions that gauged a range of student-athlete characteristics, experiences, perceptions, and outcomes. All 1,281 member institutions of the NCAA were invited to participate in SACS. One hundred ninety-five institutions agreed to participate. Ultimately, 8,481 student-athletes representing 164 NCAA institutions participated in the study. The results of this survey are captured in this report, which includes descriptions of:

- the purposes of this study,
- the theoretical foundations that guided the research,
the various methods employed,

• a detailed description of the sample,

• findings in regard to student-athletes’ experiences of harassment,

• an exploration of how the three outcomes of academic success, athletic success, and athletic identity vary based on student demographics,

• the relationship between student-athletes’ experiences of climate and the three outcomes, and

• a discussion of the findings and avenues for future research.

This executive summary includes a bulleted list of the close ended survey questions (i.e., quantitative results) and a review of the open ended survey questions (i.e., qualitative findings) uncovered in the analyses.

Sample Characteristics¹ and Outcome Measures

A total of 8,481 surveys were submitted from student-athletes at 164 NCAA member institutions. After weighting the dataset so it accurately represents these institutions, the overall total is 8,018 respondents.

- The overall response rate for SACS was 15%².
  - Women had a 21% response rate while the men’s response rate was 10%.
  - Student-athlete response rates by race/ethnicity ranged from a low of 8% for Black, non-Hispanic respondents to a high of 33% for American Indian/Alaskan Native respondents.

---

¹ The sample sizes (n) reported across statistical analyses may vary due to missing data and/or rounding.
² This response rate parallels those of other national student surveys.
Response rates by year in school ranged from 14% among first and second years to 17% among third years.

Response rates by Division ranged from 13% to 19%.

Three thousand four hundred eighty (43%) student-athletes in this study identify as women and 4,531 (57%) identify as men. Seven respondents identified as Transgender.

Student-Athletes of Color\(^3\) comprise 24% (n = 1,945) of the sample while White, non-Hispanic student-athletes comprise 76% (n = 6,073) of the sample.

Ninety-five percent (n = 7,625) of the sample identify as heterosexual student-athletes while 5% (n = 394) identify as Lesbian, Gay, Bisexual, or Questioning (LGBQ).

The sample includes 2,542 (32%) first-year student-athletes, 2,028 (25%) second-year student-athletes, 1,730 (22%) third-year student-athletes, and 1,719 (21%) student-athletes in their fourth year or more (“Fourth +”).

Student-athletes from each of the five NCAA Divisions were represented in the final sample.

- 1,562 (20%) respondents compete in Division I – FBS
- 1,827 (23%) respondents compete in Division I – FCS,
- 691 (9%) respondents compete in Division I – non-football,
- 1,671 (21%) respondents compete in Division II, and
- 2,267 (28%) respondents compete in Division III.

---

\(^3\) While the authors recognize the vastly different experiences of people of various racial identities (e.g., Chicano versus African American or Latino(a) versus Asian American), and those experiences within these identity categories, we collapsed these categories into Student-Athletes of Color and White, non-Hispanic for many of the analyses due to the small numbers in individual race and ethnicity categories.
27% of the respondents (n = 2,149) participate in featured sports\textsuperscript{4} at their respective institutions. The total sample includes respondents from each of the NCAA’s 23 Championship sports.

Less than 2% of the respondents (n = 119) report having a physical disability (hearing loss, vision loss, etc.). Close to 3% (n = 223) report having a learning disability (dyslexia, dyscalculia, etc.) and 4% of student-athletes in the sample (n = 312) report having a psychological condition (ADHD, depression, etc.).

About 75% of the respondents (n = 5,972) identify with a Christian religion.

- Thirteen percent of the students in the sample (n = 1,058) report no religious affiliation and 4% (n=328) report being spiritual, but with no religious affiliation.
- Jewish, Muslim, Hindu, Buddhist, student-athletes and those of other faiths each comprise less than 2.5% of the sample.

Twenty-nine percent of respondents (n = 2,303) report having a college grade point average (GPA) of 3.5 (A-) or higher while 12% (n = 960) indicate that they have a GPA less than 2.5 (C+ or lower).

Student-athletes rely on a variety of resources to pay for college including:

- Family contributions (55%, n = 4,386),
- Athletic scholarships (47%, n = 3,749),
- Loans (46%, n = 3,708),
- Academic scholarships (43%, n = 3,484)
- Personal contributions/income from jobs (22%, n = 1,736),

\textsuperscript{4} In literature that explores the difference between sports teams, teams are most often categorized as “high-profile” and “low-profile” or “revenue-generating” and “non-revenue-generating.” With the aim of considering the unique characteristics of participating institutions' respective programs, the research team asked each institutional contact to provide a list of its institution's “featured” and “non-featured” sports teams.
Pell grants (16%, n = 1,266), and
• Need-based institutional grants (14%, n =1,156).

o Respondents represent every geographic region of the United States, with the majority attending institutions in the mid-east region of the country (23%, n = 1,874), followed by the Great Lakes region (19%, n = 1,521). The smallest proportion, 3% of the respondents (n = 271), are from the Rocky Mountains region.

o Forty-one percent of student-athletes indicate they are not involved in any student organizations besides their varsity athletic participation. However, 59% of the respondents do report involvement in one or more student organizations beyond their athletic participation. Specifically,
  • 22% (n = 1,777) are involved in intramural or club sports,
  • 19% (n = 1,545) indicate they are involved in academic and honor societies,
  • 17% (n = 1,340) are involved with a Student Athlete Advisory Committee (SAAC),
  • 12% (n = 942) are active in religious or spiritual organizations, and
  • 10% (n = 819) participate in service organizations.

Preliminary Differences in Academic Success, Athletic Success, and Athletic Identity Outcome Measures by Selected Demographic Characteristics

The three student outcomes examined in this study varied by selected demographics of interest.

  o Student-athletes from Divisions I and II showed statistically equal levels of academic success that were, on average, lower than the average for student-athletes from Divisions II and III.
o Student-athletes from Divisions I and II reported equal levels of athletic success, while those from Division I - FBS and both Divisions II and III showed statistically equal, and slightly lower, levels of athletic success than their Division I and II counterparts.

o Student-athletes in Division III exhibited a significantly lower level of athletic identity than those in the other divisions.

o Women student-athletes reported higher levels of academic and athletic success but lower athletic identity than their male student-athlete peers.

o Student-Athletes of Color reported lower scores on academic success while White Student-Athletes reported lower scores on athletic identity. There were no differences between Student-Athletes of Color or White Student-Athletes in their reported academic success.

o Student-athletes in featured sports reported lower scores on academic and athletic success but higher scores on athletic identity relative to their peers in non-featured sports.

Student-Athlete Experiences with Harassment

Nine percent of respondents reported they had personally experienced offensive, hostile, exclusionary, or intimidating conduct that interfered unreasonably with their ability to work or learn on campus (hereafter referred to as harassment) within the past year.

o Women, Student-Athletes of Color, sexual minorities, and third- and fourth-year students reported such harassment more than their counterparts. There were no significant differences across NCAA division or sport.

---

5 Under the United States Code Title 18 Subsection 1514(c)1 harassment is defined as "a course of conduct directed at a specific person that causes substantial emotional distress in such a person and serves no legitimate purpose" (http://www.eeoc.gov/laws/vii.html). In higher education, legal issues discussions define harassment as any conduct that unreasonably interferes with one’s ability to work or learn on campus. The questions used in this survey to uncover participants’ personal and observed experiences with harassment were designed using these definitions.
Athletic performance (44%) was the most cited reason for harassment\(^7\). The bases for harassment were often related to the respondents’ participation in sport. However, 30% of respondents reported they were unsure what the basis was for the harassment they experienced.

Women, Student-Athletes of Color, sexual minorities, and third and fourth year students perceived such harassment more often than their counterparts. Harassment tended to take the form of coaches playing favorites (43%), being deliberately ignored or excluded (42%), and being subjected to derogatory remarks (38%). This behavior occurred most frequently at practice or during a competition (64%).

Coaches and other student-athletes were most often the perpetrators of the reported harassing behavior.

Few student-athletes accessed university resources in the aftermath of the incident(s).

A number of the incidents described by respondents suggest that comments made “in passing” by coaches and teammates have lasting and profound effects on student-athletes’ psychological, physical, and emotional well-being, as well as their commitment to their team or postsecondary education in general. Student-athletes’ qualitative comments also suggested that action (or lack thereof) on the part of coaches and other members of the university community influenced the eventual institutional responses related to the incidents of harassment.

---

\(^6\) Sexual minorities are defined, for the purposes of this report, as people who identify as Lesbian, Gay, Bisexual, or Questioning (LGBQ).

\(^7\) Percentages do not sum to 100% because participants could mark more than one response item.
Climate and Its Influences on Educational and Sport-Related Outcomes

Drawn from a structural equation model testing the relationship between climate and the three outcomes of interest, the overall findings concerning student-athletes’ experiences and perceptions of climate are offered in the points below. Overall, of the seven climate variables tested, two had an influence on all three outcomes: 1) faculty-student interaction and 2) interactions with athletic personnel. However, interactions with faculty and interactions with athletic personnel did not always work in concert. While both tended to have a positive influence on student-athletes’ academic success ($\beta_{8,4} = 0.363$, $\beta_{8,5} = 0.152$, respectively) and athletic success ($\beta_{9,4} = 0.047$, $\beta_{9,5} = 0.087$, respectively), student-athletes that interacted with faculty tended to report lower levels of athletic identity ($\beta_{10,4} = -0.072$) while student-athletes that interacted with athletic personnel tended to report higher levels of athletic identity ($\beta_{10,5} = 0.087$). The extent to which student-athletes perceived diversity leadership from athletic personnel had no significant influence on any of the outcomes of interest.

- Five aspects of climate had an influence on student-athletes’ academic success (in order of influence): faculty-student interaction ($\beta_{8,4} = 0.363$), athletic personnel interaction ($\beta_{8,5} = 0.152$), perceptions of climate ($\beta_{8,2} = 0.133$), personal comfort with teammate diversity ($\beta_{8,3} = 0.077$), and perceptions of respect ($\beta_{8,1} = 0.039$).

- Of the 11 different significant relationships depicted in the model (i.e., mediating climate variables onto each outcomes), the strongest relationship is between faculty-student interaction and academic success, as suggested by the largest coefficient of 0.363. This suggests that if there is concern for student-athletes’ academic success, interactions with faculty will yield the largest “pay-off.”
Similarly, interactions with athletic personnel and academic success have the second strongest relationship in the model ($\beta_{8,5} = 0.152$).

- Only two aspects of climate had an influence on student-athletes’ athletic success: athletic personnel interaction ($\beta_{9,5} = 0.087$) and faculty-student interaction ($\beta_{9,4} = 0.047$).

- Four aspects of climate had an impact on student-athletes’ athletic identity.
  - The largest influence was the extent to which student-athletes perceived that the athletic department addressed discrimination ($\beta_{10,7} = 0.150$).
  - Interactions with athletic personnel also had a positive influence on student-athletes’ sense of athletic identity ($\beta_{10,5} = 0.087$).
  - The more comfortable they were with teammate diversity, the less student-athletes’ identified with being an athlete, as indicated by the negative coefficient of -0.075.
  - Similarly, student-athletes who interacted more with faculty were less likely to have a strong athletic identity ($\beta_{10,4} = -0.072$).

**Findings across subgroups.** Other findings highlight the complexity of climate and the need to consider a range of student-athletes’ experiences and perspectives. While some aspects of climate are salient for all student-athletes, when considered across a range of demographic and institutional characteristics (i.e., race, gender, sexual identity, Division, and sport), some aspects of climate are more salient than others.

**Race.** We explored the relationship between climate and racial/ethnic identity for Student-Athletes of Color and White student-athletes.

- In general, Student-Athletes of Color tended to report lower levels of academic success relative to their White student-athlete peers ($\gamma_{8,1} = -0.144$). However, there were no
differences between White student-athletes and Student-Athletes of Color in regard to
self-reports of athletic success or athletic identity.

- Student-Athletes of Color experienced a more negative climate than their White student-
athlete peers on two of the seven climate variables tested, which compounds their already
lower levels of academic success.
  - Student-Athletes of Color reported more negative perceptions of respect \( (\gamma_{1,1} = -0.105) \) and more negative perceptions of climate \( (\gamma_{2,1} = -0.077) \). In turn, for
    Student-Athletes of Color, the mediation effect of perceptions of respect and
    perceptions of climate had a negative indirect influence on their academic success
    (indirect effect = -0.014).

**Gender.** We explored women and men student-athletes’ academic success, athletic success,
and athletic identity, particularly in regard to the influence of climate on these outcomes.

- In the entire model, compared to all other subgroups (i.e., Student-Athletes of Color,
  LGBQ student-athletes, etc.), climate’s influence on academic success was most
  profound for women student-athletes, as suggested by the largest indirect effect of 0.079.
- Women student-athletes tended to report greater levels of academic and athletic success
  \( (\gamma_{8,2} = 0.082 \text{ and } \gamma_{9,2} = 0.155, \text{ respectively}) \) and lower levels of athletic identity \( (\gamma_{10,2} = -0.148) \) compared to men student-athletes.
- Climate influenced women-student athletes’ scores on each of the outcomes investigated.
  - Women student-athletes tended to report greater personal comfort with teammate
diversity \( (\gamma_{3,2} = 0.217) \), perceptions of climate \( (\gamma_{2,2} = 0.212) \), perceptions of
  respect \( (\gamma_{1,2} = 0.210) \), and faculty-student interaction \( (\gamma_{4,2} = 0.072) \). In turn, each
of these four climate factors has a positive influence on academic success (indirect effect = 0.079).

- The most influential aspect of climate on women’s academic success was their perception of respect, followed by interactions with faculty.

- Women student-athletes tended to have more positive perceptions of climate as compared to men student-athletes, which bolstered their academic success (total effect = 0.161).

- In regard to athletic success, only one climate variable acted as a mediating influence: interactions with faculty members.

- Women had higher scores on Faculty-Student Interaction ($\gamma_{4,2} = 0.072$), which, in turn, had a positive influence on their sense of athletic success ($\beta_{9,4} = 0.047$; indirect effect = 0.003) and reinforced their overall sense of athletic success (total effect = 0.158).

- The effects of climate on women student-athletes’ sense of athletic identity tended to be negative (indirect effect = -0.021).

- Women reported greater personal comfort with teammate diversity ($\gamma_{3,2} = 0.217$) and greater levels of interaction with faculty members ($\gamma_{4,2} = 0.072$), both of which were negatively related to athletic identity ($\beta_{10,3} = -0.075$ and $\beta_{10,4} = -0.072$, respectively) and contributed to a sense of athletic identity that, generally, tended to be less salient than men’s (total effect = -0.169).

**Sexual identity.** We also evaluated the differential influence of climate on the outcomes for both LGBQ and heterosexual student-athletes.
As suggested by the lack of direct effects of being LGBQ on the outcomes, sexual identity alone is not a significant predictor of academic success, athletic success, or athletic identity. However, LGBQ student-athletes generally experienced a more negative climate than their heterosexual peers, which adversely influenced their athletic identities and reports of academic success.

LGBQ student-athletes reported lower scores on four climate variables: Perceptions of Climate ($\gamma_{2,1} = -0.077$), Perceptions of Respect ($\gamma_{2,1} = -0.105$), Athletic Department Addresses Discrimination ($\gamma_{7,3} = -0.247$), and Diversity Leadership from Athletic Personnel ($\gamma_{6,3} = -0.182$).

In the entire model, compared to all other subgroups (Student-Athletes of Color, women student-athletes, etc.), climate’s influence on athletic identity was most profound for LGBQ student-athletes, as suggested by the largest indirect effect on athletic identity of -0.037.

While visible diversity leadership from athletic personnel had no influence on the outcomes in the SACS study, athletic identity tended to be less salient for LGBQ student-athletes as a result of their lower tendency to report that the athletic department addresses discrimination (indirect effect = -0.037).

As a result of LGBQ Student-athletes’ lower perceptions of respect and of climate, they tend to report lower levels of academic success (indirect effect = -0.034).

**Divisional status.** The influence of climate on student-athletes’ academic success, athletic success, and athletic identity were compared across Divisions I, II, and III.

Without consideration given to climate, Division III student-athletes tended to have a less salient athletic identity than their Division I and Division II peers ($\gamma_{10,4} = -0.132$). There
were no other apparent differences, or direct effects, between Division I, II, or III student-athletes in regard to academic success and athletic success.

- Differences between the outcomes emerge when climate is taken into consideration.
  - Division I student-athletes reported greater levels of personal comfort with teammate diversity ($\gamma_{3,6} = 0.066$) and athletic personnel interaction ($\gamma_{5,6} = 0.067$) than Division II and III student-athletes. However, they tended to have less positive perceptions of climate ($\gamma_{2,6} = -0.060$).
  - Division I student-athletes’ perceptions of climate have repercussions for each of the outcomes in the model. 
    - The effect of participation in Division I on academic success was mediated through all three of the significant climate variables (indirect effect = 0.007).
    - The effect on athletic success was only mediated through athletic personnel interaction (indirect effect = 0.006).
    - The effect on athletic identity, as mediated through both athletic personnel interaction and personal comfort with teammate diversity, was barely non-significant ($p = 0.003$).
  - Significantly higher levels of interaction with faculty members influenced Division II and Division III student-athletes’ academic success, athletic success, and athletic identity.
    - The effect of participating in Division II is mediated through Faculty-Student Interaction and indirectly effects Division II student-athletes’
academic success (indirect effect = 0.048), athletic success (indirect effect = 0.006), and athletic identity (indirect effect = -0.009).

✓ Also mediated by Faculty-Student Interaction, there were positive effects of participation in Division III on academic success (indirect effect = 0.054) and athletic success (indirect effect = 0.007). There was a small, negative indirect effect of being in Division III on athletic identity (indirect effect = -0.011).

**Featured and non-featured sports.** With the aim of considering the unique characteristics of participating institutions' respective programs, rather than categorize student-athletes' sports membership as either “revenue-generating” or “high profile,” the research team asked each institutional contact to provide a list of the institution's “featured” and “non-featured” sports teams.

- Student-athletes who competed in featured sports tended to report a significantly greater sense of athletic identity ($\gamma_{10,7} = 0.081$), but a significantly lower sense of athletic success than student-athletes in non-featured sports ($\gamma_{9,7} = -0.113$). There were no significant differences in regard to their reports of academic success.

- Interaction with athletic personnel was the only aspect of climate that influenced the outcomes of interest.
  - Featured sport student-athletes’ tended to have greater levels of interaction with athletic personnel ($\gamma_{5,7} = 0.111$), which in turn, yielded significantly greater levels of academic success ($\beta_{8,4} = 0.363$), athletic success ($\beta_{9,5} = 0.087$), and athletic identity ($\beta_{10,5} = 0.087$).
While there was no difference between featured and non-featured sports team members’ academic success in general (as indicated by the lack of a direct effect), when interaction with athletic personnel was considered, featured sport student-athletes had higher levels of academic success than their non-featured sport peers. Therefore, interaction with athletic personnel appears to be the only aspect of climate that might foster significantly greater levels of academic success for student-athletes in featured sports.

**Summary of Qualitative Comments.** 4,264 respondents provided more than 4,500 comments across six open-ended survey questions. In regard to the various influences of climate on academic success, athletic success, and athletic identity, qualitative comments certainly support the quantitative findings. However, these qualitative data capture the particular fine-grained experiences of individual student-athletes, rather than the general “big picture” (such as that offered by quantitative analyses). In turn, individuals’ descriptions of climate as they have perceived and experienced it varies, with some student-athletes offering descriptions of athletic department and campus climates that bolster their academic and athletic success and respect students and student-athletes alike regardless of athletic identity or other salient characteristics. On the other hand, some student-athletes described one or two particular instances (some positive and some negative) that had profound, lasting effects on their collegiate experiences. The qualitative findings suggest that student-athletes’ experience are dynamic and varied. Their perspectives are shaped by an intricate and dynamic web of relationships with peers, faculty, staff, coaches, and other athletic personnel, which are set against a larger backdrop of institutional characteristics and social contexts.
Summary

The dataset collected for this project is comprehensive and diverse. It includes responses from student-athletes of each identity and from all geographic areas, sports, and NCAA divisions. Our analyses suggest that, consistently, Women, White, and Heterosexual student-athletes, as well as those in Divisions II and III report higher levels of academic success than their counterparts. Women student-athletes also show higher levels of athletic success. Finally, Men student-athletes, Student-Athletes of Color, and those in featured sports have higher levels of athletic identity.

In addition, it’s clear that climate matters. Six of the seven climate scales influenced the outcomes, and differences in outcomes based on sexual orientation, Division, and featured sport participation appeared or became more salient when climate was taken into account. Positive perceptions of climate lead to increases in student-athlete outcomes in every relationship except for the influences of personal comfort with team diversity and faculty-student interaction on athletic identity. The strongest impact by far was the influence of student-athletes’ interactions with faculty members on their academic success.

These results indicate that experiences and perceptions of climate affect student-athlete well-being. And student-athletes do experience harassment—women, under-represented minorities, LGBQ, and upper-class student-athletes disproportionately so. Typically harassment is based on sport-related reasons and is usually perpetrated by coaches and other student-athletes, most frequently at practice or during competition. This “in-house” harassment, whether intentional or not, is the most prevalent kind experienced by our respondents. It follows, therefore, that athletic departments have the power to improve the collegiate experiences of the
student-athletes in their charge through cooperation with athletic personnel, student-athletes, and faculty members at their institutions.
**Introduction**

The National Collegiate Athletic Association (NCAA) has sought to ensure student-athlete well-being since the organization’s inception (Crowley, 2006). The NCAA’s core purpose is to make the student-athlete’s athletic and educational experiences positive. The NCAA and its member institutions strive to meet these goals through an array of policies, procedures, and programs (i.e., initial eligibility standards, the Academic Performance Program, CHAMPS/Life Skills Program, etc.).

The current project also stems from the desire to ensure student-athlete well-being. Our goal is to expand the knowledge base concerning student-athletes’ well-being through a comprehensive analysis of how student-athletes experience and perceive the climate on their campus, in intercollegiate athletics, and on their teams.

The Student-Athlete Climate Study (SACS) is a national study of climate as perceived and experienced by intercollegiate student-athletes. *Climate* is defined as the “current attitudes, behaviors, and standards of employees and students that concern the access for, inclusion of, and level of respect for individual and group needs, abilities, and potential” (Rankin & Reason, 2008, p. 264). For the purposes of this study, climate includes the campus climate, the climate within the athletic department, and the climate associated with individual athletic teams.

SACS explores the impact of climate on three key outcomes of the intercollegiate student-athlete experience: (a) student-athletes’ academic success, (b) student-athletes’ athletic success, and (c) athletic identity.

---

8 Academic Success is based on the students’ perception of their academic and intellectual development (Pascarella & Terenzini, 1980).

9 Athletic success focuses on maximizing athletic potential, and includes evidence of athletic awards, scholarships, playing time, and post-season play.
A 2008 pilot study that included six institutions and 1,352 student-athletes informed the development of the final SACS survey instrument which was then used to collect data from 8,481 student-athletes at 164 institutions between January 15, 2010 and April 1, 2010. The project includes institutions from all NCAA Divisions (i.e., Division I - FBS, Division I - FCS, Division I - non-football, Division II, and Division III) and student-athletes from all 23 NCAA Championship Sports. As a result, the project’s national scope provides the research team with the rare opportunity to present a comprehensive picture of the intercollegiate student-athlete experience.

SACS provides researchers and administrators with a description of student-athlete perceptions of how climate influences their academic and athletic success. Understanding the climate’s impact on intercollegiate athletics helps identify the factors that enhance or inhibit Academic Progress Rate (APR) scores, graduation rates, and student-athletes’ experiences.

**Research Team/Advisory Board**

SACS was conducted by a team of researchers from the Center for the Study of Higher Education at the Pennsylvania State University. The research team and the advisory board included a faculty member (and former Division I coach), an intercollegiate athletics administrator, a NCAA administrator, graduate assistants, and current student-athletes. Through the course of the project, the team also consulted with experts in intercollegiate athletics, college student outcomes, and research methodology.

---

10 Athletic identity is defined as the extent to which a person identifies with the role of an athlete (Brewer, van Raalte, & Linder, 1993).
Impetus for the Study

SACS was born from necessity and concern. Current research surrounding student-athletes’ collegiate experiences is limited. In an overview of the literature on the student-athlete experience, Gayles (2009) discusses a limited number of data sources available for studying the experiences of student-athletes on college campuses and highlights the need for more national-level data to address complex questions concerning this population. Given this, Penn State’s Center for the Study of Higher Education undertook the pilot study to better understand student-athletes’ perception of climate.

The SACS pilot study revealed concerns regarding student-athletes’ well-being. In particular, student-athletes raised concerns regarding the influence of harassment on athletic and academic performance. In addition, student-athletes’ perceptions of climate varied based on their individual backgrounds (race, gender, team, etc.). This suggests that fostering a positive climate is a dynamic and complex process. Given these findings, the Penn State research team with support from the NCAA undertook a wide-ranging study of the student-athlete experience. The result is SACS. The theory and methods that undergird this study are based on previous research, reputable scales, and established research methods that are detailed in the review of literature and methodology section, respectively.

Purpose of the Study and Research Questions

SACS assesses how the climate surrounding intercollegiate athletics influences key aspects of student-athletes’ experiences. We examine the cumulative effects of campus climate, as well as team and athletic department climate, on student-athletes’ academic and athletic
success, as well as athletic identity. We highlight the differences and similarities among particular student-athlete groups (i.e., by sport, race, gender, division, etc.).

The research questions include:

1. How do student-athletes currently experience and perceive the climate on their teams, in intercollegiate athletics, and in the larger campus community?
2. How do the campus and athletic communities respond to student-athlete issues related to climate?
3. What are the factors within the climate that shape student-athlete identity and contribute to student-athlete academic and athletic success?

**Report Organization**

The report contains seven sections. The executive summary, the first section, consists of three components: a description of the respondents’ various characteristics highlights of the quantitative findings, and an overview of the qualitative findings. The executive summary serves as a synopsis of the study’s participants and the major findings.

The second section, the introduction, details the purpose and provides an overview of the study. The third section of the report is the literature review. In this review, we review previous research concerning: (a) campus climate and its effect on educational outcomes (b) student-athletes’ academic success, (c) student-athletes’ athletic success, (d) athletic identity, and (e) the influence of individual demographics and institutional characteristics on student-athletes’ collegiate experiences. Following the literature review an overview of the research methodology is presented in the fourth section. We describe the conceptual framework and then focus on the methods related to the structural equation modeling (SEM) analysis, which measures the effects of climate on the experiences of student-athletes.
The fifth section offers the project’s descriptive findings and is divided into two sub-sections. First, we profile the student-athletes that participated in the study. Second, we provide an analysis of the respondent’s experiences with harassment. The sixth section presents the results of the SEM. The seventh and final section provides a discussion of the findings and implications for future research.

**Review of the Literature**

College students’ experiences with their campus environment influence both their learning and developmental outcomes (Pascarella & Terenzini, 2005b). Negative campus climates hinder educational attainment and healthy development. Typically, students who experience a campus as supportive are more likely to experience positive learning outcomes (Milem, 2003; Pascarella & Terenzini, 2005b; Reason, Terenzini, & Domingo, 2006). Recent research indicates that students experience campus climates differently based upon social group membership (Chang, 2002; M. H. Miller, Anderson, Cannon, Perez, & Moore, 1998). Understanding how students from various social groups experience campus climate thus should be important to higher education professionals in designing more effective interventions and removing obstacles to the success of all students.

Intercollegiate athletics is an important part of the climate and culture at many institutions of higher education. Participating in sports can benefit a student’s development while in college, but if the environment is not supportive, it could also impede it. Climate, both institutional and within respective athletic departments, may affect student-athlete retention. Melendez (2007) notes that “the ability to adjust to college life and maintain enrollment is affected by a number of non-academic issues, such as finances, loneliness, health, interpersonal
struggles, autonomy, and change” (p. 40). Student-athletes also face challenges beyond those of non-athletes. Carodine, Almond, and Gratto (2001) report that student-athletes must cope with scrutiny from the public as well as serious time demands in addition to maintaining academic success. Student-athletes also contend with the potential stereotype threat that accompanies the “dumb jock” stereotype, which has been reported to negatively affect student-athletes’ academic performance (Harrison, 2007), and contribute to goal blockage (Crocker & Mischkowskii, 2008). Goal blockage involving academics would prevent student-athletes from performing to the best of their ability.

Research on the experiences of intercollegiate athletes is noticeably absent in the climate literature. In an overview of the literature on the student-athlete experience, Gayles (2009) discusses the limited number of data sources available for studying the experience of student-athletes on college campuses and highlights the need for more national-level data to address complex questions concerning this population. The purpose of this project is to examine the climate for student-athletes in intercollegiate athletics using a national-level data base and to investigate if there are differences in the experiences of student-athletes based on various characteristics (e.g., gender, race, citizenship, sport, division).

Campus climate and the various ways in which students experience and perceive campus climate are complicated constructs that require greater attention due to both their complexity and the need to provide campus environments that maximize the potential for success of all students. The research on student outcomes highlights the relationship between perceptions of campus learning environments and student learning outcomes (e.g. Harrison, 2007; Pascarella & Terenzini, 1991, 2005b). Another body of research explores the different perceptions of campus climate by social group membership (Chang, 2002; Miller, et al., 1998; Rankin & Reason, 2005).
Understood from an interactionist perspective (Evans, Forney, & Guido-DiBrito, 1998), these two bodies of research highlight the importance of continued exploration of differential perceptions of campus climate for social groups.

**Campus Climate**

Campus environments are “complex social systems defined by the relationships between the people, bureaucratic procedures, structural arrangements, institutional goals and values, traditions, and larger socio-historical environments” (Hurtado, Milem, Clayton-Pedersen, & Allen, 1998, p. 296). As such, members of different social groups experience the campus climate differently based on their group membership and group status on campus (Rankin & Reason, 2005, 2008).

As colleges and universities continue to more accurately reflect the diverse makeup of society, institutions have focused on the importance of creating a campus environment that not only includes, welcomes, and accepts people of difference, but also responds to issues of diversity (Malaney, Williams, & Geller, 1997; Rankin & Reason, 2008; Worthington, 2008). Although colleges and institutions attempt to foster welcoming and inclusive environments, they are not immune to negative societal attitudes and discriminatory behaviors. As a microcosm of the larger social environment, college and university campuses reflect the pervasive prejudices of society (Eliason, 1996; Nelson & Krieger, 1997). Consequently, campus climates have been described as “racist” for students and employees of color (Harper & Hurtado, 2007; Rankin & Reason, 2005), “chilly” for women (Hall & Sandler, 1984; Hart & Fellabaum, 2008), and “hostile” for lesbian, gay, bisexual, and transgender (LGBT) community members (Eliason, 1996; Rankin, 2003; Rankin, Weber, Blumenfeld, & Frazer, 2010). However, educational
research has yet to offer a description of the relationship between experiences of climate for student-athletes and how they vary across other salient identities.

The term *campus climate* refers to the learning, living, and working environments of colleges and universities. After an examination of the literature and experiences in assessing campus climate, Rankin and Reason (2008) described the campus climates the “current attitudes, behaviors and standards and practices of employees and students of an institution” (p. 264). A number of theoretical models conceptualize and describe the campus climate at colleges and universities (Hurtado, 1994; Hurtado, et al., 1998; Milem, Chang, & Antonio, 2005; Rankin & Reason, 2008; Smith, et al., 1997). The model proposed by Rankin and Reason (2008) informed the conceptual framework for this project.

**Campus climate and student outcomes.** Positive learning, social, and professional outcomes for students and employees result when higher education administrators design initiatives that include quality interactions among a diverse campus population (Rankin & Reason, 2008). In order for college campuses to strengthen their efforts to create inclusive campus climates and quality experiences, researchers have assessed the experiences of campus community members with majority and minority group membership (Malaney, et al., 1997; Worthington, 2008). Two decades of research that focused primarily on the campus climate for historically excluded groups such as women, racial and ethnic minorities, and LGBT individuals (Brown, Clarke, Gortmaker, & Robinson-Keilig, 2004; Worthington, 2008) have led to the emergence of a major theme: Historically advantaged groups such as White people, men, and heterosexual people express more positive views of the campus climate while historically disadvantaged groups perceive the campus climate more negatively (Norris, 1992; Rankin & Reason, 2005; Worthington, 2008). As the aforementioned disparity persists in higher education,
the campus climate for diversity becomes a main focus of institutional efforts to enhance multicultural outcomes in the 21st century (Worthington, 2008).

Negative campus climates interfere with a student’s ability to become integrated in her or his social and academic environments (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999). The majority of research concerning the influence of climate on educational incomes focuses on campus racial climates and is reviewed here.

Students of Color who perceived their college environments as racially tense had lower levels of a sense of belonging to the campus community (Hurtado & Carter, 1997). A decade later, perceptions of the campus racial climate continue to strongly influence the sense of belonging in minority college students (Johnson, et al., 2007). Several other empirical studies reinforce the importance of the perception of non-discriminatory environments to positive learning and developmental outcomes (Aguirre & Messineo, 1997; Flowers & Pascarella, 1999; Whitt, Edison, Pascarella, Terenzini, & Nora, 2001). Pascarella and Terenzini (2005b), in their comprehensive review of student outcomes literature, concluded that attending a Historically Black College or University (HBCU) is related to greater educational attainment, academic self-image, and cognitive development for African American students. Although causal connections are difficult to identify, HBCUs appear to positively influence outcomes for African American students because “black colleges provide a social-psychological environment more conducive to black students’ social integration and personal development than do predominantly white colleges” (p. 601).

Whitt et al. (2001), in a longitudinal study of 1,054 students over their first three years of college, found that the perception of a non-discriminatory environment was one of seven statistically significant predictors of openness to diversity and challenge. This finding reinforces
Flowers and Pascarella’s (1999) earlier study, which examined the responses of African American respondents in the same dataset. African American respondents’ perception of a non-discriminatory environment was also significantly related to their openness to diversity and challenge.

Other studies have identified the deleterious effects of discriminatory environments (Cabrera, et al., 1999; Feagin, Vera, & Imani, 1996; Pascarella & Terenzini, 1991). Cabrera and his colleagues, in a study of 1,454 students, found statistically significant relationships between students’ perceptions of racism on campus and their (a) academic and social experiences, (b) academic success, (c) institutional commitment, and (d) persistence. These relationships between perceived campus environment and student outcomes held for both African American and White students, with the exception of the relationship with social experiences. Basically, the perception of a campus climate as racist negatively influenced the academic experiences, academic success, institutional commitment, and persistence of both African American and White undergraduates.

Additional literature on the influence of climate on student outcomes suggests that the climate influences the degree of engagement with a student’s learning. Salter and Persaud(2003) examined the classroom climate for 142 women in either education or engineering courses to explore how classroom climate encouraged (or discouraged) participation. Women who reported a better “fit” with the classroom environment participated at higher levels than did women who experienced less of a fit. The findings reinforce previous work by the same authors (Persaud & Salter, 2003). Not surprisingly, other students who feel unsupported by their environment may also have difficulty in their experiences.
Differential perceptions of climate based upon social group membership. Clearly, the perception of a campus climate plays a large role in students’ educational experiences and outcomes. The importance of the role of students’ perceptions of educational environment has been well established. Empirically supported student development and environmental theories indicate that students from different social groups likely perceive campus environments differently (Chang, 2002; Evans, Forney, & Guido-DiBrito, 1998; LaRocca & Kromrey, 1999; Miller, et al., 1998; Rankin & Reason, 2005), including differences based on race (Miller, et al., 1998), gender (Dietz-Uhler & Murrell, 1992; LaRocca & Kromrey, 1999a; Sigal, Braden-Maguire, Patt, Goodrich, & Perrino, 2003), and sexual orientation (Bieschke, Eberz, & Wilson, 2000; Dilley, 2002; Rankin, 2003). Our understanding of campus climates therefore must incorporate differences based on social identity group membership.

Several studies reinforce the importance of considering student background and characteristics when discussing climate. Miller et al. (1998) found statistically significant differences in perceptions of campus policies by racial identity in a study of 433 undergraduate students at one institution. White students described their campus racial climate as positive, whereas African American students rated their campus racial climate as negative. Caucasian students also rated highly instructors’ efforts to include multiple viewpoints in the curriculum and institutional policies related to recruitment and retention of Students of Color. African American and other Students of Color described interracial interactions on campus as less friendly and reported being the targets of racism. It is interesting to note that experiences and perceptions are mutually reinforcing, with students’ perceptions of their campus climate influencing their experiences and their experiences influencing their perceptions.
Similarly, empirical studies also reveal that men and women perceive sexual harassment quite differently. Men tend to hold more tolerant attitudes regarding sexual harassment than do women (Dietz-Uhler & Murrell, 1992; LaRocca & Kromrey, 1999). Dietz-Uhler and Murrell (1992) surveyed 157 undergraduate students and found that men held statistically significantly more tolerant attitudes on six of 14 sexual harassment items. Men, for example, were more likely to agree with the statement, “this issue of sexual harassment has been greatly exaggerated” (p. 542).

In a larger and more recent study, LaRocca and Kromrey (1999) highlighted similar findings. In this study, 295 women and 296 men read various short sexual harassment vignettes and reported their perceptions of the level of harassment involved in the scenarios. Men indicated that the scenarios were less harassing than did women respondents. These findings are typical of the extant literature related to perceptions of sexually-harassing climates by gender (Sigal, Braden-Maguire, Patt, Goodrich, & Perrino, 2003).

College campuses historically have been difficult environments for students who do not identify as Heterosexual (Dilley, 2002). Bieschke, Eberz, and Wilson (2000) completed a review of empirical research related to the college experiences of LGB students. In the studies reviewed, LGB students reported experiencing high levels of harassment on campus. In the three studies that compared LGB and non-LGB students’ experiences, LGB students reported statistically significantly higher levels of harassment. Although Bieschke and her colleagues identified only six studies addressing the experience of LGB students (and none that addressed the experiences of Transgender students), the consistency of the results lends credence to the conclusion that LGB students have much more negative experiences of campus climates than do their Heterosexual peers.
A recent national study by Rankin et al. (2010) found similar results, reinforcing Bieschke et al.’s (2000) conclusions and indicating a continuing problem. The study by Rankin et al. revealed that LGBT students often fear for their physical safety, conceal their sexual orientation to avoid intimidation, and feel that discussing their sexual orientation with those in power may lead to negative consequences.

Based on the literature, the role of students’ perceptions of educational environment (i.e., campus climate) plays a major role in student success. Also, the literature suggests that various social identity groups (racial identity, gender identity, sexual identity, etc.) perceive the campus climate differently and their perceptions may adversely affect student outcomes including learning. Unfortunately, research on the experiences of student-athletes, a powerful social identity group on many college campuses, is noticeably absent in the climate literature.

**Student-Athletes’ Academic Success**

There are unique aspects of the student-athlete collegiate experience that create substantial challenges for their academic success. Athletic culture, extreme time demands on student-athletes, and the often uneasy marriage between athletics and academics in the university setting all contribute to the difficulties that many student-athletes face in achieving academic success. Recent research supports this tenet suggesting negative relationships between athletic participation and performance in the classroom (Gayles, 2004; Miller & Kerr, 2002).

Nationally, on a typical week when their sport is in session, 82% of student-athletes report spending over 10 hours a week practicing their sport, and 40% report spending over 10 hours a week playing their sport (Potuto & O'Hanlon, 2006). A recent survey of 21,000 student-athletes in Division I, Division I - AA, Division II, and Division III indicated that most of them spent close to 40 hours per week participating in their sports; high-profile football players
reported spending 45 hours a week on their sport (Wolverton, 2007), and most athletes reported they spent more time on their sport than on their academic work. Given the amount of time student-athletes spend on their sports offers very little time left to devote to academics. As mentioned earlier, this also leaves student-athletes less time to interact with non-athlete peers, which could potentially lead missed opportunities in regard to co-curricular learning.

Standardized test scores and high school grades are the most commonly used variables to predict academic performance in college and are used by the NCAA to determine initial eligibility to compete in college sports; however, these variables do not accurately predict academic performance for all groups of students (Sedlacek & Adams-Gaston, 1992). Several studies have indicated that college grade point average (GPA) for student-athletes’ is influenced by pre-college experiences, demographic factors and academic ability (Lang, Dunham, & Alpert, 1988; Sellers, 1992). While these studies yield relevant information relative to selected predictors of academic performance among student-athletes, few investigations are concerned with how the campus climate effects student-athletes’ educational outcomes (Comeaux, 2005; Sellers, 1992). One area that has been examined is students’ engagement in their education, especially their interactions with faculty members.

The more time and energy students devote to learning and the more intensely they engage in their own education, the greater the potential outcomes for achievement, satisfaction with educational experience, and persistence in college (Pascarella & Terenzini, 2005b; Tinto, 1993). Research also indicates that student-athletes’ academic performance in college increases when the institution has a dedicated and supportive faculty and staff (Harrison, Harrison, & Moore, 2002; Taylor & Olswang, 1997). Comeaux (2005) suggests that male student-athletes’ interaction with faculty members significantly influences their academic success.
The quality and nature of formal and informal faculty interactions and communication with student-athletes is also essential to both academic achievement and overall college experience (Comeaux, 2005; Pascarella & Chapman, 1983). Umbach, Palmer, Kuh, and Hannah (2004), using data from the National Survey on Student Engagement (NSSE), found that on average, student-athletes across division levels and institutional types did not differ from their peers on involvement in effective educational practices, such as interactions with faculty and participation in active and collaborative learning. Simons, Bosworth, Fujita, and Jenson (2007) indicated that African American student-athletes reported a much higher degree of negative perceptions from faculty than their teammates of different races. Twenty-nine percent of African American student-athletes in this sample reported they were suspected or accused of cheating in class, compared with only 6% of White student-athletes.

In a more recent study Gayles and Hu (2009) suggest that student-athletes’ engagement has positive and significant impacts on a set of college outcomes, suggesting that college-athletes can benefit from increased college engagement in ways similar to the general student population (Kuh, Hu, & Vesper, 2000; Pascarella & Terenzini, 2005a). In addition, Gayles and Hu (2009) offer evidence that suggests that the “influence of student engagement on cognitive outcomes is conditional on the type of sport student athletes participate in, suggesting differential effects for student athletes in different sport types” (p. 329). The results from this study are consistent with previous research suggesting that student-athletes should not be considered as a homogenous population relative to their experiences in college (Wolniak, Pierson, & Pascarella, 2001).

Research further suggests that when a student-athlete becomes completely engulfed in his or her athletic role, his or her academic performance may be affected (Adler & Adler, 1985; Adler & Adler, 1991; Brewer, et al., 1993; Brown & Hartley, 1998; Lally & Kerr, 2005;
Murphy, et al., 1996). When beginning college, student-athletes may think handling the academics with athletics will be easy, with no expectation of failure (Clow, 2000). Many student-athletes are not exposed to routine academic experiences, such as looking over course descriptions, scheduling classes or general education requirements (Adler & Adler, 1991). Frequently, they are registered into their classes by secretaries or assistant coaches. For some student-athletes, having someone take care of their academic registration and check up on their progress throughout the semester emphasizes the need to focus time and effort on their athletic role. It also leads to a false sense of security that someone else is responsible for their academic progress.

In addition, because some student-athletes are not proactive in their course selection, they end up studying a subject in which they have no interest. At times their courses include a number of other student-athletes, and their initial instructors are “friends of the program” (Adler & Adler, 1985). Due to time constraints, many student-athletes are encouraged to avoid certain majors and courses requiring afternoon labs or discussion groups (Adler & Adler, 1991; Bowen & Levin, 2003). In a national survey of over 10,000 student-athletes, 20% reported that their athletic participation prohibited them from studying their field of choice (Suggs, 2000; Wolverton, 2006, 2007). These student-athletes reported that their emphasis during college was their participation in intercollegiate athletics.

**Student-Athletes’ Athletic Success**

Educational research concerning athletic success tends to focus on implications of athletic success (i.e., winning seasons, post-season competition, etc.) on institutional factors, particularly fundraising, admissions, and SAT scores (i.e., Humphreys & Mondello, 1997; Tucker & Amato, 2006). The concept of athletic success as experienced and described by
student-athletes has received lesser attention. A study of Division I-A student-athletes suggests they generally view their participation in sport as a positive experience (Potuto & O’Hanlon, 2006). However, the findings remixed regarding the extent to which participants viewed themselves as athletes more than students and whether professors discriminated against or showed favoritism toward student-athletes.

Analyzing NSSE data from more than 50,000 first-year students, Umbach, Palmer, Kuh, and Hannah (2004) found that student-athletes are as engaged in educational activities as their non-athlete peers. In fact, student-athletes are more satisfied with the college experience and perceived their campus environment to be more supportive than their non-athlete peers. In addition, student-athletes at the Division III level were more engaged compared to student-athletes at Division I and II institutions.

In one of the few studies that examined how athletes perceived their athletic success, Catina and Iso-Ahola (2004) measured if positive illusion (how an athlete perceived his abilities) influenced male power lifters’ actual athletic success. The results confirmed that positive illusion has “both direct and indirect effects on athletic success” (p. 86). The greater the student-athlete’s positive illusion, the greater his success in athletic contests over time. Positive illusion contributed to successful athletic performance through its significant effects on expectation for success and motivation.

Another study explored the influence of athletic success on student-athletes’ graduation rates and concluded that neither student-athletes’ nor all other undergraduates’ graduation rates are influenced by the success of a school’s athletic program (Rishe, 2003). Yet, the graduation gap between men and women was exacerbated at schools with the most prominent athletic
programs. However, other factors, such as athletic identity, may also provide an explanation for this and similar phenomena.

**Student-Athletes’ Athletic Identity**

The bulk of educational literature concerning student-athletes explores the extent to which participation in sport influences a number of educational outcomes, particularly persistence. A smaller portion of this literature focuses on the relationship between educational outcomes and the extent to which student-athletes actually identify as athletes. Furthermore, none of the literature directly addresses the relationship between climate and athletic identity.

Rather than acknowledge multi-dimensional aspects of student-athletes’ respective identities, literature concerning intercollegiate sport most often depicts student-athletes as navigating two worlds as they strive to succeed both on the playing field as athletes and in the classroom as students. (Adler & Adler, 1991; Comeaux & Harrison, 2007; Person & Lenoir, 1997). For example, in a 2008 NCAA survey of student-athletes in Divisions I, II, and III, most respondents agreed that they view themselves “as more of an athlete than as a student” Brewer, Van Raalte, and Linder (1993) acknowledge the “multidimensional self-concept” of athletic identity and developed the *Athletic Identity Measurement Scale (AIMS)* to measure both the strength and exclusivity of athletic identity. *Athletic identity* is defined as the extent to which a person identifies with the role of an athlete (Brewer, van Raalte, & Linder, 1993).

Further understanding of athletic identity and how student-athletes see themselves may enhance our collective understanding of student-athletes’ collegiate and athletic experiences, as well as their perceptions of climate. Lubker and Etzel (2007) suggest that student-athletes with higher levels of athletic identity are less likely to understand and express other parts of their identity. For example, a study of Division I athletes from 24 institutions found the centrality of
racial and athletic identities to be negatively correlated for Black student-athletes, but positively correlated among White student-athletes (Brown, et al., 2003). In addition, Black student-athletes with a strong athletic identity are less likely than Black student-athletes with a low athletic identity to perceive discrimination, agreeing with the statement “Discrimination against people of different racial/ethnic groups is no longer a problem in the United States.”

At a small Midwestern university, students (both student-athletes and non-students) who identified as masculine tended to also have a strong athletic identity, but femininity was negatively correlated with athletic identity (Lantz & Schroeder, 1999). This statistically significant negative relationship between femininity and athletic identity held across respondents’ gender, as well as across athletes and non-athletes alike. The results of Lantz and Schroeder’s (1999) work suggest that femininity and athleticism are diametrically opposed.

Another study suggests that characteristics often associated with athletic identity may foster a successful collegiate experience for student-athletes. Kimball (2007) examined student-athletes’ perception of autonomy and the relationship between self-determination in an environment where student-athletes give up much of their autonomy, particularly at Division I schools. Kimball found that student-athletes have a strong overall sense of identity which helps them balance their lifestyle as athletes in high-profile sports. She explains that “student-athletes’ abilities to reframe activities that are non-autonomous and to integrate these behaviors into their value system enable them to experience greater autonomy and satisfaction in their role as collegiate student-athletes” (p. 819).

In general, research suggests that student-athletes have poor identity development (Lally & Kerr, 2005; Murphy, Petitpas, & Brewer, 1996), which has implications for both athletic and academic outcomes. Athletic identity has been linked to level of sport participation (Lamont-
Mills & Christensen, 2006), depressive mood among injured athletes (Brewer, 1993), starting status (Meijen, 2005) and athletic performance (Brewer, Selby, Linder, & Petitpas, 1999). Athletic identity also has repercussions for academic outcomes. Literature suggests that if a student-athlete has a high athletic identity, it detracts from their academic roles (Lally & Kerr, 2005; Yopyk & Prentice, 2005). Settles, Sellers and Damas (2002) found that athletic and academic identities cannot be perceived as one identity without student-athletes experiencing conflict, suggesting that reconciling the two identities may induce internal strife. In addition, identity foreclosure, the degree to which an individual commits early and solely to one role (in this case, athletics) without consideration to others, plays a negative role in academic self-efficacy (Adler & Adler, 1985; Brown, et al., 2000; Lally & Kerr, 2005). Perhaps of little surprise, Melendez (2009) found a negative correlation between athletic identity with both academic and personal-emotional adjustment to college. Lubker and Etzel (2007) found that the higher the level of athletic identity, the more difficult the student-athletes’ transition to college, the lower their connectedness to the institution, and the less their interaction with students outside their teammates.

Murphy et al.(1996) found an inverse relationship between career maturity and athletic identity among Division I male and female student-athletes. Similarly, Brown and Hartley (1998) and Martens and Cox (2000) found that student-athletes’ investment in the student role was more important in determining career maturity than their investment in the athletic role. Contrary to these findings, several researchers examining athletic identity and student role suggests that student-athletes can have high athletic identity and that this does not necessarily decrease the importance of their role as a student (Brown, et al., 2000; Gayles, 2005; Harrison & Lawrence, 2004).
No large-scale study of intercollegiate athletes’ athletic identity has been conducted. Instead, athletic identity is most frequently discussed as it applies to unique populations of athletes who are most often from a single institution. For example, populations explored include marathon runners (Horton & Mack, 2000), football players (Stewart, 2009), disabled swimmers (Martin, Eklund, & Mushett, 1997), track and field athletes (Griffith & Johnson, 2002), basketball players (Krylowicz, 2008), and female athletes (Mignano, Brewer, Winter, & Van Raalte, 2006). No studies explore differences in athletic identity across all levels of intercollegiate competition, such as that suggested by NCAA athletic divisions, nor has research concerning athletic identity described differences across the range of collegiate sports teams.

**Individual Demographics and Institutional Characteristics**

There are several other variables of interest in this study. These variables were chosen based on either (1) extant literature supporting possible influences on student-athletes’ success or identity development or (2) a lack of literature in areas where previous research indicates there may be a connection to student-athletes’ success or identity development and (3) preliminary analyses provided in the Fall 2010 report. The results of the current project will add to the knowledge regarding student-athletes’ experiences. A review of the literature regarding these variables is provided in the following sections.

**Racial identity in intercollegiate athletics.** While the study of race and college athletics is not new, most research concerning student-athlete racial identity and educational outcomes continues to focus on African American male student-athletes in comparison to their White peers, especially those playing in a Division I, revenue-generating sport (Adler & Adler, 1991; Edwards, 1984; Harrison, 2002). The distinction typically is whether their athletic identity or their racial identity is more salient (Harrison, et al., 2009; Harrison, Rasmussen, Connolly,
Janson, Bukstein, & Parks, 2010; Yopyk & Prentice, 2005). More recent work examines the experiences of Students of Color more broadly versus White athletes and academic performance (Brown, et al., 2003; Gaston-Gayles, 2004). This brief review suggests a complicated relationship between racial identity, college athletics, and academic performance.

In terms of racial and ethnic identity and the college campus environment, extensive research exists that suggests that African American college athletes are aware of how their racial identity evokes negative stereotypes from peers and faculty on campus (Martin & Harris, 2006; Melendez, 2008; Singer, 2008). Martin and colleagues (2010) and Oseguera (2010) separately found that African American student-athletes perceive different expectations for Black athletes versus their White peers and that this is exacerbated for student-athletes participating in revenue versus non-revenue generating sports.

Using the experiences of 533 student-athletes across 21 Division I sports programs, Brown et al. (2003) examined the overall racial perceptions of ethnic and racial discrimination and found little difference between White and Black athletes and their perceptions that racial discrimination remains a problem in the U.S. However, when analyzed separately by a student’s racial and athletic identity salience, differences emerged. Most notably, the authors found that race was a salient aspect of a Black student athlete regardless of their athletic identity but only among White student athletes with a strong athletic identity was race a salient part of their self-concept. The researchers concluded that Black and White student athletes possessed incongruent views of ethnic and racial discrimination and the salience of racial identity.

Stone and colleagues (forthcoming) evaluated test performance of African American and White college athletes when their identity as an athlete was made salient before completing a measure of verbal reasoning and found that for high academic achieving athletes, African
American student athletes performed worse on test items when their identity as an athlete was highlighted. The authors suggest that the pervasively negative view of students as athletes hampers academic performance.

Davis and Gandy (1999) conceptualize racial identity as a construct which is developed through collective social experiences and a reaction to contextual social interactions and thus this work on climate will provide additional insight into how racial identities impact academic success, athletic success, and identity development.

**Gender identity in intercollegiate athletics.** While the body of research on gender and athletics has grown considerably in the last decade, most research concerning student-athlete identity and educational outcomes has focused on African American men student-athletes, especially those playing in a Division I, revenue-generating sport, and suggests that their participation in sport has a negative impact on their academic performance (Benson, 2000; Edwards, 2000; Johnson, Hallinan, & Westerfield, 1999; Person & Lenoir, 1997).

Research about women student-athletes has traditionally focused on their athletic ability, body image issues, or sexuality issues (Harrison & Secarea, 2010; Knight & Giuliano, 2003; Miller & Levy, 1996). The literature on women student-athletes, particularly Women Athletes of Color, offers that the athletic experience for women is one of isolation, because of their smaller representation, when compared to men’s (Birrell, 1987; Riemer, Beal, & Schroeder, 2000). In all these cases, women student-athletes’ experiences with their climates are negative.

Additional literature focuses on academic achievement among women and men student-athletes. The research suggests that women student-athletes outperform men student-athletes academically (Birrell, 1987; Meyer, 1990; Pascarella, Bohr, Nora, & Terenzini, 1995; Purdy,
Eitzen, & Hufnagel, 1982) and that women student-athletes have at least equal commitment to academics and athletics (Riemer, et al., 2000; Umbach, et al., 2004; Yates, 2002).

The literature also offers that men and women student-athletes cope with the stress of athletic competition in similar ways (Cox, Shannon, McGuire, & McBride, 2010), but that men and women student-athletes navigate their collegiate experience differently (Howell & Giuliano, 2011; Stuntz, Sayles, & McDermott, 2011). The current project will examine how men and women student-athletes may experience differences in how they experience athletic participation and how it may influence academic success, athletic success, and identity.

**Sexual identity in intercollegiate athletics.** The limited research on sexual identity differences in intercollegiate athletics suggests that the athletic environment does little to encourage and support non-heterosexual identities. In fact, student-athletes who were open about their sexual identity face higher levels of discrimination (Hekma, 1998). The environment encourages heteronormative subordination of lesbian, gay, and bisexual, or queer (LGBQ) identities. The literature offers that sexual diversity on athletic teams is only tolerated as long as LGBQ student-athletes do not “make it an issue” (Anderson, 2002; Wolf-Wendel, Toma, & Morphew, 2001). This distinction between tolerance and acceptance of one’s sexual identity is psychologically influential (Cass, 1979; Halpin & Allen, 2007; Rotheram-Borus & Langabeer, 2001). If students cannot reach a level of identity achievement, then they may struggle in other aspects of their life (Marcia, 1966). Student-athletes who may be experiencing confusion over their sexuality may feel that they are unable to explore that aspect of their identity because it would have a negative impact on their relationships with their teammates and coaches. They may purposefully compartmentalize parts of their lives, therefore suppressing their non-heterosexual identity. In order to fit in with others on their team or to please parents and
coaches, they choose to focus on their athletic identity more than their LGBQ identity. This compartmentalization of identities inhibits holistic development and could create psychological angst as a result of intrapersonal incongruence.

Remaining closeted does little to encourage sexual identity development. With the understanding that a positive climate for students fosters healthy identity development (Cabrera, et al., 1999; Rankin, 2003; Rankin & Reason, 2008), it is important to examine the influence of the climate in athletics toward sexual identity diversity. Therefore the current project will examine how the climate influences LGBQ student-athletes academic success, athletic success, and identity development.

**Divisional status in intercollegiate athletics.** General differences between the NCAA divisions relate to the number of sports institutions are required to offer, the proportion of matches team’s must play within their division, and the existence of financial aid in Division I and II but not III (NCAA, 2011a, 2011b, 2011c). In terms of institutional characteristics, Division III schools have the smallest average enrollment and are overwhelmingly private (80%) compared to both Division I and II (NCAA, 2011a, 2011b, 2011c). However, most of the research on student-athletes has been conducted at Division I schools (Baucom & Lantz, 2001). Differences among student-athletes across NCAA divisions have rarely been empirically researched. Anecdotal descriptions are common in the literature. Watt and Moore’s (2001) review describes the historical and current experiences and environments of student-athletes (divisional differences are summarized in Table 1). In general, student-athletes in Division III are believed to play “for the love of the game” because they don’t face the same media, financial, and professional expectations as those in Division I and II (Grites & James, 1986; Stansbury, 2004) and are more integrated into the institution in general (Feezell, 2005; Watt & Moore III,
2001). They may also exhibit lower levels of athletic identity and life satisfaction than their Division I counterparts (Elasky, 2006), though other research indicates they may have higher levels of athletic identity (Griffith & Johnson, 2002).

Table 1. General characteristics of institutions by NCAA division

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Division I</th>
<th>Division II</th>
<th>Division III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholarships</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
</tr>
<tr>
<td>Considered “Elite”</td>
<td>✓</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Extensive Media Exposure</td>
<td>✓</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Competition for Talent</td>
<td>✓</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Extensive Athletic Time Commitments&lt;sup&gt;1&lt;/sup&gt;</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Must Balance Pressures of Being Both Student and Athlete</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Athletics &amp; Athletes Integrated into the Collegiate</td>
<td>X</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Experience&lt;sup&gt;2&lt;/sup&gt;</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Professional Influence and Expectations&lt;sup&gt;3&lt;/sup&gt;</td>
<td>✓</td>
<td>--</td>
<td>X</td>
</tr>
<tr>
<td>Graduation Rate Higher than General Population</td>
<td>✓</td>
<td>✓ (lowest of divisions)</td>
<td>✓ (highest of divisions)</td>
</tr>
</tbody>
</table>

Note: Source is Watt & Moore (2001) unless otherwise indicated.
<sup>2</sup>Also Freezell (2005).
<sup>3</sup>Snyder (1996).

There are many similarities in student-athletes’ experiences across divisions as well. For example, student-athletes in all divisions face negative stereotyping and prejudice from faculty members and non-athlete students related to their admissions and academic capabilities (Baucom & Lantz, 2001; Brody, 1996; Engstrom & Sedlacek, 1991; Richards & Aries, 1999), even though research indicates few academic differences between athletes and non-athletes (Richards & Aries, 1999; Umbach, Palmer, Kuh, & Hannah, 2006). In an overview of the literature on the student-athlete experience, Gayles (2009) notes the limited number of data sources available and highlights the need for more national-level data to address complex questions concerning this population, including differences in experiences among the NCAA divisions.
Featured and non-featured sport status in intercollegiate athletics. Several reports draw attention to these sorts of differential experiences between more high-profile or featured sports\(^\text{11}\)(i.e., football and basketball) and the array of sports that garner less attention from fans and media alike, such as field hockey and tennis. For example, the work of the Knight Commission on Intercollegiate Athletics has specifically turned its attention to featured sports in an attempt to address several controversies including the commercialization of intercollegiate athletics, reports of admissions infractions, grade-fixing, and low graduation rates (Knight Foundation Commission on Intercollegiate Athletics, 2001). With legions of fans both on and off campus, commercial interests in intercollegiate athletics continue to skyrocket. In a time when universities struggle with economic retrenchment, athletics’ commercial popularity is perhaps a boon for colleges and universities. For example, in 2007, Adidas agreed to a $66.5 million eight-year apparel contract with University of Michigan athletics, the largest contract of its sort (Vosgerchian, 2007). Featured sport student-athletes are often caught in the middle of an “amateur-professional dilemma”: “…if a college has truly amateur sport, it will lose prestige as it loses contests; if a college acknowledges outright professional sport, the college will lose respectability as a middle-class or upper-class institution” (Smith, 1988, pp. 165-166).

The dual pressures on the field and in the classroom quite possibly complicate the experiences and climate as experienced by student-athletes in featured sports. While the findings concerning educational attainment and persistence between featured and non-featured intercollegiate athletes are mixed, evidence suggests that, in general, student-athletes in featured and non-featured sports reap different learning outcomes during college. In their extensive

\(^{11}\) In literature that explores the difference between sports teams, teams are most often categorized as “high-profile” and “low-profile” or “revenue-generating” and “non-revenue-generating.” With the aim of considering the unique characteristics of participating institutions' respective programs, the research team asked each institutional contact to provide a list of its institution's “featured” and “non-featured” sports teams.
review of literature on the effects of college on students, Pascarella and Terenzini (2005a) explain that “there is a small but consistent body of evidence to suggest that intercollegiate athletes, in particular, those participating in football and basketball, may not be deriving the same cognitive benefits from college as their non-athlete peers” (p. 126). Similarly, they found that male football and basketball players also had lower critical thinking scores than non-athletes or athletes in nonrevenue sports. However, intercollegiate athletes in non-revenue generating sports appear less inclined to express openness to diversity and attach value to learning and academic experiences that increase self-understanding (Pascarella & Terenzini, 2005a). The current project will expand this body of literature by exploring the relationship between participating in featured and non-featured sports, experiences and perceptions of climate, as well as academic success, athletic success, and athletic identity.

Summary

The literature indicates that positive campus climates contribute to students’ successful academic performance, educational outcomes, social adjustment, and interpersonal skill development. Conversely, negative campus climates adversely affect these outcomes, particularly for marginalized identity groups. Student-athletes are an identity group currently scant or missing from this literature.

If students from different social identity groups experience, or at least perceive, campus climates differently, and if perceptions of campus climates can affect learning and developmental outcomes of college students, then individuals concerned with college student outcomes are obliged to continue the study of campus climates in search of effective, targeted intervention strategies. The SACS project focuses on the perceptions and experiences of student-athletes with regard to the climate in intercollegiate athletics and the campus in general. We explore how
other salient characteristics (e.g., racial identity, gender identity, divisional status, etc.) affect student-athletes’ perceptions of the climate in intercollegiate athletics, as well as how these characteristics and experiences and perceptions of climate influence academic success, athletic success, and athletic identity. The following section reviews the methods used to examine these constructs.
Research Methodology

In this section of the report we provide an overview of the research methodology. We first discuss the general research design and the procedure we used to select our sample of student-athletes including the response rates by selected sub-groups. We also discuss the use of weighting and imputation to address missing data. The conceptual framework used to guide this study is also introduced. This is followed by a discussion of the survey instrument, the development of the scales used to measure campus climate and student-athlete outcomes, and the analyses employed to establish those scales. This section concludes with a description of the qualitative methods used.

Research Design

A mixed methods approach was used for the project. The research team chose this approach because quantitative methods allow for the survey of a large sample of student-athletes which leads to results that are statistically generalizable, while qualitative methods focus on experiences and perceptions of climate as described by student-athletes in open-ended survey questions. These written responses allow the research team and the report’s readers to consider the nuances and complexity of climate that may not be captured with a multiple-choice survey instrument. The SACS project benefits from using both quantitative and qualitative methods because the researchers are able to “provide a more comprehensive picture of the phenomena being studied, emphasizing both outcomes (quantitative) and process (qualitative)” (McMillan, 2004, p. 288).
**Data collection and preparation.** The process of data collection and preparation included the development of a sampling procedure, calculation of response rates and appropriate weights, and imputation of missing data.

**Sampling procedure.** All 1,281 member institutions of the NCAA were invited to participate in SACS. Specifically, institutional participation was solicited via e-mails to each Athletic Director and Senior Woman Administrator, whose contact information was provided to the SACS team by the NCAA. In addition, each conference commissioner was asked to encourage their respective institutions’ participation. Administrators from prospective participating institutions were encouraged to visit the project’s web site¹², which included information about the study’s purposes, origin, and requirements for participation. One hundred and ninety-five institutions¹³ agreed to participate in the study.

After committing to participation, each institution’s athletic director designated a contact to serve as a liaison between the athletic department and the SACS research team. The institutional liaison submitted a demographic profile of their institution’s student-athlete population, recruited their student-athletes’ participation in the study, and distributed study information to relevant constituents on their respective campus.

The web-based survey was distributed to student-athletes between January 15 and April 1, 2010. The institutional liaison received three separate e-mail templates to modify and forward encouraging participation in the study. In addition to e-mails, other recruitment strategies were used. These included encouragement from coaches, academic support center staff, the student-athlete council, and athletic directors.

---

¹² The SACS Web site is found at http://www.ed.psu.edu/educ/student-athlete/
¹³ 195 institutions agreed to participate but student-athletes from 164 campuses actually participated in the project.
**Response rates.** One hundred and seventy-four colleges and universities actually participated in SACS. Of the 56,965 student-athletes enrolled at these institutions, 8,481 student-athletes participated in the project for an overall response rate of 15% that is typical of recent national student surveys. According to several researchers (Baruch, 1999; Dey, 1997; Smith, 1995; Steeh, 1981), survey response rates have been in decline for several decades and web-based surveys often have relatively low response rates compared to paper-and-pencil or telephone surveys (Sax, Gilmartin, & Bryant, 2003; Zhang, 2000).

As suggested by Sax, Gilmartin, and Bryant (2003), a key determinant of response rates may not necessarily be the mode of administration. Rather, the population surveyed may be influential. Student-athletes are a difficult population to access, given the demands of academics, training, practice, and competition. In addition, some students are less likely to respond to surveys than others. Reinforcing a pattern noted in literature concerning college student response rates (Sax, et al., 2003; Underwood, Kim, & Matier, 2000), the SACS survey saw lower response rates among student-athletes who identified as men and, with the exception of American Indian/Alaskan Natives, from student-athletes who identified as underrepresented minorities. As indicated by chi-square tests, there were significant differences between the actual sample and the expected sample for each of the demographic groups in Table 4.
### Table 2. NCAA aggregate student-athlete population and sample respondents

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Subgroup</th>
<th>Population</th>
<th></th>
<th>Sample</th>
<th></th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>Percentage</td>
</tr>
<tr>
<td>Gender</td>
<td>Man</td>
<td>32,014</td>
<td>56.2</td>
<td>3,138</td>
<td>37.0</td>
<td>9.8</td>
</tr>
<tr>
<td></td>
<td>Woman</td>
<td>24,951</td>
<td>43.8</td>
<td>5,336</td>
<td>62.9</td>
<td>21.4</td>
</tr>
<tr>
<td></td>
<td>Transgender</td>
<td>--</td>
<td>--</td>
<td>7</td>
<td>0.1</td>
<td>--</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>American Indian/Alaskan Native</td>
<td>357</td>
<td>0.6</td>
<td>117</td>
<td>1.4</td>
<td>32.8</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
<td>1,361</td>
<td>2.4</td>
<td>237</td>
<td>2.8</td>
<td>17.4</td>
</tr>
<tr>
<td></td>
<td>Black, non-Hispanic</td>
<td>7,695</td>
<td>13.6</td>
<td>642</td>
<td>7.6</td>
<td>8.3</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>2,733</td>
<td>4.8</td>
<td>389</td>
<td>4.6</td>
<td>14.2</td>
</tr>
<tr>
<td></td>
<td>White, non-Hispanic</td>
<td>44,516</td>
<td>78.6</td>
<td>7,446</td>
<td>87.8</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>2,677</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Class Standing</td>
<td>First Year</td>
<td>18,423</td>
<td>32.4</td>
<td>2,621</td>
<td>30.9</td>
<td>14.2</td>
</tr>
<tr>
<td></td>
<td>Second Year</td>
<td>14,470</td>
<td>24.6</td>
<td>2,088</td>
<td>24.6</td>
<td>14.4</td>
</tr>
<tr>
<td></td>
<td>Third Year</td>
<td>11,958</td>
<td>21.1</td>
<td>2,033</td>
<td>24.0</td>
<td>17.0</td>
</tr>
<tr>
<td></td>
<td>Fourth + Year</td>
<td>11,931</td>
<td>21.0</td>
<td>1,739</td>
<td>20.5</td>
<td>14.6</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
<td>2,590</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Division</td>
<td>Division I - FBS</td>
<td>13,104</td>
<td>22.1</td>
<td>1,703</td>
<td>20.1</td>
<td>13.0</td>
</tr>
<tr>
<td></td>
<td>Division I - FCS</td>
<td>13,537</td>
<td>22.8</td>
<td>1,926</td>
<td>22.7</td>
<td>14.2</td>
</tr>
<tr>
<td></td>
<td>Division I - non-football</td>
<td>5,080</td>
<td>8.6</td>
<td>985</td>
<td>11.6</td>
<td>19.4</td>
</tr>
<tr>
<td></td>
<td>Division II</td>
<td>10,939</td>
<td>18.4</td>
<td>1,421</td>
<td>16.8</td>
<td>13.0</td>
</tr>
<tr>
<td></td>
<td>Division III</td>
<td>16,680</td>
<td>28.1</td>
<td>2,451</td>
<td>28.9</td>
<td>14.7</td>
</tr>
</tbody>
</table>

Note: Percentages may not sum to 100% due to rounding.

1 Population refers to the population of student-athletes at participating institutions.

2 Respondents were instructed to indicate all racial/ethnic categories that apply.

3 Sample respondents were instructed to indicate all racial/ethnic categories that apply.

4 Population refers to the population of student-athletes at participating institutions.

5 Response rates and sample representativeness should not be conflated (Krosnick, 1999; Sax, et al., 2003). Krosnick (1999) explains:

> In the extreme, a sample will be nearly perfectly representative of a population if a probability sampling method is used and if the response rate is 100%. But it is not
necessarily true that representativeness increases monotonically with increasing response rate. Remarkably, recent research has shown that surveys with very low response rates can be more accurate than surveys with much higher response rates (p. 540).

To address any existing bias due to non-response, statistical weights were created and applied to the data set.

**Weighting and unit non-response.** In instances where responses are not representative of the population, statistically correcting for demographic biases in sample composition has little negative impact on the substantive implications of correlational analyses (Brehm, 1993). To address demographic biases in the collected data due to unit non-response by particular demographic groups of student-athletes (e.g., African-Americans, women), several statistical weights were created. Each case, or respondent, in the dataset is weighted to be representative of each participating institution’s population of student-athletes. With the aim of avoiding sample bias, post-stratification methods were used to develop weight adjustments on several demographic characteristics for which population data were available. The weights for gender, race, class, and division are each a ratio of the total sample population to the actual respondents, where:

\[
\text{weight} = \frac{\% \text{ of total population}}{\% \text{ of respondents}}
\]

For example, where 17% of the student-athlete population is women, but 16% of the respondents are women, the `genderweight` value for women respondents at that institution is 1.1 (i.e., 17% / 16%). This method, also called ratio estimation, is one of the most widely used population weighting adjustments in survey research (Brick & Kalton, 1996; Holt & Smith, 1979). In addition to weights for each demographic group, a total weight for each respondent takes into
account all of the demographics and weights to be representative of the entire participant population. For this study, the total weight is such that

\[ \text{total weight} = \text{gender weight} \times \text{race weight} \times \text{class weight} \times \text{division weight} \]

Student-athletes were not required to identify their respective institutions, therefore response rates and weights for each participating institution were not calculated.

**Data imputation and item non-response.** A common finding among researchers when analyzing data is that some of the values on a given variable will be missing for certain subjects (Cohen, Cohen, West, & Aiken, 2003). There may be missing data on questions due to respondents’ survey fatigue, respondents feeling uncomfortable answering sensitive questions, lack of knowledge, lack of applicability to the respondent’s circumstances, or even data processing and programming errors. This can introduce bias into the analyses, reduce statistical power, or limit the generalizability of subsequent results.

The amount of missing data in the SACS dataset is small, with less than 5% for demographic variables (individual and institutional characteristics) and less than 10% for all variables (with the highest being 8.7%). Survey fatigue did not appear to be an issue because the response rate increased for questions at the end of the survey with the amount missing on the last quantitative question (Q65: Does your team have a faculty advisor?) being only 0.6%.

When the number of cases with missing data on a particular item is small, dropping those cases, also called listwise deletion, is typically acceptable for some types of analysis (Brick & Kalton, 1996; Garson, 2009). However, when cases are dropped from multiple items in a large analysis, the result is a highly limited set of data that may have fundamentally different characteristics than the dataset when taken in its entirety. The Structural Equation Modeling (SEM) analysis used large numbers of variables, such that, if listwise deletion had been
employed, the resulting number of cases would be too small for analysis. Instead, data imputation was used to compute appropriate values to complete the dataset, thereby reducing the bias that would exist in analyses that use incomplete data (Brick & Kalton, 1996; Garson, 2009; Graham, 2009). The team first attempted to use a Multiple Imputation (MI) process with PASW Statistics 18 (formerly known as SPSS), but experienced technical difficulties because there were too many parameters for the computer to estimate. MI was preferred for this project because it best retains the covariance structure of the dataset, which is the basis for SEM analysis (Graham, 2009). After taking all reasonable steps to reduce the number of parameters, the analysis would still not run. After consulting with institutional researchers and faculty members proficient in imputation, the team decided to use the maximum likelihood estimation-based Expectation-Maximization (EM) method. As the “second-best” option, EM is potentially less accurate than MI and produces smaller standard errors that may influence significance testing, but it gives better results than other methods of dealing with missing data and is frequently used by researchers (Allison, 2003; Garson, 2009; Graham, 2009; Musil, Warner, Yobas, & Jones, 2002). With this awareness, the team examined the effect of EM on the covariance matrix by comparing the factor analysis used to establish scales both before and after imputation. Factor loadings and other calculations typically varied by less than one hundredth of a point, and the overall structure of the factors and items that loaded onto the final scales did not change, indicating only minor changes to the underlying covariance matrix.

In later discussion concerning scale development, the factor analyses are based on the “raw” data or pre-weighted data (n = 8,481). Findings concerning demographics and sexual harassment in Results I are based on the weighted imputed data (n = 8,018). Because the software does not allow sample weights when using maximum likelihood as the estimator
(Muthen & Muthen, 2010), unweighted imputed data were used for the SEM analysis discussed in Results II\textsuperscript{14}.

**Conceptual framework.** As the literature review suggests, campus climate is central to student-athletes’ success. Climate is a complex construct comprised of many dimensions. In order to understand the particulars of how student-athletes experience climate and to explore programs, policies, and practices that might be effective in fostering a positive climate, it is crucial to examine the multiple dimensions of the construct. The conceptual model that acted as the foundation for SACS and guided the examination of the unique contexts and characteristics of student-athletes’ experiences was based on work by Smith et al. (1997), Rankin (2003), and Rankin and Reason (2008). Through a review of relevant literature, consultation with student-athletes and coaches, and findings from the pilot study, the framework was modified to include additional characteristics unique to student-athletes’ experiences. These include the concepts of team and department climate, student-athlete academic and athletic success, and athletic identity. The top-level elements of the conceptual framework and the relationships among them are depicted in Figure 1. This framework was used as a road map for the survey construction and subsequent analyses.

---

\textsuperscript{14} It is important to note that discussions of missing data are often excluded in a number of peer-reviewed journal articles (Roth, 1994) and discussions of statistical treatments for unit non-response (i.e., weighting) appear to be entirely absent.
This framework suggests that individual and institutional characteristics directly influence both how student-athletes experience climate and a variety of educational outcomes unique to student-athletes. At the same time, student-athletes’ experiences of climate can also influence these educational outcomes. Individual and institutional characteristics include demographic characteristics (e.g., race, gender), characteristics unique to student-athletes (e.g., sport affiliation), and characteristics unique to the array of participating institutions (e.g., division). Climate constructs include measures of student-athletes’ experiences, attitudes, perceptions, and reports of institutional actions relevant to the campus, athletic department, and team climates. Outcome measures for the purposes of this study include academic success, athletic identity, and athletic success.
**Survey instrument.** The 2008 pilot survey was constructed using questions from Rankin’s Campus Climate Survey (2003) as well as from the “It takes a team! Survey on Student-Athlete’s Perspectives on Lesbian and Gay Teammates and Coaches” developed by Pat Griffin (Griffin, Perrotti, Priest, & Muska, 2002). After reviewing and editing drafts of the survey, the research team piloted the survey at six institutions and garnered 1,332 respondents. Based on further review of the literature, consultation with experts in the fields of intercollegiate athletics and higher education, and analysis of pilot data (which included both quantitative and qualitative data), the research team further refined the instrument. The survey was modified to obtain more information about factors that specifically relate to the climate for student-athletes, including measures of athletic and academic success, and athletic identity. The final instrument was reviewed by several student-athletes from the NCAA and from Penn State who offered additional revisions to assist in the survey’s *readability* for student-athletes. The final instrument was inclusive of these recommendations.

The survey, which was distributed on-line, included information describing the purpose of the study, the survey instrument, and confidentiality. The final SACS instrument included 68 questions that gauged a range of student-athlete characteristics, experiences, perceptions, and outcomes. The theoretical bases for the scales are described in the following section.

**Scales of interest.** In addition to questions about students’ academic and athletic experiences and background characteristics, the final instrument included scales that measure campus climate, as well as athletic identity, academic success, and athletic success. Each of these scales was drawn from previous research. All of the items that were entered into the factor analyses used to create these scales are listed in Table B1 in Appendix B, while the items that were retained in the final factor structure are offered below in Table 3.
Table 3. Items and factor loadings for latent variables

<table>
<thead>
<tr>
<th>Academic Success</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have performed academically as well as I anticipated I would</td>
<td>1.00</td>
</tr>
<tr>
<td>I am satisfied with my academic experience at this college/university</td>
<td>.965</td>
</tr>
<tr>
<td>I am performing up to my full academic potential</td>
<td>.908</td>
</tr>
<tr>
<td>I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this college/university</td>
<td>.781</td>
</tr>
<tr>
<td>My interest in ideas and intellectual matters has increased since coming to this college/university</td>
<td>.749</td>
</tr>
<tr>
<td>My academic experience has had a positive influence on my intellectual growth and interest in ideas</td>
<td>.658</td>
</tr>
<tr>
<td>I am satisfied with the extent of my intellectual development since enrolling in this college/university</td>
<td>.434</td>
</tr>
<tr>
<td>Few of my courses this year have been intellectually stimulating</td>
<td>.000***</td>
</tr>
</tbody>
</table>

***Factor loading was fixed to zero. The parameter was not estimated but covariance information was retained

<table>
<thead>
<tr>
<th>Athletic Identity</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sport is the only important thing in my life</td>
<td>1.00</td>
</tr>
<tr>
<td>Other people see me mainly as an athlete</td>
<td>.955</td>
</tr>
<tr>
<td>I feel bad about myself when I do poorly in sport</td>
<td>.842</td>
</tr>
<tr>
<td>I would be very depressed if I were injured and could not compete in sport</td>
<td>.813</td>
</tr>
<tr>
<td>I consider myself an athlete</td>
<td>.806</td>
</tr>
<tr>
<td>I have many goals related to sport</td>
<td>.673</td>
</tr>
<tr>
<td>I need to participate in sport to feel good about myself</td>
<td>.633</td>
</tr>
<tr>
<td>Sport is the most important part of my life</td>
<td>.585</td>
</tr>
<tr>
<td>Most of my friends are athletes</td>
<td>.554</td>
</tr>
<tr>
<td>I spend more time thinking about sport than anything else</td>
<td>.448</td>
</tr>
</tbody>
</table>
## Athletic Success

<table>
<thead>
<tr>
<th>Question</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based on your roster spot or frequency of competition, how would you classify your status in your main sport during the time when you competed (not on injury list, not academically ineligible, etc.)?</td>
<td>1.00</td>
</tr>
<tr>
<td>As a collegiate athlete, have you received any individual awards? (Mark all that apply)</td>
<td>.573</td>
</tr>
<tr>
<td>All-American</td>
<td></td>
</tr>
<tr>
<td>All-Region</td>
<td></td>
</tr>
<tr>
<td>All Conference</td>
<td></td>
</tr>
<tr>
<td>Team Awards</td>
<td></td>
</tr>
<tr>
<td>Academic Awards</td>
<td></td>
</tr>
<tr>
<td>Never received an award</td>
<td></td>
</tr>
<tr>
<td>I feel that I am performing up to my full athletic potential</td>
<td>.283</td>
</tr>
<tr>
<td>During the past five years, how often has your team participated in any post-season competition?</td>
<td>.000***</td>
</tr>
</tbody>
</table>

*** Factor loading was fixed to zero. The parameter was not estimated but covariance information was retained

## Athletic Personnel Interaction

<table>
<thead>
<tr>
<th>Question</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall, I feel that my relationship with the following people has been positive</td>
<td>1.00</td>
</tr>
<tr>
<td>Athletic administrators</td>
<td></td>
</tr>
<tr>
<td>My athletic team academic advisor</td>
<td>.945</td>
</tr>
<tr>
<td>My athletic trainer(s)/medical staff</td>
<td>.753</td>
</tr>
<tr>
<td>My assistant coach(es)</td>
<td>.637</td>
</tr>
<tr>
<td>My head coach</td>
<td>.581</td>
</tr>
</tbody>
</table>
### Personal Comfort with Team Diversity

*I am comfortable sharing a hotel room with someone who is...*

<table>
<thead>
<tr>
<th></th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGBT</td>
<td>1.00</td>
</tr>
<tr>
<td>Black (not Latino[a]/Chicano[a]/Hispanic)</td>
<td>.994</td>
</tr>
<tr>
<td>White (not Latino[a]/Chicano[a]/Hispanic)</td>
<td>.969</td>
</tr>
<tr>
<td>Disabled</td>
<td>.955</td>
</tr>
<tr>
<td>A Person of Color (i.e., not Black or White; a collapsed variable based on responses to an array of other items, such as Asian American, Middle Eastern)</td>
<td>.616</td>
</tr>
</tbody>
</table>

### Faculty Student Interaction

In general, since coming to this university...

<table>
<thead>
<tr>
<th></th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>My non-classroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas</td>
<td>1.00</td>
</tr>
<tr>
<td>My non-classroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes</td>
<td>.972</td>
</tr>
<tr>
<td>My non-classroom interactions with faculty have had a positive influence on my career goals</td>
<td>.964</td>
</tr>
<tr>
<td>I feel that the majority of my relationships with faculty are positive</td>
<td>.769</td>
</tr>
<tr>
<td>I have developed close personal relationships with at least one faculty member not associated with athletics</td>
<td>.643</td>
</tr>
<tr>
<td>How often do you actively participate in class?</td>
<td>.335</td>
</tr>
</tbody>
</table>
### Diversity Leadership from Athletic Personnel

There is visible leadership that fosters diversity and inclusion in our athletic department from:

<table>
<thead>
<tr>
<th>Role</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>My athletic team academic advisor</td>
<td>1.00</td>
</tr>
<tr>
<td>My athletic trainer(s)/medical staff</td>
<td>.982</td>
</tr>
<tr>
<td>Other head coaches</td>
<td>.973</td>
</tr>
<tr>
<td>My athletic administration</td>
<td>.962</td>
</tr>
<tr>
<td>My assistant coach(es)</td>
<td>.885</td>
</tr>
<tr>
<td>My head coach</td>
<td>.836</td>
</tr>
</tbody>
</table>

### Athletic Department Addresses Discrimination

My athletic department proactively addresses (takes actions designed to prevent) discrimination related to:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socioeconomic class</td>
<td>1.00</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>.995</td>
</tr>
<tr>
<td>Race</td>
<td>.991</td>
</tr>
<tr>
<td>Religion/Spirituality</td>
<td>.990</td>
</tr>
<tr>
<td>Physical disabilities</td>
<td>.988</td>
</tr>
<tr>
<td>International students</td>
<td>.984</td>
</tr>
<tr>
<td>Gender</td>
<td>.977</td>
</tr>
<tr>
<td>Cognitive/Emotional disabilities</td>
<td>.972</td>
</tr>
<tr>
<td>Gender expression</td>
<td>.963</td>
</tr>
<tr>
<td>Sexual orientation</td>
<td>.957</td>
</tr>
<tr>
<td>Student-athlete identity</td>
<td>.929</td>
</tr>
</tbody>
</table>
Perceptions of Climate

Rate the climate in your **team** at your school on the following dimensions:

Rate the climate in your **athletic department** at your school on the following dimensions:

Rate the climate in your **campus climate** at your school on the following dimensions:

<table>
<thead>
<tr>
<th>First-order Factor Loadings</th>
<th>Team</th>
<th>Department</th>
<th>Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-racist...Racist</td>
<td>1.00</td>
<td>.999</td>
<td>.991</td>
</tr>
<tr>
<td>Religiously tolerant...Religiously intolerant</td>
<td>.988</td>
<td>1.00</td>
<td>.989</td>
</tr>
<tr>
<td>Non-sexist...Sexist</td>
<td>.983</td>
<td>.975</td>
<td>1.00</td>
</tr>
<tr>
<td>Non-classist...Classist</td>
<td>.972</td>
<td>.990</td>
<td>.964</td>
</tr>
<tr>
<td>Positive for People of Color...Negative for People of Color</td>
<td>.955</td>
<td>.989</td>
<td>.987</td>
</tr>
<tr>
<td>Positive for people of my faith/spirituality...Negative for people of my faith/spirituality</td>
<td>.946</td>
<td>.983</td>
<td>.977</td>
</tr>
<tr>
<td>Positive for international people...Negative for international people</td>
<td>.938</td>
<td>.990</td>
<td>.991</td>
</tr>
<tr>
<td>Non-homophobic...Homophobic</td>
<td>.892</td>
<td>.963</td>
<td>.953</td>
</tr>
<tr>
<td>Improving...Regressing</td>
<td>.883</td>
<td>.951</td>
<td>.989</td>
</tr>
<tr>
<td>Respectful...Disrespectful</td>
<td></td>
<td>.961</td>
<td>.975</td>
</tr>
<tr>
<td>Positive for people who identify as LGB...Negative for people who identify as LGB</td>
<td>.797</td>
<td>.931</td>
<td>.918</td>
</tr>
<tr>
<td>Positive for people who identify as Transgender...Negative for people who identify as Transgender</td>
<td>.795</td>
<td>.855</td>
<td>.852</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second-order Factor Loadings</th>
<th></th>
<th>1.00</th>
<th>.880</th>
</tr>
</thead>
</table>
### Perceptions of Respect

*How respectful is the climate within your team for people who are ...*

*How respectful is the climate within the athletic department for people who are ...*

*How respectful is the campus climate at your school for people who are ...*

<table>
<thead>
<tr>
<th>First-order Factor Loadings</th>
<th>Team</th>
<th>Department</th>
<th>Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christian</td>
<td>1.00</td>
<td>1.00</td>
<td>.974</td>
</tr>
<tr>
<td>Disabled</td>
<td>.998</td>
<td>1.00</td>
<td>.955</td>
</tr>
<tr>
<td>From lower socioeconomic classes</td>
<td>.997</td>
<td>.998</td>
<td>.971</td>
</tr>
<tr>
<td>Black (not Latino[a]/Chicano[a]/Hispanic)</td>
<td>.987</td>
<td>.988</td>
<td>.927</td>
</tr>
<tr>
<td>White</td>
<td>.986</td>
<td>.985</td>
<td>.973</td>
</tr>
<tr>
<td>Men</td>
<td>.978</td>
<td>.986</td>
<td>.904</td>
</tr>
<tr>
<td>LGBT</td>
<td>.967</td>
<td>.981</td>
<td>1.00</td>
</tr>
<tr>
<td>Women</td>
<td>.944</td>
<td>.994</td>
<td>.974</td>
</tr>
<tr>
<td>A Person of Color (i.e., not Black or White; a collapsed variable based on responses to an array of other items, such as Asian American, Middle Eastern)</td>
<td>.811</td>
<td>.956</td>
<td>.777</td>
</tr>
<tr>
<td>Varsity Athletes</td>
<td>N/A</td>
<td>.993</td>
<td>.922</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second-order Factor Loadings</th>
<th>Team</th>
<th>Department</th>
<th>Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.00</td>
<td>.916</td>
<td>.896</td>
</tr>
</tbody>
</table>

*** Factor loading was fixed to zero. The parameter was not estimated but covariance information was retained
**Campus climate.** Rankin’s (2003) initial analysis of her survey used to assess the campus climate through the Transformational Tapestry Model indicated the existence of three factors: students’ experiences with the campus environment, their perceptions of the environment, and their perceptions of institutional actions taken to address diversity (Rankin & Reason, 2008). The items pertaining to climate were organized and analyzed based on these three categories.

**Faculty-student interaction.** With the aim of gauging the role of faculty members as stewards of a healthy campus climate, the SACS team cast a wide net in the measurement of faculty-student interaction, asking questions about the quality and quantity of interaction. Two subscales of Pascarella and Terenzini’s (1980) *Institutional Integration Scale* were used: *Interactions with Faculty* and *Faculty Concern for Student Development and Teaching*. One question in the former was modified to more directly apply to student-athletes by asking about faculty members who are not also coaches. In addition, six modified questions from the NCAA’s GOALS (Growth, Opportunities, Aspirations, and Learning of Students in College) and SCORE (Study of College Outcomes and Recent Experiences) surveys were added:

1. I feel that the majority of my relationships with faculty are positive.
2. How often do you actively participate in class? (Five-point metric from “Never” to “Very Often”).
3. How often do you meet with a faculty member who is not associated with athletics? (Five-point metric from “Never” to “Very Often”).
4. I feel that some of my professors discriminate against me because I am a student-athlete.
5. I feel that some of my professors favor me because I am a student-athlete.
6. I feel that some of my professors view me as more of an athlete than a student.

Finally, questions were constructed by the research team to determine the influence of athletic personnel on student-athlete’s academic advising.

1. I have been pressured by an athletic representative (coach, team advisor, etc.) to take a certain class or classes because it required less work or time.
2. I have been pressured by an athletic representative (coach, team advisor, etc.) to take a class or classes offered by a particular professor because she/he requires less work.
3. I have been pressured by an athletic representative (coach, team advisor, etc.) to declare a particular major because it required less work.
4. Does your team have a faculty advisor who provides academic support for the team? (“Yes,” “No,” or “Don’t Know”).

All of the faculty-student interaction questions were asked on a traditional five-point Likert metric from “Strongly Agree” to “Strongly Disagree” unless otherwise noted.

**Academic success.** Academic success is measured using Pascarella and Terenzini’s (1980)*Academic and Intellectual Development* subscale of their *Institutional Integration Scale*. The *Institutional Integration Scale* or its subscales have been used in a variety of studies examining undergraduate student persistence (Berger, 1997; Pascarella, 1985; Pascarella & Chapman, 1983). The scale was used in its entirety with the addition of one question that paralleled a similar question in the athletic success scale. All questions consisted of a traditional five-point Likert metric from “Strongly Agree” to “Strongly Disagree.”

**Intent to persist.** The measure of student-athletes’ intent to persist at their current institution is based on the *Persistence at the Institution* subscale of *The Undergraduate Persistence Intentions Measure (UPI)* (Robinson, 1996, 2003). It was modified by the research team to more directly apply to student-athletes, distinguishing between academic and athletic reasons for transferring to another institution. The questions also use the traditional Likert metric.

**Athletic success.** No single scale has been developed to measure student-athletes’ athletic success. The research team, based on input from athletic and NCAA administrators, chose to focus on maximizing athletic potential. The constructed scale includes questions asked on a survey conducted at Penn State in 2008, as well as others added by the research team.
Athletic identity. Student-athletes’ athletic identity is measured using the Athletic Identity Measurement Scale (AIMS). This scale consists of ten items and was developed by Brewer, Van Raalte, and Linder (1993) to measure the degree to which an individual identifies with the athlete role. The items are measured on a traditional five-point Likert metric. The SACS survey also included nine items from Curry and Weaver’s (1987) Sport Identity Index that were adapted and modified by Cieslak (2004), who sought to enhance the face validity of the initial AIMS. However, these items were not retained during process of scale development.

Scale Development

The two phases of scale development are: 1) exploratory factor analysis of the constructs under investigation, and 2) structural equation modeling analysis. Each of these analyses are described here in detail, starting with the use of factor analysis to examine the scales included in the survey to measure student-athletes’ climate and academic and athletic outcomes. The purpose was three-fold: 1) to produce scales that would be used to conduct descriptive statistics to see how student-athletes differed on these constructs based on demographic identity, 2) to produce scales that would give direction to the subsequent structural equation modeling process used to examine the relationships illustrated in the conceptual framework, and 3) to test the survey instrument’s ability to measure these important constructs and inform the research on campus climate, faculty-student interaction, academic success, student retention, athletic identity, and athletic success.

Used for scale construction, factor analysis determines how well a specified set of survey questions represent a latent construct by measuring how similarly respondents answer them. Since a latent construct (such as intelligence or athletic identity) cannot and should not be measured directly by a single question, researchers use a series of items that are believed to vary depending on the strength of the latent construct (DeVellis, 2003). Factor analysis is used to determine the number of latent constructs described by the items in question and examine or verify the meaning of the constructs, as well as reduce the number of items necessary to adequately measure those constructs (DeVellis, 2003; Garson, 2010). There are many aspects of factor analysis that require the researcher to intentionally consider which procedures are appropriate for the study’s goal. The major decisions to be made include: (a) the factor
extraction method, (b) determining which factors to retain, and (c) the method of rotation used to facilitate factor interpretation. Each of these decision points is described below.

**Factor extraction.** There are two major methods of factor extraction: Principal Components Analysis (PCA) and Principal Axis Factoring (PAF). Principal Components is, strictly speaking, not factor analysis because it does not attempt to determine the relationship of each item to a theoretical construct, or latent variable (de Gruijter & van der Kamp, 2008; DeVellis, 2003; Garson, 2010). It is essentially a data reduction technique. Principal Axis Factoring is true factor analysis in that the resulting composite variables represent the structure of the theoretical latent variables (de Gruijter & van der Kamp, 2008; DeVellis, 2003; Garson, 2010). Even though data reduction is an agreeable byproduct of the intended analysis, the primary purpose of factor analysis for this study is to determine and explain the underlying structure of constructs based on the theoretical framework. This makes PAF a more appropriate choice than PCA.

Unfortunately, the analysis of questions related to student-athletes beliefs about team diversity produced an ultra-Heywood case error (indicating the communality of a variable exceeded its variance) (SAS Institute Inc., 1999). The team consulted with an expert methodologist who suggested running an image factor analysis in that case. An image analysis is based on the correlation matrix of variables predicted from the others using multiple regression (Garson, 2010). It proved to be successful. The analysis of those questions was subsequently conducted with a combination of PAF and Image analysis.

**Factor retention.** Just as there is more than one option for extracting factors, there are many criteria used to determine which of the extracted factors to retain. Kaiser criterion is the most prominent factor retention criteria, partially because of its ease of use and partially because
it is the default in common statistical packages. The common Kaiser criterion is to only retain factors that have an eigenvalue of greater than one (Kaiser, 1960). The eigenvalue of the factor’s eigenvector essentially quantifies how much of the variance in the analyzed items is explained by that factor (in terms of percentage out of the total number of items). Therefore, a factor with an eigenvalue of less than one explains less of the total information among the items than a single item would. Since one of the goals of factor analysis is to reduce the number of items necessary to adequately measure a latent variable, retaining factors that explain less than single items is counter-productive (Darlington, 2006). Additionally, one should consider if a factor that explains slightly more variance than a single item (for example, a factor with an eigenvalue of 1.1) sufficiently meets the goals of the analysis. Unfortunately, because of the difficulty in using a specific cut off value, the Kaiser criteria typically suggests retaining more factors than are optimal (Garson, 2010; Zwick & Velicer, 1986).

Reading a scree plot of the factors’ eigenvalues may also give an indication of the number of factors to retain (Cattell, 1966). Cattell (1966) suggested retaining the number of factors that compose the steep part of the slope of the plot, through the “elbow” in the curve, until it levels off, like the scree at the bottom of a hill. This method can be a good option, but can be very difficult to interpret, especially for solutions with a very small or very large number of factors (Garson, 2010; Zwick & Velicer, 1986). The latter is the case in this study. The reliability of judgments based on scree plots may be increased by having more than one researcher examine the plot and come to an agreement (Zwick & Velicer, 1986).

Presently the most recommended method is parallel analysis (Garson, 2010; O'Connor, 2000; Velicer, Eaton, & Fava, 2000; Zwick & Velicer, 1986). This is a method of determining which factors to retain that is more accurate than other methods. Its primary limitation is its
relative obscurity, perhaps due to its novelty. None of the major statistical packages offer it as an option, but code has been written that enables one to conduct the analysis (O'Connor, 2000). We intended to primarily use this method of factor retention due to its accuracy and dependability relative to the other options, but had technical difficulty getting the analysis to run in PASW. Therefore, we had to rely on a combination of the other methods listed in this section. Eigenvalues and scree plots were examined by multiple researchers. Decisions were also based on theory, as explained next.

True factor analysis (as opposed to data reduction using PCA) is predicated on the assumption that there are latent variables that can be indirectly measured. This assumption flows from whichever theory indicates the existence of the constructs to be examined. Therefore, most of the decisions researchers must make should be based on the theory (or theories) they are investigating. This can be done at the factor retention phase by imposing the structure based on theory, then checking to see if the factor loadings match the predicted structure, thereby determining/confirming how many factors should be retained. It can also be used as the overarching criteria to decide between different results obtained from the previous methods (Garson, 2010; Velicer, et al., 2000; Zwick & Velicer, 1986). This also incorporates factor interpretation, which is best conducted on rotated factors.

**Factor rotation and interpretation.** The purpose of rotating the factor structure is to clarify the factors and determine which items load onto which factors so the researcher can better interpret the latent variables the factors represent (Darlington, 2006; DeVellis, 2003; Garson, 2010). Rotations are either orthogonal or oblique, depending on the assumptions of the underlying theory explaining the latent variables. If the researcher has reason to believe that the underlying constructs are related to each other (as is often the case in social science research)
then an oblique rotation should be used (DeVellis, 2003; Garson, 2010). For this project, we chose to use an Oblimin oblique rotation, acknowledging that any resulting factors may be related to each other. PASW allows the researcher to specify a delta value indicating the extent to which the rotated factors are expected to correlate. The default value of zero was used.

After the factors have been extracted and rotated, verification of the items that primarily contribute to (i.e., load on to) each factor is necessary. In order to do so, researchers use a combination of the items’ factor loadings, comprehensibility of the factors in relation to the underlying theory, and the reliabilities of the resulting scales (see the next section). Keeping in mind that different factor analysis procedures produce different factor loadings (DiStefano, Zhu, & Mîndrilă, 2009), the minimum acceptable factor loading required to retain an item varies from approximately 0.4 to 0.7 in the literature (Darlington, 2006; Garson, 2010). Even when an item loads highly onto one factor, it may also co-load onto one or more other factors. This can be especially troublesome with obliquely rotated factors because their correlation to each other is exhibited through items frequently co-loading onto two or more factors. In that case, not only should the individual items be categorized based on their comprehensibility related to the underlying theoretical construct; the factor correlation matrix should also be examined to determine if any of the factors are too highly correlated to justify their independent existence (Darlington, 2006).

**Hierarchical factor analysis.** The construct of climate is complicated to conceptualize and measure. The questions on the survey related to climate were based on Rankin’s *Campus Climate Survey*(2003), which organizes climate into three general areas: (a) one’s experiences, (b) one’s perceptions, and (c) the institution’s actions. However, preliminary work on another project conducted by researchers from the SACS team that utilizes similar climate questions
indicated the existence of subcategories of climate (Merson & Rankin, in preparation). Therefore, the team employed hierarchical factor analysis (HFA) to examine the relationships between the survey items and possible lower- and higher-order factors that comprise the construct of climate (Garson, 2010; Schmid & Leiman, 1957; StatSoft Inc., 2010; Wherry, 1984). HFA helps to delineate multiple, correlated lower-order factors and determine how they combine to form higher-order factors that represent more general, subsuming theoretical categories. A relatively simple way to conduct an HFA is to first analyze the items and extract rotated factors that are oblique in nature (i.e., correlated to each other), then perform another factor analysis on the factor scores or the correlation matrix between those factors using an orthogonal rotation (Garson, 2010; StatSoft Inc., 2010; Wherry, 1984). The result is higher-order factors representing constructs that are composed of underlying factors.

**Scale testing.** The analysis was based on a set of data and, to an extent, is characteristic of those data. Even though the dataset contains responses from students representing all NCAA sports at multiple institutions of varying sizes, locations, and types, the resulting scales were tested in order to gain evidence of their reliability and validity for the purpose of student-athlete climate assessment and enhancement.

**Reliability.** Rankin has examined correlations between sections of her *Campus Climate Survey* (2003), for every iteration of the survey and for each institutional assessment (Rankin, 1994, 2003; Rankin, et al., 2009; Rankin & Reason, 2008), determining that those sections of the instrument show acceptable levels of internal reliability (Trochim, 2006). For the purpose of this project we focused on determining the reliability of the factor scores used to represent campus climate, faculty-student interaction, and student outcomes.
Cronbach’s alpha (Cronbach, 1951) is the most widely used measure of the internal consistency of a scale (Garson, 2008; Haertel, 2006). It is not a direct measure of the unidimensionality of a scale, which limits its use (Sijtsma, 2009). As such, it should be calculated after the unidimensionality of the scale is first determined through factor analysis.

Cronbach’s alpha is dependent on the similarity between item responses in the scale as well as the number of items, typically increasing as the number of items increases. The balancing act between these two dimensions is a part of scale construction. As previously mentioned, the reliability of the resulting scale score should be considered as well as item factor loadings and factor comprehensibility. The reliability may also increase if an item is removed from the scale. This typically corresponds with an item having a relatively low factor loading. However, the researcher may decide to keep the item if it contributes to the theoretical meaning greatly adds to the theoretical comprehensibility of the scale and does not result in an alpha value that is too low or a scale that is too long (all very subjective considerations). Acceptable values for alpha vary from approximately 0.6 to over 0.9, with the most generally acceptable value in social science research being either 0.7 or 0.8. Yet, some researchers accept values as low as 0.5 (DeVellis, 2003; Garson, 2008; George & Mallery, 2003; Simon, 2008). As with most aspects of statistics and research, the researcher considers the acceptable value for Cronbach’s alpha in relation to other statistical, theoretical, and practical considerations.

**Validity.** Establishing validity requires presenting evidence that supports interpretation of the instrument’s results and subsequent decision-making based on this evidence (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 1999; Kane, 2006). Over time, the notion of instrument validity has shifted from attempts to validate the test as a measure of some criterion to focusing on justifying
the proposed uses of interpretations derived from the test (Kane, 2006). The latest joint
standards from the American Educational Research Association, the American Psychological
Association, and the National Council on Measurement in Education (1999) suggest that sources
of validity evidence include but not be limited to:

1. evidence based on test content (perhaps evaluated by a panel of experts),
2. evidence based on response processes (authenticity of the testing process),
3. evidence based on internal structure (using a nomological net or comparing the
   structure to theoretical constructs through a technique such as factor analysis),
4. evidence based on relations to other variables (such as traditionally defined
   notions of predictive, concurrent, and criterion validity, or through the use of a
   nomological net), and
5. evidence based on consequences of testing (this is the most important, but the
   hardest to get information on until the test is in use, which might be too late).

The evidence required for one’s argument depends on the intended uses of the
instrument. For example, the high-stakes MCAT test that greatly influences entrance to medical
school should be validated with evidence about the potential consequences of using the test to
individuals, society, and members of the public at large who may have to rely on that future
doctor being knowledgeable and skilled enough to save lives. On the other hand, a process that
determines one’s ability to play softball at Penn State may have serious consequences for the
individual student-athlete, but less potential impact on society. In that case, however, one would
expect the process to be an authentic representation of actual playing conditions.

**Factor scale score calculations.** Just as latent constructs cannot be directly measured,
they also cannot be absolutely calculated. Factor analysis helps to home in on the best
representation of the latent variables. Once acceptable factors are extracted, variables that
represent those constructs must be built so they can be used in further description, examination,
and analysis. There are two general classes of factor score calculation, “refined” and “non-
refined” or “coarse” (DiStefano, et al., 2009; Grice, 2002). Refined methods produce scores that
are approximately standardized (with a mean of zero and a standard deviation close to or equal to one) and are more exact than non-refined methods, while also retaining the relative correlations between the factors. This contributes to the validity of the scale. Coarse methods utilize a manual procedure of selecting items to include in the scale and combining them to produce a scale score. They are simple to compute and interpret, but will most likely correlate less with the factors themselves compared to any of the refined methods, thereby being less exact.

The goal of the current project is to accurately measure student outcomes and to use those measures in a subsequent analysis of the effect of individual characteristics and climate on those outcomes. Therefore, the accuracy of a refined method of calculation is preferred. In addition, in order to compare scores they must be standardized (Allen & Yen, 1979; de Gruijter & van der Kamp, 2008; Suen, 2008). Thurstone’s regression refined method was chosen because its accuracy maximizes the validity of the scale (DiStefano, et al., 2009; Grice, 2002) and produces standardized variables with a mean of zero and standard deviation close to one.

**Scale development summary.** Each of the campus climate and outcome scales was analyzed using Principal Axis Factoring (PAF) and an Oblimin oblique rotation with a delta value of zero (except for “Attitudes” which required an image factor analysis). Solutions consisting of only one factor were not rotated. Cronbach’s alpha was calculated for each of the resulting factors/scales. Finally, each scale was scored using the regression refined method.

The next component of analysis employed structural equation modeling. This analytic technique tested how well each of the factors extracted from the exploratory factor analysis (EFA) fit the data. Scale scores were then created based on a specified factor structure for each latent variable. The relationship of identity and institutional characteristics, climate variables, and selected outcome variables was modeled and tested using SEM path analyses.
Structural Equation Modeling (SEM)

With the aim of testing the relationships implied by the conceptual framework, this research employed SEM. The survey items included in the exploratory and confirmatory factor analyses are listed in Appendix B. The final scales that were produced via this process are detailed in the Methodology section (Table 3, p. 40). The final path model also includes exogenous demographic variables representing individual and institutional characteristics of interest: gender, race/ethnicity, sexual orientation, class standing, NCAA division\(^{15}\), and participation in a featured sport\(^{16}\).

**Software and estimation methods.** The data were analyzed using MPlus (Version 6) software. Because the software does not allow sample weights when using maximum likelihood as the estimator (Muthen & Muthen, 2010), unweighted imputed data were used for this analysis\(^{17}\). This should be a consideration when interpreting the path coefficients, particularly for specific identity groups.

Confirmatory factor analyses (CFA) were performed on each of the eight measures to ensure they are sound. The software created factor scores from the CFA procedures, providing a continuous metric for estimating the path models. Path models were estimated, tested, and modified as appropriate.

For the CFA, the estimation method selected was diagonally weighted least squares because all of the response choices were ordered categorical (ordinal). This procedure calculates

---

\(^{15}\) In the SEM model “NCAA Division” represents the institution’s membership in DI, DII, or DIII.

\(^{16}\) With the aim of considering the unique characteristics of participating institutions’ respective programs, rather than categorize student-athletes' sports membership as either 'revenue-generating' or 'high profile,' the research team asked each institutional contact to provide a list of its institution's “featured” and “non-featured” sports teams.

\(^{17}\) It is important to note that discussions of missing data are often excluded in a number of peer-reviewed journal articles (Roth, 1994) and discussions of statistical treatments for unit non-response (i.e., weighting) appear to be entirely absent.
non-parametric correlations among the items. Unlike exploratory factor analysis, CFA requires the researcher to scale the latent variables either by fixing the highest factor loading to one or fixing the variance to one. Although observed variables are assumed to be measured independently, that is, without correlated errors, CFA permits the researcher to correlate the errors of items if theoretically and statistically justifiable. Factor loadings for the measurement models are reported in Table 3 (p. 40). Survey questions, including item stems and response choices, can be found in Appendix A.

Factor scores were subsequently created by the software program based on the participants’ responses. Estimated using diagonally weighted least squares, these are deviation scores with a mean of zero and a standard deviation of one. Participants are assigned a value based on how their responses deviate from the average. When computing the factor scores, the specified factor structure and error correlations are considered, increasing the precision of CFA factor scores. These factor scores were saved and then used as continuous variables for the path model.

The path model was analyzing using factor scores for the latent variables. These data are continuous and normally distributed; therefore maximum likelihood was selected as the estimation method. The residual variances of endogenous variables were permitted to correlate based on theory and information from the modification indices. All exogenous variables in the path model were correlated with each other.

**Mediation and indirect effects.** Mediation examines how predictor variables affect the outcome when traveling through intervening variables (Baron & Kenny, 1986). In simple mediator models, an indirect effect is the product of the two direct regression coefficients on either side of the mediating variable (Baron & Kenny, 1986). In SEM, it is more complex
because all paths in the model are being tested simultaneously. According to Preacher and Hayes (2008), a specific indirect effect is the product of two direct regression coefficients on either side of the mediating variable. This represents the ability of the mediator account for the effects of the predictor to the outcome conditional on the inclusion of all other mediators in the model. The total indirect effect is the sum of all of the specific indirect effects.

Two models were constructed to compare mediation effects of climate. To develop the path model, we included all possible regression paths and correlations based on the initial conceptual framework. Iteratively, we removed the most insignificant path or correlation and re-ran the model until all remaining correlations and regression coefficients were statistically significant at \( p < 0.001 \). The mediation model required 72 iterations. The second model included the mediation model as well as all possible direct effects. Fourteen iterations were needed to create the model with direct effects.

The model shown in Figure 15(p. 98) is considered the nested or mediator model in this analysis. A second model was created to test the direct effects of the exogenous variables to the outcomes. When studying indirect effects, not estimating the direct effects could potentially bias other path coefficients in a way that spuriously inflates estimates of indirect effects (Preacher & Hayes, 2008). Therefore, the coefficients of the indirect effects are reported from the non-nested model. Since paths and correlations in the models are tested simultaneously, the results indicate that the influences of all other variables are controlled. In other words, the coefficients are reported holding all other variables constant.

**Qualitative Analyses**

Along with the quantitative questions, the survey also included six optional open-ended survey items. These questions were used to capture student-athletes’ voices on their perspectives
concerning the climate on their respective campuses. The questions asked students to comment on their experiences with and observations of climate, their interactions with faculty members, and the contributions of their teams’ respective faculty advisors. Respondents were also asked to offer recommendations for improving climate. A total of 4,264 respondents provided more than 4,500 comments across the six open-ended items.

The first step in analyzing the qualitative data was the development of a coding structure. It is important to note that coding is only the first step in analysis, rather than the sole act in the process of analysis. As described by Maxwell (2005), coding is merely a “categorizing strategy” and tends to focus on three types of categories: organizational, substantive, and theoretical. The coding framework used for the initial coding of the data consists of a mix of these three. The responses were initially organized based on the survey item (organizational coding) and were also coded when relevant responses included information concerning interactions with specific people or in specific contexts (e.g., coaches, faculty, during practice, in the locker room). Substantive codes were developed through a fine-grained “open coding” of the data, which consisted of inductively identifying themes as they emerged (e.g., no avenue for voicing opinion, fear of further injury). See Strauss and Corbin (1998) for descriptions of grounded theory and open coding. A third type of coding used in the initial stage of analysis was theoretical, with the codes corresponding to themes in the study’s theoretical framework. The data were organized and coded using NVivo 8 qualitative data analysis software. This report includes qualitative data that support the findings of the quantitative analysis. Future work includes a series of research articles that will focus on particular themes and topics described by the respondents.
Preliminary Analyses of Sample Characteristics, Harassment, and Outcomes

The first step in the data analysis was to produce a snapshot of the sample. In Results I, we first present a snapshot of the sample based on demographic and institutional variables of interest (NCAA division, gender, race/ethnicity, sport played, sexual orientation, class standing, disability status, religious affiliation, participation in a featured sport, GPA, financial sources, geographic location, and participation in other activities). The second section includes descriptions of the student-athletes’ experiences with harassment. Following that is an analysis of how the outcomes vary based on the demographic and institutional variables of interest. These three sections were compiled using descriptive and multivariate techniques such as frequencies, crosstabulations, chi-square tests, t-tests, and analysis of variance (ANOVA).

The Chi-Square Test of Independence determines if there exist one or more statistically significant differences between the proportions of observed values reported by the sample and those that are statistically expected. A T-Test determines if the mean scores of two groups are statistically different. We also used Levene’s test of homogeneity of variances to determine if the variances of the two groups are unequal, indicating which of the t-test results to use and how many degrees of freedom to report. ANOVA is used to distinguish differences in means when there are more than two groups. We used both Tukey’s Honestly Significant Difference (Tukey’s HSD) and Tomhane’s T2 tests. The former is appropriate when the group variances are equal while the latter takes into account unequal variances.

Summary

In this section of the report we described the research methodology used. We first presented the general research design and the procedure we used to select our sample of student-
athletes, including a discussion of the use of weighting and imputation to address missing data. We then introduced the conceptual framework used to guide this study. Following was a detailed discussion of the survey instrument, the development of the scales used to measure campus climate and student-athlete outcomes, the analyses employed to establish those scales, and the use of SEM and path analysis to test the relationships between various student-athlete characteristics, climate, and the outcomes of interest. Finally, this section concluded with a description of the qualitative methods used. Results I and Results II of this report contain detailed descriptions of the sample, experiences with harassment, and outcomes.
Results I: Sample Characteristics\textsuperscript{18}, Experiences with Harassment, and Outcomes

This section of the report provides descriptive findings of the project. The first step in the data analysis was to produce a snapshot of the sample. We first present a snapshot of the sample based on demographic and institutional variables of interest. The second section includes descriptions of the student-athletes’ experiences with harassment. Following that is an analysis of how the outcomes vary based on the demographic and institutional variables of interest. These three sections were compiled using descriptive and multivariate techniques such as frequencies, crosstabulations, chi-square tests, t-tests, and ANOVA.

Sample Characteristics

These analyses were based on the weighted sample of 8,018 respondents from 164 different institutions. All reported differences are statistically significant as confirmed through statistical testing (chi-square, t-test, or ANOVA). The responses by division with corresponding responses rates are provided in Table 4.

<table>
<thead>
<tr>
<th>Division</th>
<th>Number of Respondents (n)</th>
<th>Percent of Sample (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DI - FBS</td>
<td>1,562</td>
<td>19.5</td>
</tr>
<tr>
<td>DI - FCS</td>
<td>1,827</td>
<td>22.8</td>
</tr>
<tr>
<td>DI - non-football</td>
<td>691</td>
<td>8.6</td>
</tr>
<tr>
<td>DII</td>
<td>1,671</td>
<td>20.8</td>
</tr>
<tr>
<td>DIII</td>
<td>2,267</td>
<td>28.3</td>
</tr>
</tbody>
</table>

When grouping the respondents by gender, 43% identified themselves as women (n = 3,480) and 57% as men (n = 4,531). Since only seven respondents identified themselves as “Transgender,” they were subsequently removed from further analyses. The gender breakdown across each of the five divisions is detailed in Table 5.

\textsuperscript{18} The sample size (n) reported in statistical analyses may vary due to missing data and/or rounding.
<table>
<thead>
<tr>
<th>Gender</th>
<th>DI - FBS</th>
<th>DI – FCS</th>
<th>DI – non-</th>
<th>DII</th>
<th>DIII</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>football</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Women</td>
<td>792</td>
<td>50.7</td>
<td>782</td>
<td>42.8</td>
<td>297</td>
<td>43.0</td>
</tr>
<tr>
<td>Men</td>
<td>769</td>
<td>49.3</td>
<td>1,044</td>
<td>57.2</td>
<td>394</td>
<td>57.0</td>
</tr>
</tbody>
</table>

Respondents were given the opportunity to mark multiple racial and ethnic identities, allowing for self-identification as bi-racial or multi-racial. Their distribution is detailed in Figure 2. Using the collapsed total, 81% are Caucasian/White (n = 6,517) (Figure 3). The student-athletes of color identified as African/African American/Black (n = 968, 11.4%), Latino/Hispanic (n = 552, 6.5%), Asian/Asian American/Southeast Asian (n = 300, 3.5%), American Indian/Alaskan Native (n = 168, 1.9%), Pacific Islander/Filipino/Hawaiian (n = 78, 1%), and Middle Eastern (n = 50, 0.6%).

Figure 2. Respondents by racial identity (Duplicated total)
In an unduplicated total, Student-Athletes of Color\(^{19}\) comprise 24% (n = 1,945) of the sample and 76% (n = 6,073) are White, non-Hispanic. The term “Student-Athletes of Color” includes any respondents that indicated their race and/or ethnicity as African, African American, Black, Alaskan Native, Asian, Asian American, Caribbean, West Indian, Indian Subcontinent, Latino, Chicano, Hispanic, Middle Eastern, Native American Indian, and Pacific Islander, Hawaiian Native. The Student-Athletes of Color variable collapses all races and/or ethnicities that do not represent Caucasian/White. “White, non-Hispanic” represents respondents that indicated their race/ethnicity as only Caucasian/White. When reviewing the data by division (Table 6), the percentages of Student-Athletes of Color are highest in Divisions I – non-football and II, and lowest in Division III ($\chi^2_{(4, N = 8,018)} = 191.0, p < .001$).

---

\(^{19}\) While the authors recognize the vastly different experiences of people of various racial identities (e.g., Chicano(a) versus African American or Latino(a) versus Asian American), and those experiences within these identity categories, we collapsed these categories into Student-Athletes of Color and White, non-Hispanic for many of the analyses due to the small numbers in individual race and ethnicity categories.
### Table 6. Respondents by racial identity and division

<table>
<thead>
<tr>
<th>Racial Identity</th>
<th>DI - FBS</th>
<th></th>
<th>DI - FCS</th>
<th></th>
<th>DI – non-football</th>
<th></th>
<th>DII</th>
<th></th>
<th>DIII</th>
<th></th>
<th>TOTAL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Student-Athletes of Color</td>
<td>395</td>
<td>25.3</td>
<td>461</td>
<td>25.2</td>
<td>221</td>
<td>31.9</td>
<td>534</td>
<td>32.0</td>
<td>333</td>
<td>14.7</td>
<td>1,944</td>
<td>24.2</td>
</tr>
<tr>
<td>White, non-Hispanic Student-Athletes</td>
<td>1,167</td>
<td>74.7</td>
<td>1,365</td>
<td>74.8</td>
<td>471</td>
<td>68.1</td>
<td>1,137</td>
<td>68.0</td>
<td>1,934</td>
<td>85.3</td>
<td>6,074</td>
<td>75.8</td>
</tr>
</tbody>
</table>

**Sports by division and gender.** For the purposes of this preliminary report, we report the number of respondents by sport and division. We collapsed track and field with cross country as many students participated in both (see Table 7).
Table 7. Number of respondents by sport and division

<table>
<thead>
<tr>
<th>Sport</th>
<th>Total</th>
<th>DI - FBS</th>
<th>DI - FCS</th>
<th>DI - non-football</th>
<th>DII</th>
<th>DIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseball</td>
<td>771</td>
<td>124</td>
<td>122</td>
<td>45</td>
<td>251</td>
<td>229</td>
</tr>
<tr>
<td>Basketball</td>
<td>592</td>
<td>65</td>
<td>104</td>
<td>47</td>
<td>159</td>
<td>217</td>
</tr>
<tr>
<td>Bowling</td>
<td>12</td>
<td>1</td>
<td>4</td>
<td>---</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Fencing</td>
<td>30</td>
<td>4</td>
<td>12</td>
<td>---</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Field Hockey</td>
<td>177</td>
<td>25</td>
<td>39</td>
<td>---</td>
<td>33</td>
<td>80</td>
</tr>
<tr>
<td>Football</td>
<td>1084</td>
<td>181</td>
<td>307</td>
<td>66</td>
<td>247</td>
<td>283</td>
</tr>
<tr>
<td>Golf</td>
<td>339</td>
<td>112</td>
<td>66</td>
<td>43</td>
<td>52</td>
<td>66</td>
</tr>
<tr>
<td>Gymnastics</td>
<td>111</td>
<td>63</td>
<td>16</td>
<td>1</td>
<td>3</td>
<td>28</td>
</tr>
<tr>
<td>Ice Hockey</td>
<td>115</td>
<td>4</td>
<td>11</td>
<td>8</td>
<td>15</td>
<td>77</td>
</tr>
<tr>
<td>Lacrosse</td>
<td>411</td>
<td>3</td>
<td>70</td>
<td>27</td>
<td>74</td>
<td>237</td>
</tr>
<tr>
<td>Rifle</td>
<td>21</td>
<td>5</td>
<td>8</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Rowing</td>
<td>213</td>
<td>88</td>
<td>51</td>
<td>4</td>
<td>2</td>
<td>68</td>
</tr>
<tr>
<td>Skiing</td>
<td>48</td>
<td>1</td>
<td>13</td>
<td>3</td>
<td>23</td>
<td>8</td>
</tr>
<tr>
<td>Soccer</td>
<td>1014</td>
<td>182</td>
<td>191</td>
<td>111</td>
<td>183</td>
<td>347</td>
</tr>
<tr>
<td>Softball</td>
<td>392</td>
<td>70</td>
<td>83</td>
<td>38</td>
<td>86</td>
<td>115</td>
</tr>
<tr>
<td>Swimming/Diving</td>
<td>521</td>
<td>107</td>
<td>155</td>
<td>57</td>
<td>53</td>
<td>149</td>
</tr>
<tr>
<td>Tennis</td>
<td>357</td>
<td>82</td>
<td>63</td>
<td>37</td>
<td>64</td>
<td>111</td>
</tr>
<tr>
<td>Track &amp; Field and/or</td>
<td>1644</td>
<td>336</td>
<td>412</td>
<td>157</td>
<td>385</td>
<td>354</td>
</tr>
<tr>
<td>Cross Country</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volleyball</td>
<td>384</td>
<td>86</td>
<td>72</td>
<td>46</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Water Polo</td>
<td>38</td>
<td>12</td>
<td>19</td>
<td>---</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Wrestling</td>
<td>98</td>
<td>32</td>
<td>25</td>
<td>16</td>
<td>2</td>
<td>23</td>
</tr>
</tbody>
</table>
Sexual orientation. Table 10 depicts the number of LGBQ and Heterosexual student-athletes in the sample. Approximately 5% self-identified as LGBQ (n = 394) with 95% self-identified as Heterosexual (n = 7,625). A larger percentage of student-athletes participating in DI – Non-football and DIII identified as LGBQ ($\chi^2_{(4, N = 8,019)} = 14.1, p< .010$).

<table>
<thead>
<tr>
<th>Sexual Orientation</th>
<th>DI - FBS</th>
<th>DI - FCS</th>
<th>DI – nonfootball</th>
<th>DII</th>
<th>DIII</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>LGBQ Student-Athletes</td>
<td>68</td>
<td>4.4</td>
<td>73</td>
<td>4.0</td>
<td>43</td>
<td>6.2</td>
</tr>
<tr>
<td>Heterosexual Student-Athletes</td>
<td>1,494</td>
<td>95.6</td>
<td>1,753</td>
<td>96.0</td>
<td>649</td>
<td>93.8</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>73</td>
<td>4.0</td>
<td>137</td>
<td>6.0</td>
<td>394</td>
<td>4.9</td>
</tr>
<tr>
<td></td>
<td>1,753</td>
<td>96.0</td>
<td>2,130</td>
<td>94.0</td>
<td>7,625</td>
<td>95.1</td>
</tr>
</tbody>
</table>

Class standing. Regarding class standing, the largest percentage in the sample consists of first-year student-athletes at 32% (n = 2,542), followed by 25% second-year student-athletes (n = 2,028), and then 22% of third-years (n = 1,730) and 21% of a combined group of fourth-, fifth-year, and graduate student-athletes (n =1,719) (Table 9). When grouped by division, the distribution is similar except for the proportion of second-years, which varies across divisions ($\chi^2_{(12, N = 8,019)} = 46.0, p< .001$).

<table>
<thead>
<tr>
<th>Class Standing</th>
<th>DI - FBS</th>
<th>DI – FCS</th>
<th>DI – nonfootball</th>
<th>DII</th>
<th>DIII</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>First year</td>
<td>452</td>
<td>28.9</td>
<td>567</td>
<td>31.0</td>
<td>234</td>
<td>33.8</td>
</tr>
<tr>
<td></td>
<td>234</td>
<td>33.8</td>
<td>534</td>
<td>31.9</td>
<td>755</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td>2,542</td>
<td>31.7</td>
<td>1,730</td>
<td>21.6</td>
<td>1,719</td>
<td>21.4</td>
</tr>
<tr>
<td>Second year</td>
<td>385</td>
<td>24.6</td>
<td>450</td>
<td>24.6</td>
<td>187</td>
<td>27.0</td>
</tr>
<tr>
<td></td>
<td>373</td>
<td>22.3</td>
<td>633</td>
<td>27.9</td>
<td>2,028</td>
<td>25.3</td>
</tr>
<tr>
<td>Third year</td>
<td>362</td>
<td>23.2</td>
<td>383</td>
<td>21.0</td>
<td>131</td>
<td>18.9</td>
</tr>
<tr>
<td></td>
<td>389</td>
<td>23.3</td>
<td>465</td>
<td>20.5</td>
<td>1,730</td>
<td>21.6</td>
</tr>
<tr>
<td>Fourth + year</td>
<td>363</td>
<td>23.2</td>
<td>427</td>
<td>23.4</td>
<td>140</td>
<td>20.2</td>
</tr>
<tr>
<td></td>
<td>376</td>
<td>22.5</td>
<td>413</td>
<td>18.2</td>
<td>1,719</td>
<td>21.4</td>
</tr>
</tbody>
</table>
Disability status. Student-athletes with some form of physical disability (e.g., hearing loss, vision loss, etc.) make up less than 2% (n = 119) of the sample. Student-athletes with some form of a learning disability (e.g., dyslexia, dyscalculia, etc.) make up 3% (n = 223) of the sample and those with a psychological condition (e.g., ADHD, depression, etc.) make up 4% (n = 312) of the sample.

Religious affiliation. There is a diversity of religious affiliations represented in the sample; student-athletes in the sample are affiliated with 33 different religions or spiritualties. The distribution of a collapsed version of the full list is in Table 10. The largest category is Christian-affiliated, which represents almost 75% (n = 5,972) of the sample. The second largest category is student-athletes that are not spiritual and have no religious affiliation at 13% (n = 1,058). Student-athletes that consider themselves to be spiritual but have no religious affiliation represent 4% (n = 328) of the sample. No other category made up more than 2.5% of the sample; Jewish, Muslim, Hindu, Buddhist, and student-athletes of other faiths were represented in small percentages in the sample.
Table 10. Religious and spiritual affiliation

<table>
<thead>
<tr>
<th>Affiliation</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christian-affiliated</td>
<td>5,972</td>
<td>74.5</td>
</tr>
<tr>
<td>No affiliation</td>
<td>1,058</td>
<td>13.2</td>
</tr>
<tr>
<td>Spiritual, but no religious affiliation</td>
<td>328</td>
<td>4.1</td>
</tr>
<tr>
<td>Agnostic</td>
<td>181</td>
<td>2.3</td>
</tr>
<tr>
<td>Atheist</td>
<td>180</td>
<td>2.2</td>
</tr>
<tr>
<td>Jewish</td>
<td>142</td>
<td>1.8</td>
</tr>
<tr>
<td>Buddhist</td>
<td>45</td>
<td>0.6</td>
</tr>
<tr>
<td>Muslim</td>
<td>30</td>
<td>0.4</td>
</tr>
<tr>
<td>Unitarian Universalist</td>
<td>21</td>
<td>0.3</td>
</tr>
<tr>
<td>Hindu</td>
<td>20</td>
<td>0.2</td>
</tr>
<tr>
<td>Quaker</td>
<td>20</td>
<td>0.2</td>
</tr>
<tr>
<td>Baha’i</td>
<td>4</td>
<td>0.1</td>
</tr>
<tr>
<td>Native American Practitioner</td>
<td>9</td>
<td>0.1</td>
</tr>
<tr>
<td>Other Affiliation</td>
<td>9</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8,018</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

**Featured and non-featured sports.** Each participating institution provided to the research team their respective self-identified “featured sports." Almost 27% (n = 2,149) of the student-athletes participate in featured sports at their institutions. Just over 9% (n = 200) of the student-athletes that are featured sport participants are also student-athletes from low socio-economic backgrounds, which is higher than for student-athletes in non-featured sports (5%, n = 301, \( \chi^2(1, N = 8,018) = 46.9, p < .001 \)). This percentage is also higher than the total sample, of which only 6% (n = 501) of the student-athletes are from low-income backgrounds. A distinction between student-athletes in featured and non-featured sports occurs in student GPA as well. Seventy seven percent (n = 5,251) of the non-featured sport student-athletes maintain a B

---

20 In literature that explores the difference between sports teams, teams are most often categorized as “high-profile” and “low-profile” or “revenue-generating” and “non-revenue-generating.” With the aim of considering the unique characteristics of participating institutions’ respective programs, the research team asked each institutional contact to provide a list of its institution’s “featured” and “non-featured” sports teams.
average or better. In contrast, only 67% (n = 1,442) of the featured sport student-athletes maintain a B average or better ($\chi^2_{(8, N = 7,992)} = 107.4, p < .001$).

**Grade point average.** The distribution of respondents’ grade point average (GPA) is presented in Figure 4. It is presented for all student-athletes respondents. These categories are used in subsequent reporting on GPA.

![Figure 4. Respondents’ GPA](image)

The data appear to reveal a gender gap in student-athlete GPA as indicated in Figures Figure 5 and Figure 6 below. Only 21% (n = 956) of the men in the study achieved a GPA of 3.5 or higher. In contrast, 39% (n = 1,346) of the women student-athletes in the study maintain a GPA of 3.5 or higher ($t = -17.216, p < .001$). The gender gap also appears among student-athletes with GPAs below 2.5. Only 7% (n = 238) of women in the study maintain a GPA of below 2.5 whereas, 16% (n = 722) of the men in the study do ($t = 13.137, p < .001$).
Figure 5. GPA of men student-athletes

- A (4.00-3.84) n = 323
- A- (3.83-3.50) n = 633
- B+ (3.49-3.17) n = 1,013
- B (3.16-2.84) n = 1,078
- B- (2.83-2.50) n = 748
- C+ (2.49-2.17) n = 444
- C (2.16-1.84) n = 200
- C- (1.83-1.50) n = 50
- D or below (< 1.50) n = 28
Figure 6. GPA of women student-athletes

Figure 7 highlights student-athlete GPA breakdown across all NCAA Divisions. Overall, almost 29% (n = 2,304) of the student-athletes in the study have a GPA over 3.5. Only 12% (n = 960) of the student-athletes in the study report a GPA below a 2.5. The highest achieving student-athletes are in Division I Non-Football where 34.6% (n = 237) of the student-athletes maintain a GPA of 3.5 or higher ($\chi^2(4, N = 7,992) = 16.0, p < .010$). All Divisions have between 10-14% of their student-athletes at a GPA below 2.5, with the lowest and highest percentages belonging to Division I-FBS and Division II, respectively ($\chi^2(4, N = 7,992) = 15.8, p < .010$).
Financial contributions. Table highlights how student-athletes from the various divisions pay for college. It is important to note that this is self-reported data. The information presented here suggests that student-athletes across divisions rely on multiple resources to pay for their education in addition to athletic scholarships.
Table 11. Types of financial aid reported by student-athletes

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>DI - FBS</th>
<th>DI - FCS</th>
<th>DI - non-football</th>
<th>DII</th>
<th>DIII</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Family contribution</td>
<td>4,386</td>
<td>54.7</td>
<td>757</td>
<td>48.5</td>
<td>926</td>
<td>50.7</td>
</tr>
<tr>
<td>Athletics scholarship</td>
<td>3,749</td>
<td>46.8</td>
<td>997</td>
<td>63.8</td>
<td>1,140</td>
<td>62.4</td>
</tr>
<tr>
<td>Loans</td>
<td>3,708</td>
<td>46.3</td>
<td>453</td>
<td>29.0</td>
<td>636</td>
<td>34.8</td>
</tr>
<tr>
<td>Academic scholarship</td>
<td>3,484</td>
<td>43.4</td>
<td>558</td>
<td>35.7</td>
<td>568</td>
<td>31.1</td>
</tr>
<tr>
<td>Personal contribution/job</td>
<td>1,736</td>
<td>21.7</td>
<td>225</td>
<td>14.4</td>
<td>338</td>
<td>18.5</td>
</tr>
<tr>
<td>Pell grant</td>
<td>1,266</td>
<td>15.8</td>
<td>164</td>
<td>10.5</td>
<td>248</td>
<td>13.6</td>
</tr>
<tr>
<td>Need-based institutional grant</td>
<td>1,156</td>
<td>14.4</td>
<td>97</td>
<td>6.2</td>
<td>208</td>
<td>11.4</td>
</tr>
</tbody>
</table>

**Geographic location.** Information on the geographic location of the respondents’ institutions is presented in Figure 8. The geographic locations are those used by the Integrated Postsecondary Education Data System (IPEDS). The sample contains representatives from each geographic region.
Participation in other activities. The data suggest that despite their time demands student-athletes participate in other campus activities. Most student-athletes report that they are involved in intramural/club sports, academic and honor societies, or the Student-Athlete Advisory Council. Student-athletes also participate in religious and service organizations. Of the 14 organizational choices available,

Table 12 highlights the most frequently reported organizations and level of student-athlete participation by division. Student-athletes in Division III are more involved in organizations outside of varsity athletics than student-athletes in other divisions($\chi^2(4, N = 8,019) = 184.1, p < .001$). Interestingly, when comparing student-athlete involvement in religious/spiritual
activities Division I–FBS student-athletes report the most involvement, while Division III student-athletes report the least ($\chi^2 (4, N = 8,018) = 81.0, p < .001$).

Table 12. Student-athlete involvement in organizations outside of athletics

<table>
<thead>
<tr>
<th>Organization</th>
<th>Total</th>
<th>DI - FBS</th>
<th>DI - FCS</th>
<th>DI - non-football</th>
<th>DII</th>
<th>DIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not involved in other organizations</td>
<td>3,244</td>
<td>685</td>
<td>281</td>
<td>126</td>
<td>406</td>
<td>838</td>
</tr>
<tr>
<td>Intramural/club sports</td>
<td>1,777</td>
<td>151</td>
<td>281</td>
<td>330</td>
<td>406</td>
<td>513</td>
</tr>
<tr>
<td>Academic &amp; honor societies</td>
<td>1,545</td>
<td>296</td>
<td>300</td>
<td>131</td>
<td>263</td>
<td>354</td>
</tr>
<tr>
<td>SAAC</td>
<td>1,340</td>
<td>295</td>
<td>297</td>
<td>129</td>
<td>183</td>
<td>180</td>
</tr>
<tr>
<td>Religious/spiritual</td>
<td>942</td>
<td>269</td>
<td>236</td>
<td>74</td>
<td>153</td>
<td>280</td>
</tr>
<tr>
<td>Service</td>
<td>819</td>
<td>162</td>
<td>156</td>
<td>68</td>
<td>153</td>
<td>280</td>
</tr>
</tbody>
</table>

Note: This table includes the most frequently reported options.

Summary

As this section illustrated, student-athletes are not a monolithic group. This variation among individual characteristics and the NCAA divisions in which they compete is an important level of detail that helps one to understand the similar, yet varied experiences of student-athletes. The next section explores how the outcome measures used in the study vary based on some of these characteristics.

Preliminary Differences in Outcomes Based on Demographic Characteristics

In order to conceptualize how the SEM models of the three student outcomes may vary based on student-athletes’ and institutional characteristics, the research team conducted a series of t-tests and ANOVA on each outcome (as measured by the factors created during the exploratory factor analysis). The grouping variables were gender (without transgender student-
athletes), race (in terms of Student-Athletes of Color and White, non-Hispanic Student-Athletes), participation in a featured or a non-featured sport, the institution’s NCAA Division (Divisions I - FBS, I - FCS, I - non-football, II, and III), and class standing (first- through fourth year + students). The first three variables were analyzed with t-tests, while the last two were examined using ANOVA.

Results for gender, race, and featured sport. We used t-tests to determine if differences in the outcomes existed among student-athletes of different genders, races, and featured- vs. non-featured sport membership. A t-test determines if the mean scores of two groups are statistically different. We also used Levene’s test of homogeneity of variances to determine if the variances of the two groups are unequal, indicating which of the t-test results to use and how many degrees of freedom to report. Such was the case for all of the analyses except for gender and Athletic Success.

As compared to their counterparts, Women, White, non-Hispanic Student-Athletes, and student-athletes in non-featured sports all have higher levels of academic success and athletic success. The pattern is opposite for Athletic Identity, with Men, Student-Athletes of Color, and student-athletes in Featured Sports exhibiting higher levels of Athletic Identity (Table 13). The only exception is race and Athletic Success, which is non-significant.
Table 13. Results of t-tests comparing outcome means by gender, race, and participation in a featured sport

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Grouping Variable</th>
<th>Mean Difference</th>
<th>T-Value</th>
<th>Degrees of Freedom</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic &amp; Intellectual Development</strong></td>
<td>Women</td>
<td>0.20</td>
<td>-9.42   **</td>
<td>7536.6</td>
</tr>
<tr>
<td>Student-Athletes of Color</td>
<td>-0.22</td>
<td>8.67            **</td>
<td></td>
<td>3068.3</td>
</tr>
<tr>
<td>Featured Sport</td>
<td>-0.08</td>
<td>3.29            **</td>
<td></td>
<td>3677.9</td>
</tr>
<tr>
<td><strong>Athletic Success</strong></td>
<td>Women</td>
<td>0.16</td>
<td>-10.70  ***</td>
<td>7639.4</td>
</tr>
<tr>
<td>Student-Athletes of Color</td>
<td>-0.01</td>
<td>0.39</td>
<td></td>
<td>3333.2</td>
</tr>
<tr>
<td>Featured Sport</td>
<td>-0.14</td>
<td>7.93            ***</td>
<td></td>
<td>3457.7</td>
</tr>
<tr>
<td><strong>Athletic Identity</strong></td>
<td>Women</td>
<td>-0.22</td>
<td>10.69   ***</td>
<td>7716.0</td>
</tr>
<tr>
<td>Student-Athletes of Color</td>
<td>0.11</td>
<td>-4.11           ***</td>
<td></td>
<td>3087.1</td>
</tr>
<tr>
<td>Featured Sport</td>
<td>0.19</td>
<td>-7.91           ***</td>
<td></td>
<td>3714.3</td>
</tr>
</tbody>
</table>

**p < .01  ***p < .001

Note: Groups in bold have higher scores than their counterparts.

**Results for NCAA division and class standing.** Tests of ANOVA indicated that there were also significant differences in outcomes based on NCAA division and student-athletes’ class standing (Table 14).
Table 14. Results of ANOVA comparing outcomes by NCAA division and class standing

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Grouping Variable</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic &amp; Intellectual Development</td>
<td>NCAA Division</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Between Groups</td>
<td>27.04</td>
<td>4.00</td>
<td>6.76</td>
<td>7.40 ***</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>7320.24</td>
<td>8013.00</td>
<td>0.91</td>
<td></td>
</tr>
<tr>
<td>Class Standing</td>
<td>Between Groups</td>
<td>38.76</td>
<td>3.00</td>
<td>12.92</td>
<td>14.17 ***</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>7308.52</td>
<td>8014.00</td>
<td>0.91</td>
<td></td>
</tr>
<tr>
<td>Athletic Success</td>
<td>NCAA Division</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Between Groups</td>
<td>6.50</td>
<td>4.00</td>
<td>1.63</td>
<td>3.59 **</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>3623.46</td>
<td>8013.00</td>
<td>0.45</td>
<td></td>
</tr>
<tr>
<td>Class Standing</td>
<td>Between Groups</td>
<td>612.39</td>
<td>3.00</td>
<td>204.13</td>
<td>542.13 ***</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>3017.57</td>
<td>8014.00</td>
<td>0.38</td>
<td></td>
</tr>
<tr>
<td>Athletic Identity</td>
<td>NCAA Division</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Between Groups</td>
<td>48.75</td>
<td>4.00</td>
<td>12.19</td>
<td>13.60 ***</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>7182.44</td>
<td>8013.00</td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td>Class Standing</td>
<td>Between Groups</td>
<td>31.08</td>
<td>3.00</td>
<td>10.36</td>
<td>11.53 ***</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>7200.11</td>
<td>8014.00</td>
<td>0.90</td>
<td></td>
</tr>
</tbody>
</table>

**p < .01  ***p < .001

Significant differences between group means were examined using both Tukey’s Honestly Significant Difference (Tukey’s HSD) and Tomhane’s T2 tests. The former is appropriate when the group variances are equal while the latter takes into account unequal variances. According to Levene’s test of homogeneity of variances, group variances for all of the outcomes were unequal except for Athletic Identity.

The patterns of difference among the NCAA divisions varied from outcome to outcome. Student-athletes from Divisions I and II showed statistically equal levels of academic success, but so did those from Divisions II and Division III (Figure 9). In the following figures of group means, boxes of both equal height and shade indicate groups whose mean score on the outcome were statistically equal.
Student-athletes from Divisions I and II reported equal levels of athletic success, while those from Division I – FBS and both Divisions II and III showed statistically equal, and slightly lower, levels of Athletic Success (Figure 10). Finally, student-athletes in Division III exhibited a significantly lower level of Athletic Identity than those in the other divisions (Figure 11).
Figure 10. Results of ANOVA of athletic success by NCAA division
There were also differences in the outcomes based on class standing. Athletic and Intellectual Development increased slightly with class standing, but the group differences were small, with much overlap (Figure 12). Student-athletes’ reported Athletic Success increased (Figure 13). However, seniors exhibited a significantly lower level of Athletic Identity than their colleagues, who all reported statistically equal, relatively higher levels (Figure 14). The results pertaining to athletic success are unsurprising when one considers that the student-athletes who took the survey were the “successful” ones who had remained in school and in athletics over the years. In addition, the lower level of Athletic Identity in seniors maybe attributable to their focus on post-graduation plans, most of which do not entail a career as an athlete.
Figure 12. Results of ANOVA of academic & intellectual development by class standing
Figure 13. Results of ANOVA of athletic success by class standing
Figure 14. Results of ANOVA of athletic identity by class standing

**A note of caution when examining preliminary results.** While these results are interesting and raise many questions, they should be seen as purely preliminary. The statistical tests used in this section to compare outcomes for different groups of student-athletes do not take into account other possible influences, such as other individual characteristics (such as sexual orientation) and their experiences with and perceptions of the climate at their school and on their teams. These potential influences are fully examined in the SEM analysis presented in Results II. Next we examine the student-athletes’ experiences with harassment.
Student-Athlete Experiences with Harassment

The SACS survey instrument included items that capture respondents’ descriptions of their experiences and observations of harassing behavior. The respondents also had the opportunity to elaborate on their responses through qualitative comments. The findings regarding harassment are discussed below and are also examined in relation to the respondents’ demographic characteristics.

Personal experiences. Student-athletes experienced less offensive, hostile, or intimidating conduct, which interfered with their ability to compete in sports or learn in the classroom (e.g., harassment) than what is reported in similar studies of overall campus climate. In the last year, 9% of respondents (n = 695) personally experienced harassment at their institution. Ninety percent of the student-athlete respondents (n = 7,323) did not experience this type of conduct. Although the proportion of student-athletes who experienced this conduct is small, compared to the entire sample, the harassment may be significant to the student-athletes who experienced it. Statistical analysis techniques were employed to test if there were significant differences among student-athletes based on social identity characteristics. The chi-square values and degrees of freedom are reported.

Women reported experiencing more harassment than did men. Among the 695 respondents who experienced harassment, 52% are women (n = 362), 48% are men (n = 330), and three student-athletes indicated a gender other than as a man or woman. (See Table 15.) Additionally, Student-Athletes of Color and those who identified as lesbian, gay, bisexual, or

---

21 Rankin, S. (2002). National assessment of climate for underrepresented groups where 25% (n = 3767) of respondents indicated personally experiencing harassment based mostly on their race (31%), their gender (55%) or their ethnicity (16%).

22 Under the United States Code Title 18 Subsection 1514(c)1, harassment is defined as "a course of conduct directed at a specific person that causes substantial emotional distress in such a person and serves no legitimate purpose" (http://www.eeoc.gov/laws/vii.html). In higher education, legal issues discussions define harassment as any conduct that has unreasonably interferes with one’s ability to work or learn on campus. The questions used in this survey to uncover participants’ personal and observed experiences with harassment were designed using these definitions.
questioning experienced disproportionately more harassment than their peers. As for class year, juniors and seniors report more harassment than do sophomores and first-year student-athletes. Reports of harassment did not differ by NCAA division or by sport.

Table 15. Student-athletes' experiences of harassment

Have you personally experienced any offensive, hostile, or intimidating conduct that has interfered with your ability to compete in your sport or learn in the classroom?

<table>
<thead>
<tr>
<th></th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
</tr>
<tr>
<td>No</td>
<td>7,323</td>
</tr>
<tr>
<td>Yes</td>
<td>695</td>
</tr>
</tbody>
</table>

**Significant Chi-Square Tests**

Experienced harassment by gender

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th></th>
<th>Men</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>No</td>
<td>3,118</td>
<td>89.5</td>
<td>4,200</td>
<td>92.7</td>
</tr>
<tr>
<td>Yes</td>
<td>362</td>
<td>10.4</td>
<td>330</td>
<td>7.3</td>
</tr>
</tbody>
</table>

χ² (1, N = 8,010) = 24.2, p < .001

Experienced harassment by race

<table>
<thead>
<tr>
<th></th>
<th>Student-Athlete of Color</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>No</td>
<td>1,735</td>
<td>89.2</td>
</tr>
<tr>
<td>Yes</td>
<td>210</td>
<td>10.7</td>
</tr>
</tbody>
</table>

χ² (1, N = 8,010) = 14.7, p < .001

Experienced harassment by sexual orientation

<table>
<thead>
<tr>
<th></th>
<th>Heterosexual</th>
<th>LGBQ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>No</td>
<td>7,000</td>
<td>91.8</td>
</tr>
<tr>
<td>Yes</td>
<td>624</td>
<td>8.5</td>
</tr>
</tbody>
</table>

χ² (1, N = 8,019) = 47.8, p < .001
Experienced harassment by class year

<table>
<thead>
<tr>
<th></th>
<th>First-Year</th>
<th></th>
<th>Sophomore</th>
<th></th>
<th>Junior</th>
<th></th>
<th>Senior+</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>No</td>
<td>2,392</td>
<td>94.1</td>
<td>1,851</td>
<td>91.2</td>
<td>1,569</td>
<td>90.7</td>
<td>1,511</td>
<td>87.9</td>
</tr>
<tr>
<td>Yes</td>
<td>150</td>
<td>5.9</td>
<td>177</td>
<td>8.7</td>
<td>161</td>
<td>9.3</td>
<td>208</td>
<td>12.1</td>
</tr>
</tbody>
</table>

$\chi^2 (3, N = 8,019) = 51.0, p < .001$

Experienced harassment by featured sport

<table>
<thead>
<tr>
<th></th>
<th>Featured</th>
<th></th>
<th>Non-featured</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>No</td>
<td>1,937</td>
<td>90.1</td>
<td>5,386</td>
<td>91.7</td>
</tr>
<tr>
<td>Yes</td>
<td>213</td>
<td>9.9</td>
<td>483</td>
<td>8.2</td>
</tr>
</tbody>
</table>

$\chi^2 (1, N = 8,019) = 5.59, p = 0.018$

Non-Significant Chi Square Test

Experienced harassment by division

<table>
<thead>
<tr>
<th></th>
<th>DI - FBS</th>
<th></th>
<th>DI - FCS</th>
<th></th>
<th>DI –non- football</th>
<th>DII</th>
<th></th>
<th>DIII</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>No</td>
<td>1,422</td>
<td>91.0</td>
<td>1,661</td>
<td>90.9</td>
<td>633</td>
<td>1,527</td>
<td>91.4</td>
<td>2,080</td>
<td>91.8</td>
</tr>
<tr>
<td>Yes</td>
<td>141</td>
<td>9.0</td>
<td>166</td>
<td>9.1</td>
<td>59</td>
<td>144</td>
<td>8.6</td>
<td>186</td>
<td>8.2</td>
</tr>
</tbody>
</table>

$\chi^2 (4, N = 8,019) = 1.27, p = 0.866$

An overwhelming majority of those who experienced harassment reported that these experiences were based most often on their athletic performance (44%, n = 308) (Table 16). The most frequently cited response choices are provided in the table below.
Table 16. Bases for experienced harassment

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Women</th>
<th>Men</th>
<th>Student-Athlete of Color</th>
<th>LGBQ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>My athletic performance</td>
<td>308</td>
<td>44.3</td>
<td>172</td>
<td>47.5</td>
<td>136</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>38.1</td>
<td>24</td>
<td>33.8</td>
<td></td>
</tr>
<tr>
<td>Unsure of reason</td>
<td>210</td>
<td>30.2</td>
<td>132</td>
<td>36.4</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>67</td>
<td>31.9</td>
<td>18</td>
<td>25.0</td>
<td></td>
</tr>
<tr>
<td>My athletic identity</td>
<td>205</td>
<td>29.4</td>
<td>95</td>
<td>26.2</td>
<td>108</td>
</tr>
<tr>
<td></td>
<td>49</td>
<td>23.3</td>
<td>23</td>
<td>32.4</td>
<td></td>
</tr>
<tr>
<td>My temporary injuries</td>
<td>140</td>
<td>20.1</td>
<td>84</td>
<td>23.2</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>36</td>
<td>17.1</td>
<td>13</td>
<td>18.1</td>
<td></td>
</tr>
</tbody>
</table>

Note: For the full distribution of responses to this item, see Table B2 in Appendix B.

Of the student-athletes who experienced harassment, they reported most frequently that it came in the form of the coach playing favorites (43%, n = 297), being deliberately ignored or excluded (42%, n = 290), or being subjected to derogatory remarks (38%, n = 267). See Table 17 for the most frequently cited experiences for the total population, and differences by gender, race, and sexual identity.

Table 17. Forms of experienced harassment

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Women</th>
<th>Men</th>
<th>Student-Athlete of Color</th>
<th>LGBQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>I felt the coach was playing favorites</td>
<td>297</td>
<td>42.8</td>
<td>171</td>
<td>47.1</td>
<td>127</td>
</tr>
<tr>
<td></td>
<td>90</td>
<td>42.9</td>
<td>25</td>
<td>35.2</td>
<td></td>
</tr>
<tr>
<td>I felt I was deliberately ignored or excluded</td>
<td>290</td>
<td>41.7</td>
<td>174</td>
<td>48.1</td>
<td>115</td>
</tr>
<tr>
<td></td>
<td>87</td>
<td>41.4</td>
<td>37</td>
<td>51.4</td>
<td></td>
</tr>
<tr>
<td>I was the target of verbal derogatory remarks either in person or via the phone</td>
<td>267</td>
<td>37.9</td>
<td>144</td>
<td>39.8</td>
<td>119</td>
</tr>
<tr>
<td></td>
<td>74</td>
<td>35.1</td>
<td>33</td>
<td>46.5</td>
<td></td>
</tr>
</tbody>
</table>

Note: For the full distribution of responses to this item, see Table B3 in Appendix B.

The location of the hostility most often occurred at practice (64%, n = 448) or during a competition (28%, n = 194) (Table 18). Coaches and other student-athletes were most often cited as the source of harassment (53%, n = 370; and 43%, n = 296 respectively) (Table 19).
### Table 18. Location of experienced harassment

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Women</th>
<th>Men</th>
<th>Student-Athlete of Color</th>
<th>LGBQ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>At practice</td>
<td>448</td>
<td>64.4</td>
<td>247</td>
<td>68.2</td>
<td>199</td>
</tr>
<tr>
<td>In a competition</td>
<td>194</td>
<td>27.8</td>
<td>114</td>
<td>31.5</td>
<td>78</td>
</tr>
<tr>
<td>While traveling for an away competition</td>
<td>141</td>
<td>20.2</td>
<td>93</td>
<td>25.7</td>
<td>48</td>
</tr>
<tr>
<td>In a locker room</td>
<td>117</td>
<td>16.8</td>
<td>64</td>
<td>17.6</td>
<td>52</td>
</tr>
<tr>
<td>In a campus/faculty office</td>
<td>106</td>
<td>15.3</td>
<td>65</td>
<td>18.0</td>
<td>40</td>
</tr>
</tbody>
</table>

*Note: For the full distribution of responses to this item, see Table B5 in Appendix B.*

### Table 19. Sources of experienced harassment

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Women</th>
<th>Men</th>
<th>Student-Athlete of Color</th>
<th>LGBQ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>A coach of my institution</td>
<td>370</td>
<td>53.2</td>
<td>196</td>
<td>54.1</td>
<td>174</td>
</tr>
<tr>
<td>A member of my team or another student-athlete at my institution</td>
<td>296</td>
<td>42.5</td>
<td>182</td>
<td>50.3</td>
<td>114</td>
</tr>
<tr>
<td>Athletic department staff (trainers, strength coach, medical staff, administrators, etc.)</td>
<td>63</td>
<td>9.1</td>
<td>33</td>
<td>9.1</td>
<td>30</td>
</tr>
<tr>
<td>Faculty member</td>
<td>56</td>
<td>8.0</td>
<td>31</td>
<td>8.6</td>
<td>23</td>
</tr>
<tr>
<td>A student on campus (not an athlete)</td>
<td>57</td>
<td>8.1</td>
<td>24</td>
<td>6.6</td>
<td>31</td>
</tr>
</tbody>
</table>

*Note: For the full distribution of responses to this item, see Table B5 in Appendix B.*

### Table 20. Feelings about experienced harassment

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Women</th>
<th>Men</th>
<th>Student-Athlete of Color</th>
<th>LGBQ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>I felt angry</td>
<td>443</td>
<td>63.8</td>
<td>244</td>
<td>67.4</td>
<td>198</td>
</tr>
<tr>
<td>I lost confidence</td>
<td>333</td>
<td>47.8</td>
<td>211</td>
<td>58.1</td>
<td>119</td>
</tr>
<tr>
<td>I felt depressed</td>
<td>250</td>
<td>36.0</td>
<td>156</td>
<td>43.1</td>
<td>91</td>
</tr>
<tr>
<td>I felt embarrassed</td>
<td>196</td>
<td>28.2</td>
<td>114</td>
<td>31.5</td>
<td>79</td>
</tr>
<tr>
<td>I felt as if I should take some action</td>
<td>204</td>
<td>29.3</td>
<td>104</td>
<td>28.7</td>
<td>99</td>
</tr>
<tr>
<td>I didn’t feel it was serious enough to do anything about</td>
<td>155</td>
<td>22.3</td>
<td>64</td>
<td>17.7</td>
<td>90</td>
</tr>
</tbody>
</table>

*Note: For the full distribution of responses to this item, see Table B6 in Appendix B.*
While these results may be encouraging in terms of low incidence, for the student-athletes subjected to harassing behavior, the incidents themselves, as well as the institutional and administrative responses to the incidents, have very real implications for the emotional health and overall well-being of student-athletes. A number of the incidents described by respondents suggest that comments made “in passing” by coaches and teammates have lasting and profound effects. For example, a female soccer player described a comment made by a coach during a competition.

It was during a game. My coach was getting angry because we were losing. He was getting mad at the defenders and said we had no one to put in. When I was sitting on the bench right beside him and I am a defender. He ended up putting in a midfielder instead of me.

Another student reported leaving the team right before end-of-season championship competition as a direct result of harassing comments made by her coach.

A coach verbally harassed me and others on my team repeatedly throughout the 09-10 swim season, and the end result was me leaving the team two weeks before championships during my senior year.

One student-athlete explained how being ignored by a coach, combined with derogatory verbal remarks, influenced her well-being:

My head coach will easily go five weeks without speaking to me, even though I am in the gym with him. He finds any opportunity, behind closed doors, to accuse me of having a "weight problem" and threatens to put me on diets that he will monitor. He unfairly compares me to the rest of the team. He plays favorites, and everyone on the team knows who he does and does not like. He finds many opportunities to verbally chastise me and
put me in a figurative corner so much so that I get knots in my stomach when I walk into the gym and/or see his face. Sometimes I cannot sleep. Other times I consider doing unhealthy things to my body in order to lose weight. He [my head coach] is not a good coach in general, let alone a good role model or resource.

Two female respondents shared their stories of sexual abuse and how the responses of their institutions fostered negative or positive outcomes:

I was sexually assaulted by another student-athlete. To condense the whole process, the athletic department conducted their own investigation, due to the lack of action taken by law enforcement and other university policies (statute of limitations, evidence, etc.). The athletic department found that I was one of 3 sexual assaults by the same perpetrator. The punishment that the Athletic Director and Football coach gave him was a 2 game suspension along with an alcohol awareness class. However, they continued to supply him with financial aid and he is still a student at [my institution]. On the other hand, I was so mentally affected by this that my athletic performance suffered and I lost significant playing time. I also was noticeably unhappy, and after the suggestion of my coaches, [I] decided to transfer schools at semester. I have taken time off and will start spring quarter at the [another institution].

The intervention of a teammate and coach made a seemingly more positive difference in a similar scenario at another institution:

I was raped by a teammate then harassed by the same teammate after the event. At first I was too unsure, embarrassed, and scared to do anything about it. But, another teammate noticed something was wrong and helped me be vocal. I told a coach who got me help at the counseling center. I was on the verge of failing out. I was getting about two hours of
sleep a night. I was scared and considered leaving all together. The guy got kicked off the team and I got some help. It was hard and affected many areas of my education and athletic endeavors.

**Summary of experiences of harassment.** This section of the report focused on the experiences of harassment by student-athletes. An overwhelming majority of student-athletes have not experienced conduct that creates an offensive/hostile/intimidating environment or conduct that interfered with their ability to compete or learn in the classroom. Of those who experienced harassment, most often it was based on a student-athlete’s athletic participation. This finding supports the tenet that being an athlete is a salient part of a person’s identity.
Results II:

Climate and Its Influences on Educational and Sport-Related Outcomes

The results of this analysis illustrate a causal relationship of identity characteristics, climate variables, and athletic and academic outcomes for student-athletes. Data were analyzed using structural equation modeling (SEM). The use of SEM offers a number of advantages over other statistical techniques, including making it possible to assess overall model fit, examine indirect effects, and account for measurement error to improve the accuracy of parameter estimates (Bollen, 1989). SEM also permits the simultaneous regression of multiple dependent variables on multiple independent variables. For the measurement model of SEM, confirmatory factor analysis (CFA) was employed to test ten latent variables and create factor scores for the path model. Two hypothesized path models were constructed, one showing the direct relationship of identity and institutional characteristics to the outcomes and the other illustrating how climate mediates these paths. This section begins with results from the CFA, discusses the interpretation of fit indices, highlights the path models, and then examines specific identity characteristics.

Confirmatory Factor Analyses

Results from the exploratory factor analyses demonstrated how items loaded onto latent constructs. This information allowed us to specify the factor structure and apply a more stringent estimation method using Confirmatory Factor Analysis. Ten latent variables were tested to see how well the data fit the specified model. That is, we analyzed the extent to which items in each factor represent the underlying latent construct. Results from our CFAs suggest these measures
and the specified combination of items accurately fit the data. Table 21 displays a summary of
the fit indices as well as the variance explained by each factor.

<table>
<thead>
<tr>
<th>Outcome Factors</th>
<th>Variance</th>
<th>RMSEA</th>
<th>CFI</th>
<th>SRMR</th>
<th>Chi Square</th>
<th>DF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Success</td>
<td>.897</td>
<td>.047</td>
<td>.998</td>
<td>.024</td>
<td>334.805</td>
<td>17</td>
</tr>
<tr>
<td>Athletic Identity</td>
<td>.741</td>
<td>.082</td>
<td>.979</td>
<td>.041</td>
<td>1,583.563</td>
<td>27</td>
</tr>
<tr>
<td>Athletic Success</td>
<td>.827</td>
<td>.056</td>
<td>.876</td>
<td>.033</td>
<td>83.575</td>
<td>3</td>
</tr>
<tr>
<td>Mediating/Climate Factors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Athletic Department Addresses</td>
<td>.903</td>
<td>.055</td>
<td>.997</td>
<td>.017</td>
<td>3,504.750</td>
<td>113</td>
</tr>
<tr>
<td>Discrimination</td>
<td>.462</td>
<td>.030</td>
<td>.999</td>
<td>.046</td>
<td>25.657</td>
<td>3</td>
</tr>
<tr>
<td>Diversity Leadership from Athletic Personnel</td>
<td>.826</td>
<td>.055</td>
<td>.997</td>
<td>.017</td>
<td>3,504.750</td>
<td>113</td>
</tr>
<tr>
<td>Faculty Student Interaction</td>
<td>.897</td>
<td>.050</td>
<td>.999</td>
<td>.007</td>
<td>134.983</td>
<td>6</td>
</tr>
<tr>
<td>Perceptions of Climate</td>
<td>.770</td>
<td>.091</td>
<td>.960</td>
<td>.043</td>
<td>41,466.970</td>
<td>586</td>
</tr>
<tr>
<td>Perceptions of Respect</td>
<td>.933</td>
<td>.071</td>
<td>.986</td>
<td>.045</td>
<td>15,190.510</td>
<td>345</td>
</tr>
<tr>
<td>Personal Comfort with Team Diversity</td>
<td>.970</td>
<td>.072</td>
<td>1.00</td>
<td>.002</td>
<td>88.852</td>
<td>2</td>
</tr>
</tbody>
</table>

**Interpreting Fit Indices**

Goodness-of-fit statistics are reported for each CFA as well as both path models.

Although there are numerous methods for calculating model fit, we report those more common
in SEM literature. Based on recommendations from Hu and Bentler (1999) the results from four
“goodness-of-fit” indexes are provided (chi-square, root mean square error of approximation
[RMSEA], comparative fit index [CFI], and standardized root mean residual [SRMR]). The chi-
square was not significant for any factor, while other fit statistics indicated the model accurately
fit the data. Researchers recognize that the chi-square test may be unsatisfactory for assessing
model fit (Thompson & Daniel, 1996). Larger sample sizes produce larger chi-square test
values, making even small discrepancies statistically significant. As a result, Hu and Bentler
(1999) recommend using multiple fit indices to assess goodness-of-fit. Although they
recommend cut-off criteria of < 0.06, for the RMSEA, other researcher postulate that are no
universal cut-off criteria for this fit index because it is influenced by the degrees of freedom,
sample size, and model specifications (Chen, Curran, Bollen, Kirby, & Paxton, 2008). Hu and
Bentler (1999) also recommend the CFI be > 0.95 and the SRMR be < 0.08. Individual indexes indicate some of these models are not specified. However, when examining fit statistics in combination, all models fit the data. Constructing a model that fits the data allows for accurate interpretation of the regression coefficients.

**Path Models**

After the independent confirmatory factor analyses were conducted and the factor scores created, two causal models depicting regression paths from identity and institutional characteristics to the outcome variables were constructed. The characteristics initially entered into the model were gender, race/ethnicity, sexual identity, divisional status, featured sport, low-income/first generation, and class standing. Prior to solidifying the final models, we performed a series of iterative deletions of insignificant paths and correlations based on the statistical modification indices. All regression and correlation coefficients are statistically significant at \( p < 0.001 \). The stringent nature of the p-value allowed us to remove coefficients with trivial effect sizes. Because the sample was very large, if we used the conventional \( p < 0.05 \), the model would have included many paths with statistical significance, but the practical significance of these paths would have been inconsequential. Factor scores were created using the regression refined method which produces coefficients that might be compared across paths. The standardized path coefficients represent the standard unit change in the dependent variable for each change of one standard unit in the independent variable. This is a consideration for interpreting the reported coefficients.

Two models were examined in order to test if climate mediated the relationship of identity and institutional characteristics to the outcomes. Mediation examines how predictor
variables affect the outcome when traveling through intervening variables (Baron & Kenny, 1986). The mediation model shown in Figure 15 is considered the nested model in this analysis. This was constructed first as a true mediator model without direct effects. The results of the fit indices indicate adequate model fit. Due to the large sample size and the degrees of freedom, the chi-square was statistically significant \(\chi^2(86) = 620.761, p<0.001\). However, the other three fit indices show that this model fit the data well. The RMSEA was 0.027, the CFI was 0.097, and the SRMR was 0.021. Indirect effects were also calculated and reported to the left side of the exogenous variables in Figure 15.

Figure 15. Mediation model with path diagrams
After the mediation model was constructed, a second model was created to test the direct effects of identity and institutional characteristics on the outcomes. This model includes all of the paths in the mediation model in addition to significant paths from the exogenous variables to the outcomes. Figure 16 highlights the direct effects, but can be interpreted as being superimposed on the mediation model (Figure 15). We chose to use two separate figures to help distinguish the influence of climate, but conceptually they are not mutually exclusive. Figure 16 also includes total effects, or the combination of direct and indirect effects, denoted by TE on the regression lines.

The model-fit statistics suggest an acceptable fit, validating our specifications of these causal relationships. Again, because of the large sample size and the degrees of freedom, the
chi-square was statistically significant ($\chi^2_{(79)} = 209.938, p< 0.001$). However, the other three fit indices show that this model also fit the data well. For this analysis, the RMSEA was 0.014, the CFI was 0.094, and the SRMR was 0.012. As stated previously, conceptually, this model should be superimposed on the mediation model in order to accurately interpret the causal chains.

This section examined results from ten confirmatory factor analyses and two path models. The following sections offer an in-depth description of the path model for the overall sample of student-athletes, which is followed by a comparison of results based on identity and institutional characteristics, specifically women, Student-Athletes of Color, LGBQ student-athletes, student-athletes in Divisions I, II, and II, and student-athletes that compete in featured sports.

**Overall findings.** Six of the seven mediating climate variables appear to influence one or more of the outcomes. The only climate variable that does not appear to have a statistically significant influence on any of the outcomes is diversity leadership from athletic personnel, which consists of a series of items that asked respondents the extent to which athletic administrators proactively address diversity concerns.

Academic success is positively influenced by five of the mediating climate variables. Student-athletes’ reports of academic success tend to increase as there are increases in their reports of 1) perceptions of respect ($\beta_{81} = 0.039$), 2) perceptions of climate ($\beta_{82} = 0.133$), 3) personal comfort with teammate diversity ($\beta_{83} = 0.077$), 4) faculty-student interaction ($\beta_{84} = 0.363$), and 5) athletic personnel interaction ($\beta_{85} = 0.152$). Because it has the largest coefficient among these, faculty-student interaction has the most profound influence on academic success, followed by athletic personnel interaction. The extent to which one perceives both diversity
leadership from personnel and that the athletic department addresses discrimination do not appear to have a statistically significant influence on student-athletes’ academic success.

Two aspects of climate influence student-athletes’ athletic success: faculty student interaction ($\beta_{9,4} = 0.047$) and athletic personnel interaction ($\beta_{9,5} = 0.087$). These are positive relationships meaning that athletic success is likely to increase if the substance of student-athletes’ interactions with both faculty and athletic personnel is positive in nature.

Athletic identity is affected by four aspects of climate. Personal comfort with diversity and faculty student-interaction have a negative influence on athletic identity ($\beta_{10,3} = -0.075$ and $\beta_{10,4} = -0.072$, respectively). Student-athletes who indicate greater levels of personal comfort with diversity and greater levels of faculty-student interaction are less likely than others to see themselves as athletes. On the other hand, as indicated by the positive path coefficients, interactions with athletic personnel ($\beta_{10,5} = 0.087$) and perceptions that the athletic department addresses discrimination ($\beta_{10,7} = 0.150$) tend to have a positive influence on student-athletes’ sense of athletic identity. While various perceptions and experiences of climate appear to influence academic and athletic success, as well as identity, these patterns do not necessarily hold true when particular characteristics of respondents or the respondents’ respective institutions are considered.

Several of the qualitative comments offered by student-athletes support these findings, particularly in regard to interactions with faculty and with athletic personnel. In particular, a number of students cited interactions with faculty as directly contributing to their academic success. A Latino student-athlete offered, “My interactions with faculty have been great. They have opened my eyes to many things that I alone would never consider.”

A gymnast at a Division III school explained,
My interactions with the faculty here have helped me figure out who I am as a person, and where the road ahead may lead me. They support not only what I do in the classroom, but have made efforts to come see competitions and shows that I am in, which makes me feel very valued as a person, not just a student.

Yet, in many instances, when asked about their interactions with faculty, student-athletes mentioned faculty members’ willingness to accommodate their travel schedules. While some faculty members were described as “helpful” in this regard, many student-athletes suggested that faculty members’ inflexibility has the potential for negatively affecting their academic performance. A tennis player at a DI – non-football institution offered her perspective:

I feel that sometimes professors aren’t as fair and/or flexible with student-athletes as they are with regular students. Some of them get so mad when we have to miss an important day such as a test or other important activity. I think they need to realize that we didn't make the schedule and can't help the days that we are going to be gone.

A junior woman student-athlete at a Division I – non-football school explained that

Recently I handed a professor a signed letter from our coach stating I'd miss class for our championship meet and he said ‘I don't do jocks.’ I found this very disrespectful and feel many teachers resent athletes and do not want to accommodate them.

While many student-athletes cited one or two specific incidents during which faculty either actively or passively express that they “don’t give a damn” about student-athletes (as one student-athlete suggested) these negative experiences and perceptions with faculty members may not be the predominant pattern in faculty and student-athlete interactions. A number of student-athletes echoed the sentiment offered by a women’s basketball player: “Overall, I have very positive relationships with my professors and [they] have been extremely supportive of me. I
have only had a couple of professors who I felt have somewhat discriminated against me because I am an athlete.”

The quantitative findings suggest that athletic personnel have a positive influence on student-athletes’ academic and athletic success, as well as athletic identity. Student-athletes’ comments support this finding. In some instances, it appears that interactions with team faculty advisors and athletic personnel may help student-athletes navigate two cultures that sometimes clash. One of the open-ended survey questions asked, “How do you feel that your team’s faculty advisor has contributed to your academic or athletic success?” As described by the survey respondents, team faculty advisors’ primary responsibilities include helping student-athletes with class scheduling, acting as a liaison or advocate for student-athletes when conflicts between faculty members and student-athletes arise (especially in regard to missed classes due to competition), advising student-athletes in regard to effective time management, and ensuring that student-athletes fulfill academic requirements that both keep them eligible to compete and on-track to graduate on time. In some instances, faculty advisors are vital to student-athletes’ academic accomplishments. A woman Student-Athlete of Color remarked about her team’s faculty advisor, “She is an irreplaceable asset to my success. She has counseled me through major changes, tough classes, time management, and job interviews. I would hope that every team has an advisor like mine.” A soccer player at a Division I – non-football institution explained:

My academic advisor has made all the difference in the world. He constantly helps me when I need help with anything: from papers, to professor problems, to concerns. He even helps me pick my schedule in a way that will help me graduate earlier and get into a good grad school.
However, other student-athletes suggested that meetings with their respective team’s faculty advisor are non-existent or dwindle after their first-year. A senior man at a Division I – FCS institution explained that his “team’s faculty advisor has not done anything. I know who they are and they have never once tried to engage our team.” However, in his instance it appears that the athletic department’s had created a web of academic support. While his team’s faculty advisor had no influence on his experiences, his “athletic academic advisor has helped me stay in school and be eligible.” Other student-athletes described similar occurrences in which interactions with faculty and/or personnel (some affiliated with athletics and other not) had a profound influence on their experiences. For example, a woman African-American track and field student-athlete remarked

My coaches always emphasize that school work comes first and whatever we need help in they will help us, or find someone able to help us. There are free tutors for athletes and mandatory study halls for freshmen and those below a particular grade point average. Our advisors make sure we excel not only in sports but also in school.

In explaining why she hasn’t used the services offered by her team’s faculty advisor, a senior woman student-athlete at a Division II institution lauded the efforts of her coaches: “I haven't really used their services because I personally have felt fine without them. Also, my coach is a very big help in both the athletic and academic side of things.” Other student-athletes suggested that team faculty advisors and coaches work together to in regard to ensuring student-athletes’ academic success. A senior woman Student-Athlete of Color observed that “[Our team’s faculty advisor is] always on top of things and making sure we are all doing well in are classes when grade reports come in and discussing it with our coaches.”
However, there were also a few instances in which a series of chinks in a department’s climate might color a student-athlete’s overall perception of an institution or its program. When asked to elaborate about incidents of observed harassment, a senior woman-student athlete rattled off a series of incidents:

Athletic adviser doesn't know what she is doing, she makes people ineligible to run, [An athletic administrator] handled losing our head coach horribly and did not treat us like adults or allow us to partake in the situation, as promised. Former athletic director lied to the team and put off telling us anything until we protested a meet. Had an athletic director fired for using the school’s money for an affair and a head coach fired for sleeping with a teammate (great people to look up to). First distance coach [named] was unable to hold conversations and acted inappropriately in many different circumstances.

In general, the qualitative results suggest that student-athletes’ perceptions and experiences of climate vary and are shaped by several contextual factors. The following findings explore just this by considering a series of demographic and institutional characteristics that may influence student-athletes’ experiences of climate and, ultimately, educational and athletic outcomes.
Figure 17. Direct effects of race on outcomes

For this analysis, Students-Athletes of Color are compared to White student-athletes. The results contribute to our understanding of student-athlete academic success, athletic success, and athletic identity. In examining the direct effects of Student-Athletes of Color, we see a negative direct effect of being a Student-Athlete of Color on academic success ($\gamma_{8,1} = -0.144$, Figure 17). In other words, Student-Athletes of Color reported lower scores on the measure of academic success relative to their White student-athlete peers. In this model, there are no differences between Student-Athletes of Color and White student-athletes and their reports of athletic success or holding salient athletic identities. This suggests that Student-Athletes of Color do not differ from their White student-athlete peers on measures of athletic success or athletic identity. This is an important finding and contributes to the literature base that generally suggests that...
Student-Athletes of Color, primarily Black student athletes, tend to view their athletic success and identity as more salient aspects of their development than their White student-athlete counterparts (Benson, 2000; Edwards, 2000; Johnson, Hallinan & Westerfield, 1999; Person & Lenoir, 1997).

Figure 18. Mediation model: Race, climate, and outcomes

When including a series of climate related variables to the model (Figure 18), we witness how climate variables mediate the relationship with academic success. There are positive direct effects of perceptions of climate (β_{8,2}=0.133) and perceptions of respect (β_{8,1}=0.039) on academic success. Yet, Student-Athletes of Color report more negative perceptions of respect (γ_{1,1}=-0.105) and more negative perceptions of climate (γ_{2,1}=-0.077) than their White student-
athlete peers. In other words, higher perceptions of respect and climate lead to higher levels of academic success. However, for Student-Athletes of Color, the mediation effect of perceptions of respect and perceptions of climate has a small, negative, indirect, influence on their academic success (indirect effect = -0.014). When combining this with the direct effect mentioned in the previous paragraph ($\gamma_{8,1} = -0.144$), Student-Athletes of Color report lower scores on academic success compared to their white peers (total effect = -0.158). Promising findings among Student-Athletes of Color and their White student-athlete peers were that there were no other indirect influences for the other five climate variables tested. That is, both groups report similar experiences and perspectives in regard to 1) personal comfort with teammate diversity, 2) faculty-student interaction, 3) athletic personnel interaction, 4) diversity leadership from athletic personnel, and 5) the extent to which the athletic department addresses discrimination.

Qualitative comments offered by respondents suggest that perceptions of respect and of climate are formed through both overt and covert behaviors by personnel in positions of leadership or authority. A Latino student-athlete at a Division III institution described an incident that occurred during his first semester:

I was told that there was no point to show up to class because there was no way I would pass the class and that I was an exception to have been admitted to the school just based on my ethnicity. These comments were by the same teacher my first semester of school.

An African-American baseball player at a Division I–non-football institution mentioned his athletic program’s legacy in regard to African Americans in sport and how it only exacerbated the negative feelings associated with not getting playing time. He gets the “cold shoulder” from coaches, while the son of an important alumnus gets a disproportionate (and perhaps undeserved) amount of attention from coaches.
...[my institution] has NEVER had an African American shortstop since [a famous groundbreaking player]. And according to the way things are going, it never will. It's humiliating to feel like you're there just to TEACH the others how to play the position, even though you and everyone else knows you're the best. [My institution's] Baseball [team] has proven to be a huge disappointment, and I made a huge mistake by attending. They try to hide me and keep me off the field so I won't outshine the guy they have at shortstop. Last year, he was catastrophic! Everybody knows it. He has been shadowing me all of last year up to now. They have me literally teaching him how to be a shortstop while he has the starting position (and he did not come to [this institution] as a shortstop...I did!) I have a feeling I will never get to play.

Several student-athletes enrolled at the same institution remarked about a larger campus climate issue that negatively influenced team dynamics. A woman soccer player explained, “There has been some racial tension going on in the past week at [my institution]. [It has] nothing to do with athletics directly, but I’m sure there are some athletes that are pretty upset and angry.” A third-year student-athlete explained that

Two of my friends on [my institution's] Fencing team were involved in the [incident]. They wanted to defend those involved. One of them decided not to for fear of being called a traitor to his/her race. The other individual stood with others while being shouted down by a mob in a classroom setting.

In regard to race, it appears that the institutional climate, combined with both overt and covert behaviors by faculty, coaches, and other personnel can have profound impacts on student-athletes’ perspective of the institution.
Gender.

SACS Path Diagram – Direct Effects, Relevant Indirect Effects, Total Effects for Gender

Figure 19. Direct effects of gender on outcomes
In general, women student-athletes tend to report greater levels of academic and athletic success and lower levels of athletic identity compared to men student-athletes (Figure 19). Furthermore, the SEM suggests that climate influences all three of the outcomes of interest for women (Figure 20). The calculations of our model suggest that when controlling for other characteristics, women student-athletes report greater levels of academic success ($\gamma_{8,2} = 0.082$) than men$^{23}$. When adding climate to the analysis, four of the seven aspects of climate included in the model significantly influence academic success for women student-athletes: Perceptions of climate ($\gamma_{2,2} = 0.212$), faculty-student interaction ($\gamma_{4,2} = 0.072$), personal comfort with teammate diversity ($\gamma_{5,2} = 0.363$), and diversity leadership from athletic personnel ($\gamma_{7,2} = -0.075$).

---

$^{23}$ All of the coefficients included in this section are significant at $p<.001$. 

Figure 20. Mediation model: Gender, climate and outcomes
diversity ($\gamma_{3,2} = 0.217$), and perceptions of respect ($\gamma_{1,2} = 0.210$). For women, their perception of climate is a stronger predictor of academic success than interactions with faculty. The indirect effect of climate as a mediator is higher for women student-athletes (indirect effect = 0.079) than for men.

Overall, the direct and indirect effects of gender on academic success are higher for women. This results in a higher positive total effect (total effect = 0.161) for women-student-athletes’ academic success than for men.

Likewise, when controlling for other characteristics in our model, women student-athletes report greater levels of athletic success ($\gamma_{9,2} = 0.155$) than men. Women student-athletes tend to report greater levels of interaction with faculty ($\gamma_{4,2} = 0.072$) than men, which contributes to a slightly larger indirect mediating effect of climate (indirect effect = 0.003). Similarly to academic success, for women student-athletes both the direct and indirect effects of gender on athletic success are higher than for men ($\gamma_{9,2} = 0.155$ and indirect effects = 0.003, respectively with total effect = 0.158).

As indicated by a negative path coefficient, women student-athletes, on the other hand, report lower levels of athletic identity than men ($\gamma_{10,2} = -0.148$). The last two also negatively impact women student-athletes’ athletic identity; women student-athletes tend to report greater comfort with teammate diversity ($\gamma_{3,2} = 0.217$) and interaction with faculty ($\gamma_{4,2} = 0.072$), both of which have a negative influence on athletic identity ($\beta_{10,3} = -0.075$ and $\beta_{10,4} = -0.072$, respectively). In turn, the overall indirect effect of climate on athletic identity is negative for women (indirect effect = -0.021), as is the total effect (total effect = -0.169) for women student-athletes’ athletic identity.
With the exception of athletic identity, all other direct and indirect effects were positive for women student-athletes. In the entire model, compared to all other subgroups (i.e., Student-Athletes of Color, LGBQ student-athletes, etc.), climate’s influence on academic success was most profound for women student-athletes, as suggested by the largest indirect effect of 0.079. While interaction with faculty was the strongest predictor of academic success for all student-athletes, for women, perceptions of climate and then faculty-student interaction had the strongest indirect effects on their academic success.

Sexual identity. This section highlights the results for student-athletes who identify as lesbian, gay, bisexual, queer, or questioning (LGBQQ). These non-heterosexual identities were grouped together and compared with heterosexual identified student-athletes.

There were no direct effects for LGBQ student-athletes on any of the outcome variables. In other words, sexual identity alone is not a significant predictor of academic success, athletic success, or athletic identity. However, LGBQ student-athletes report lower scores on four of the seven climate variables (Figure 21). When introducing these mediator variables, sexual identity has a small, negative indirect effect on academic success (indirect effect = -0.034) and athletic identity (indirect effect = -0.037).
Figure 21. Mediation model: Sexual identity, climate, and outcomes

Student-athletes who identify as LGBQ report lower scores than their heterosexual peers on four mediator variables: perceptions of respect ($\gamma_{1,3} = -0.155$), perceptions of climate ($\gamma_{2,3} = -0.211$), agreement with diversity leadership from athletic personnel ($\gamma_{6,3} = -0.182$), and perceptions that the athletic department addresses discrimination ($\gamma_{7,3} = -0.247$). There were no statistically significant differences for faculty-student interaction, personal comfort with teammate diversity, or athletic personnel interaction. These results indicate that LGBQ student-athletes do not differ from their heterosexual student-athlete peers in their interactions or comfort with diverse teammates. However, they have more negative perceptions of respect and climate than their heterosexual student-athlete peers. Additionally, LGBQ student-athletes report lower agreement that athletic personnel took action around issues of diversity or discrimination.
Perceptions of respect and perceptions of climate positively predict academic success ($\beta_{8,1} = 0.039, \beta_{8,2} = 0.133$, respectively). However, LGBQ student-athletes report lower scores on perceptions of respect ($\gamma_{1,3} = -0.155$) and perceptions of climate ($\gamma_{2,3} = -0.211$) than heterosexual student-athletes. The results demonstrate a small mediation effect of perceptions of climate and perceptions of respect on academic success for LGBQ student-athletes (indirect effect = -0.034). Similarly, agreement that the athletic department addresses discrimination positively predicts athletic identity ($\beta_{10,7} = 0.150$), but LGBQ student-athletes report lower agreement that the athletic department addresses discrimination ($\gamma_{7,3} = -0.247$). Again, there is a small mediation effect of addressing discrimination on athletic identity for LGBQ student-athletes (indirect effect = -0.037). In the entire model, compared to all other subgroups (i.e., Student-Athletes of Color, women student-athletes, etc.), climate’s influence on athletic identity was most profound for LGBQ student-athletes, as suggested by the largest indirect effect on athletic identity of -0.037.

These findings demonstrate the influence of climate on the outcomes for LGBQ identified student-athletes. The results show that LGBQ student-athletes generally experience a more negative climate than their heterosexual peers and although sexual identity is not a direct predictor of the outcomes, the way LGBQ student-athletes experience the climate indirectly affects their academic success as well as their athletic identity.

**Divisional status.** As noted in the review of literature, there are few comparative studies of student-athletes at all three NCAA divisions. Many differences found with Division III student-athletes could be conflated with general institutional effects of attending smaller, private institutions that are qualitatively different from the schools that choose to join Division I (NCAA, 2011a, 2011b, 2011c). In the full path model there was only one direct effect of
division on the outcomes (Figure 22). There is a direct negative effect ($\gamma_{10,4} = -0.132$) of participating in Division III on athletic identity. This is of little surprise considering Division III student-athletes are more integrated into their collegiate environment and have fewer expectations of a professional athletic career than those in Division I and II (Grites & James, 1986; Snyder, 1996; Stansbury, 2004). In the model, other divisions had no significant direct effects on the outcomes.

Figure 22. Direct effects of division on outcomes
The indirect effects of participating in Division III on the three outcomes were all mediated through faculty-student interaction. (See Figure 23). Recall that the largest effect in the model is the positive influence of faculty-student interaction on academic success ($\beta_{8,4} = 0.363$). This results in a relatively robust positive indirect effect of being in Division III on academic success (indirect effect = 0.054). There is a small, positive indirect effect on athletic success (indirect effect = 0.007), as well as a small, negative indirect effect of Division III on athletic identity (indirect effect = -0.011)

Figure 23. Mediation model: Division, climate, and outcomes
Like Division III, the effect of participating in Division II also has indirect effects on the outcomes mediated through faculty-student interaction which are almost equivalent to the effect of participating in Division III (indirect effect on athletic and intellectual development = 0.048, on athletic identity = -0.009, on athletic success = 0.006). Participating as a Division I student-athlete has small, indirect effects on the outcomes which are mediated through the climate variables: Perceptions of climate, personal comfort with teammate diversity, and athletic personnel interaction. Division I student-athletes tend to report greater levels of personal comfort with teammate diversity ($\gamma_{3,6} = 0.066$) and athletic personnel interaction ($\gamma_{5,6} = 0.067$) than Division II and III student-athletes. However, they tend to have less positive perceptions of climate ($\gamma_{2,6} = -0.060$) than Division II and III student-athletes. The effect of participation in Division I on academic success is mediated through all three of these climate variables (indirect effect = 0.007). The effect on athletic success is only mediated through athletic personnel interaction (indirect effect = 0.006). The effect on athletic identity, as mediated through both athletic personnel interaction and personal comfort with teammate diversity, is barely non-significant ($p = 0.003$).

**Featured and non-featured sports team membership.** This section offers the results for student-athletes who participate in featured and non-featured sports. With the aim of considering the unique characteristics of participating institutions' respective programs, rather than categorize student-athletes' sports membership as either “revenue-generating” or “high profile,” the research team asked each institutional contact to provide a list of its institution's “featured” and “non-featured” sports teams. Accounting for other demographic characteristics (such as race, gender, and sexual orientation) and as suggested by the direct effects measured by our model, student-athletes who compete in featured sports tend to report a significantly greater
sense of athletic identity ($\gamma_{10,7} = 0.081$), but a significantly lower sense of athletic success than student-athletes in non-featured sports ($\gamma_{9,7} = -0.113$). There were no significant differences between student-athletes who compete in featured and non-featured sports in regard to their reports of academic success. (See Figure 24.)

Figure 24. Direct effects of featured sport on outcomes

When we consider student-athletes’ sports team membership, only one aspect of climate appears to influence our outcomes of interest (Figure 25). As suggested by the indirect effects of our model, featured sport student-athletes’ tend to have greater levels of interaction with athletic personnel ($\gamma_{5,7} = 0.111$), which in turn, yields significantly greater levels of 1) academic success ($\beta_{8,4} = 0.363$), 2) athletic success ($\beta_{9,5} = 0.087$), and 3) athletic identity ($\beta_{10,5} = 0.087$). Interestingly, while there does not appear to be a difference between featured and non-featured sports team members ‘academic success in general (as suggested by the lack of a direct effect),
when interaction with athletic personnel is considered in particular, significant differences become evident. Interaction with athletic personnel appears to positively influence the academic success of featured sport student-athletes more so than their non-featured sport peers. Furthermore, the positive influence of interactions with athletic personnel on academic success tends to be greater than its influence on athletic success and athletic identity.

While featured sport athletes report statistically greater levels of diversity leadership from athletic personnel ($\gamma_{6,7} = 0.052$) and may find this leadership to be meaningful, it does not appear to have a significant influence on our outcomes of interest.

When all other aspects of student-athletes experiences are considered along with climate, interaction with athletic personnel appears to be the only aspect that might foster significantly greater levels of academic success for student-athletes in featured sports.
Figure 25. Mediation model: Featured sports, climate, and outcomes

Despite the positive and significant influence of interaction with athletic personnel on featured sport student-athletes’ sense of athletic success, when their experiences are considered as a whole along with their interactions with athletic personnel, their sense of athletic success still tends to be less than those of their non-featured sport peers. The mediating positive effect of featured sport student-athletes’ interaction with athletic personnel is not profound enough to compensate for their overall lesser sense of athletic success as compared to non-featured sport student-athletes.

The indirect effect of featured sports student-athletes’ interactions with athletic personnel appears to reinforce their sense of athletic identity, which is suggested by the combined total effect of featured sports membership on athletic identity.
Validity

While the results of the SEM contribute to the knowledge base concerning student-athletes’ various perceptions and experiences of climate, these findings carry little weight unless the scales used in this study are considered valid measures of the variables of interest. Recall that AERA, APA, and NCME (1999) suggest that researchers collect evidence regarding the interpretation and uses of an instrument in the following areas:

a. evidence based on test content (perhaps evaluated by a panel of experts),
b. evidence based on response processes (authenticity of the testing process),
c. evidence based on internal structure (using a nomological net or comparing the structure to theoretical constructs through a technique such as factor analysis),
d. evidence based on relations to other variables (such as traditionally defined notions of predictive, concurrent, and criterion validity, or through the use of a nomological net), and
e. evidence based on consequences of testing (this is the most important, but the hardest to get information on until the test is in use, which might be too late).

We address each of these areas in order.

Firstly, all of the original questions upon which the scales were based were developed by experts in their field. The content related to campus climate was developed by Dr. Susan Rankin, a nationally-recognized expert in diversity and social justice, based on previous research on campus diversity and climate, and reviewed by experts in diversity, two eminent Higher Education researchers (Drs. M. Lee Upcraft and Patrick Terenzini), and members of underrepresented constituent groups. Variations of these climate questions have subsequently been used at almost 100 institutions where they have been examined, vetted, and modified by
faculty and staff members, as well as administrators and students, to determine if the questions “make sense” – modifying them if not. As described in the methodology section, the Academic and Intellectual Development and Faculty-Student Interaction scales were based on the Institutional Integration Scale (IIS) developed by Drs. Ernest Pascarella and Patrick Terenzini, two distinguished researchers and professors of Higher Education who have been recognized for their exemplary careers researching how college affects students. The AIMS has been used by many researchers and the original authors have validated it against others similar measures. The only scale that did not previously exist was Athletic Success. However, it was drafted by the SACS research team which included a former Division I coach, an intercollegiate athletics administrator, a NCAA administrator, and a former student-athlete, as well as graduate students trained in research and assessment. In addition, throughout the course of the project, the team consulted with experts in intercollegiate athletics, college student outcomes, and research methodology.

We believe there is authenticity in the response process as well, though this determination is not as clear-cut. Authenticity of the testing process is more relevant when applied to a test of concrete skill, ability, or knowledge. How do student-athletes authentically exhibit their opinion of their campus climate? The most direct evidence comes from the survey data collection process. Great care was taken to ensure that people may respond anonymously. The survey URL was open, so no numbered invitations were used and no electronic personally identifiable information was collected (such as IP address). Respondents could choose to not respond to a question and they were assured repeatedly that their responses would be kept confidential to the research team and only reported in aggregate form. In addition, there were several open-ended questions which give them the opportunity to describe, explain, or reflect on the quantitative
questions. All of these steps help to ensure an unencumbered process whereby they may reflect upon and share their thoughts and experiences regarding potentially upsetting incidents or perspectives. Reflecting on these experiences and perceptions may evoke authentic emotions and memories, which will hopefully be authentically relayed through the protected data collection process.

The internal structure of the instrument was examined by the research team through the exploratory and confirmatory factor analyses. As described earlier in this report, the resulting factor structure of the climate and outcome variables corresponded to the original conceptual framework and original scales, with a few adjustments. In addition, the research team examined the correlations between the climate factors and between the outcomes to determine if any factors were so highly correlated as to not be able to discriminate between the theoretical concepts they measure. As with other statistical decision points there is no absolute rule, but Garson (2010) suggests a possible cut-off value of 0.85. None of the correlations met that threshold. All of the factors were correlated at trivial to moderate levels, with the highest being between Athletic Personnel Interaction and Athletic Department Addresses Discrimination at 0.45. Therefore, the seven climate factors and the three outcomes show the ability to discriminate between the theoretical constructs they represent.

Evidence for the validity of the climate scales based on relations to other variables is hard to come by. The questions have been used for single-institution campus climate assessments without relating them to other instruments that purport to measure climate. The development of these scales is one step towards being able to compare them to other measures of campus climate. The measures for Academic and Intellectual Development and Faculty-Student Interaction were based on the Institutional Integration Scale (Pascarella & Terenzini, 1980),

Validity evidence in terms of the proposed use of the instrument is difficult to examine if the instrument hasn’t previously been used. This is the first time a research project has connected an assessment of campus climate with these three important outcomes in a causal manner, especially for the rarely studied sub-population of student-athletes. Therefore, the appropriateness of the actions that results from its interpretation and use is yet to be determined. In general, the research team believes the SEM analyses show that the instrument supports a causal model of the effect of climate on outcomes for student-athletes. The NCAA and individual universities’ athletic departments are encouraged to use the study’s findings and subsequent recommendations to improve the collegiate experience for student-athletes in ways that enhance their academic success, athletic success, and athletic identity. Still, versions of each scale (except for Athletic Success) have been used before. The items used to measure climate (except for Faculty-Student Interaction) have been successfully used at almost 100 institutions. So far, the survey and its ability to describe climate has been well-received by these organizations, which are primarily colleges and universities; many have since requested follow-up assessments. As already stated, the instruments used as bases for our scales of Faculty-Student Interaction, Academic and Intellectual Development, and Athletic Identity have also been used by researchers. Unfortunately, the unintended negative consequences of their subsequent
use for making changes to policy and/or practice are not reported in the journal articles or any other media. This illustrates the very common disconnect between academic research and practical implementation. It is the hope of the SACS team that steps taken based on the information presented in this report will have positive impacts on student-athletes’ academic and athletic well-being.

Summary

The purpose of SACS is to examine how the climate in intercollegiate athletics influences key aspects of the student-athlete experience including academic success, athletic success, and athletic identity. We use structural equation modeling (SEM) to test a theoretical model of student-athlete experiences that hypothesizes a causal relationship between the climate in intercollegiate athletics and other constructs (academic success, athletic success, and identification as an athlete) that have been previously shown to influence overall success in higher education. In addition we examine how other exogenous variables (racial identity, gender identity, sexual identity, sport affiliation, and divisional status) may also influence student-athlete’s successful navigation of the collegiate experience. Discussions of these findings along with potential implications are highlighted in the next section.
Discussion

SACS has illuminated our collective understanding of the role of climate in the collegiate experiences of student-athletes, particularly as it pertains to its effect on three particular outcomes—academic success, athletic success, and athletic identity. Defined as the “current attitudes, behaviors and standards and practices of employees and students of an institution” (Rankin & Reason, 2008, p. 264), campus climate can profoundly influence students’ learning and development. Students who see a campus as supportive are more likely to experience positive learning outcomes (Milem, 2003; Pascarella & Terenzini, 2005b; Reason, Terenzini, & Domingo, 2006). Conversely, negative campus climates may be obstacles to students’ integration into the social and academic environments that characterize a college or university (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999). Adding to the complexity of gauging campus climate, within any given student population, students may perceive or experience the campus climate differently based on their social identity. For example, campus climates have been described as “racist” for students and employees of color (Harper & Hurtado, 2007; Rankin & Reason, 2005), “chilly” for women (Hall & Sandler, 1984; Hart & Fellabaum, 2008), and “hostile” for lesbian, gay, bisexual, and transgender (LGBT) community members (Eliason, 1996; Rankin, 2003; Rankin, Weber, Blumenfeld, & Frazer, 2010). Despite the attention that student-athletes garner on campus and, at times, in the media, SACS is the first study with the capacity to address the question of how student-athletes experience climate, how these experiences vary according to different individual and institutional characteristics, and what the implications are in regard to student-athletes’ academic and athletic success, and athletic identity.

Despite the unique challenges that come with being actively engaged in intercollegiate sport, student-athletes are expected to succeed both in the classroom and on the playing. This is
certainly no small feat. Most student-athletes report spending close to 40 hours a week participating in their sports (Wolverton, 2007). At the same time, student-athletes must overcome the potential “stereotype threat” that accompanies the “dumb jock” stereotype (Harrison, 2007) and pursue behaviors that foster positive learning outcomes, such as active engagement in the classroom and quality interactions with faculty (Comeaux, 2005; Gayles & Hu, 2009; Pascarella & Chapman, 1983). Recognizing the potential of activities such as this to contribute to student-athletes’ overall academic success, SACS used Pascarella and Terenzini’s (1980) Academic and Intellectual Development subscale of their Institutional Integration Scale to measure student-athletes’ self-reported levels of academic success.

Little is known about how student-athletes’ define athletic success. Certainly, wins, losses, and post-season competition get a fair amount of attention from coaches, administrators, and fans. Athletic success in this project was measured using these sorts of traditional metrics, as well as by asking respondents about individual awards earned as a collegiate athlete and the extent to which they felt they were living up to their full athletic potential.

With the understanding that identity shapes how students may engage with their environment and may in and of itself have repercussions for students’ learning and development, SACS also gauged the influence of climate on student-athletes’ athletic identity by using Brewer et al.’s (1993) Athletic Identity Measurement Scale (AIMS). While some research suggests that a strong sense of identity helps some student-athletes balance the demands of sport and academics (Kimball, 2007), others suggest that early commitment to an athletic identity may result in identity foreclosure and detract from one’s academic self-efficacy (Adler & Adler, 1985; Brown, et al., 2000; Lally & Kerr, 2005). Additional literature suggests that athletic and academic identities conflict. Settles, Sellers and Damas (2002) found that athletic and academic identities
cannot be perceived as one identity without student-athletes experiencing conflict, suggesting that any attempt to reconcile the two identities may induce internal strife.

In order to gauge the extent to which student-athletes’ are fulfilling these outcomes, the SACS research team first described the sample according to its demographic characteristics (i.e., race, gender, class standing, etc.), then examined how the three student outcomes of academic success, athletic success, and athletic identity varied based on those demographics, and finally and offered a description of respondents’ experiences with harassing behavior. We then used Structural Equation Modeling (SEM) to measure the influence of various aspects of climate on student-athletes’ outcomes. SEM was also used to examine how the perceptions and experiences of climate varied across different demographic and institutional characteristics, and the subsequent influences on the outcomes of interest.

The majority of the SACS participants are White, Men, Christian, or Division I student-athletes. However, Women, student-athletes who identify as LGBQ and those who identify as Student-Athletes of Color tend to report being victims of harassment more so than their peer counterparts. A striking finding is that harassment appears to occur as a result of and in the context of athletic participation. Most of the respondents who reported being harassed said that it was because of their athletic performance and, most frequently, coaches or other student-athletes were the perpetrators. The perception of coaches playing favorites was the most frequently cited form of harassment, followed by respondents being deliberately ignored or excluded and being the target of verbal derogatory remarks.

While it is encouraging that the majority of respondents do not report being subjected to harassing behavior, of those who did experience harassment it appears to be “in house” and may be difficult to detect because of its intangible form (i.e., spoken words or neglectful behaviors
that are difficult to observe). Coaches play a vital role in shaping team climate, but their perceptions of team climate and dynamics tend to be more positive than those of their team members (Fisher, Mancini, Hirsch, Proulx, & Staurowsky, 1982). In the context of the SACS results, this is problematic in that coaches may not detect the negative effects of their own behavior or behaviors of team members on team cohesion or climate. Ironically, in the pursuit of success, coaches and team members may actually inhibit team success.

A preliminary analysis of the three outcomes based on demographic information indicated differences among student-athletes. Divisions II and III student-athletes showed higher levels of academic success. They, along with Division I – FBS student-athletes, reported slightly lower levels of athletic success. Student-athletes in Division III exhibited a significantly lower level of athletic identity than those in the other divisions. These results are consistent with other research which suggests Division II and II student-athletes are more integrated into their institution in general (Feezell, 2005; Watt & Moore III, 2001) and that Division III student-athletes may have lower levels of athletic identity (Elasky, 2006).

Women student-athletes reported higher levels of academic success and athletic success and lower levels of athletic identity than men. On the other hand, Student-Athletes of Color and those who play in a featured sport generally showed the opposite pattern. These results parallel other studies that indicate that women student-athletes outperform men student-athletes academically (Birrell, 1987; Meyer, 1990; Pascarella, Bohr, Nora, & Terenzini, 1995; Purdy, Eitzen, & Hufnagel, 1982) and that student-athletes who identified as feminine had a lower athletic identity (Lantz & Schroeder, 1999). Finally, student-athletes’ academic and athletic success increased as they progressed in their academic career, but the athletic identity of fourth plus-year student-athletes was higher than first- through third-years, which supports previous
research that found an inverse relationship between career maturity and athletic identity (Murphy, Petitpas, & Brewer, 1996). The preliminary results were further examined within the context of climate in the SEM analysis, which allowed for comparison across groups while also controlling for other demographic characteristics.

The results of the SEM analysis provided a broader overview of students’ engagement with their college environments by exploring the connection between their perceptions and experiences of climate and repercussions for their academic and athletic success, and athletic identity. Of the seven mediating climate measures, two had an influence on each of the outcomes of interest: 1) faculty-student interaction and 2) interactions with athletic personnel. However, these interactions do not appear to always act in concert. Interactions with faculty and with athletic personnel both tend to have a positive influence on student-athletes’ academic and athletic success. Yet, students that interact with faculty tend to report lower levels of athletic identity and students that interact with athletic personnel tend to report higher levels of athletic identity.

Of the 11 different significant relationships depicted in the model (i.e., mediating climate variables onto each of the outcomes), the strongest relationship is between faculty-student interaction and academic success, as evidenced by the largest coefficient in the model of 0.363. This suggests that if there is concern for student-athletes’ academic success, interactions with faculty will yield the largest “pay-off.” Similarly, the effect of interactions with athletic personnel on academic success is the second strongest relationship in the model.

The profound influence of interactions with faculty on student-athletes’ outcomes are of little surprise. A large body of research suggests that faculty student-interaction shapes the way students are socialized to the university and influences students’ academic achievement,
satisfaction with college, persistence and attrition; and shapes students’ educational and career aspirations (Lamport, 1993; Pascarella, 1980). However, interactions alone do not guarantee successful learning and development. Rather, the quality of these interactions matters (Lamport, 1993). Furthermore, the context in which these interactions occur may also influence their dynamics. Research suggests that the quality of faculty-student interactions may be contingent on faculty members’ interpersonal characteristics and that these interactions simultaneously shape and are shaped by the classroom atmosphere (Lamport, 1993; Pascarella, 1980). To further complicate matters, student-athletes may also have to overcome what they see as a negative stigma. For example, in one study, a third of student-athletes said they were perceived negatively by faculty while only 15% reported that they were perceived positively (Simons, Bosworth, Fujita, & Jensen, 2007).

Given this context and combined with the unique demands faced by student-athletes, it is also of little surprise—and is perhaps encouraging—that interactions with athletic personnel also appear to encourage student-athletes’ academic success, as well as athletic success and athletic identity. The scale, Athletic Personnel Interaction, asked respondents about the quality of their relationships with athletic administrator(s), the athletic team academic advisor, their head coach, assistant coach(es), and athletic trainer(s) or medical staff. Positive relationships with people who may be uniquely poised to understand the stresses experienced by student-athletes appear to yield positive results. Broughton & Neyer (2001) explained that academic advising of student-athletes has traditionally focused on “maintaining academic eligibility and graduation rates rather than on enhancing the academic, personal, and athletic development of the student athlete” (p. 48). In this regard, the findings concerning interactions with athletic personnel are indeed encouraging. Interactions with athletic personnel not only contribute to the academic success of
student-athletes (a measure that extends the notion of academic success beyond GPA or graduation rates), but also to students-athletes’ athletic success and athletic identity.

While interactions with faculty and with athletic personnel tend to influence student-athletes’ outcomes in general, when demographic and institutional characteristics are taken into consideration, different patterns emerge. As explained in the review of literature, empirically supported student development and environmental theories indicate that students from different social groups are likely to perceive campus environments differently (Chang, 2002; Evans, Forney, & Guido-DiBrito, 1998; LaRocca & Kromrey, 1999; M. H. Miller, et al., 1998; Rankin & Reason, 2005), including differences based on race (M. H. Miller, et al., 1998), gender (Dietz-Uhler & Murrell, 1992; LaRocca & Kromrey, 1999a; Sigal, Braden-Maguire, Patt, Goodrich, & Perrino, 2003), and sexual orientation (Bieschke, Eberz, & Wilson, 2000; Dilley, 2002; Rankin, 2003). The same holds true for student-athletes.

In regard to race, Student-Athletes of Color tend to report lower levels of academic success and also more negative perceptions of respect and of climate than their White student-athlete counterparts. These negative perceptions contribute to an already lower sense of academic success. However, both Student-Athletes of Color and White student-athletes report similar experiences and perspectives in regard to 1) personal comfort with teammate diversity, 2) faculty-student interaction, 3) athletic personnel interaction, 4) diversity leadership from athletic personnel, and 5) the extent to which the athletic department addresses discrimination.

Women student-athletes appear to have somewhat different experiences than men. Compared to men student-athletes, women student-athletes tend to report greater levels of academic and athletic success and lower levels of athletic identity. This finding is supports previous literature that suggested women student-athletes outperform men student-athletes
academically (Birrell, 1987; Meyer, 1990; Pascarella, Bohr, Nora, & Terenzini, 1995; Purdy, Eitzen, & Hufnagel, 1982) and that women student-athletes have at least equal commitment to academics and athletics (Riemer, et al., 2000; Umbach, et al., 2004; Yates, 2002).

Furthermore, women student-athletes tend to have more positive experiences than men in regard to their perceptions of climate, faculty-student interaction, personal comfort with teammate diversity, and perceptions of respect, each of which has a positive influence on their levels of academic success. Women student-athletes’ tendency to report greater levels of faculty-student interaction also has a positive influence on their athletic success, which contributes to their already higher sense of athletic success, as compared to men student-athletes.

In regard to their athletic identity, women tended to report a lower sense of athletic identity than men, which is supported by previous research (Brewer et al., 1993; Krylowicz, 2008). However, some experiences of climate may exacerbate this negative relationship. Women student-athletes tend to report greater comfort with teammate diversity and interaction with faculty, which in turn has a negative relationship with athletic identity.

For LGBQ student-athletes, their sexual identity alone is not a significant predictor of academic success, athletic success, or athletic identity. However, LGBQ student-athletes report lower scores on four of the seven climate variables: perceptions of respect, perceptions of climate, perceptions of diversity leadership from athletic personnel, and perceptions that the athletic department addresses discrimination. In turn, these climate variables appear to result in lower levels of academic success, as well as lower levels of athletic identity as compared to heterosexual student-athletes. While there is certainly a dearth of literature concerning the experiences of LGBQ student on college campuses, particularly LGBQ student-athletes, a small body of existing literature supports this finding concerning experiences and perceptions of
climate, as well as the repercussions regarding academic success and athletic identity. LGB students and student-athletes tend to experience relatively high levels of harassment and/or discrimination on campus, particularly compared to their heterosexual peers (Bieschke, Eberz, & Wilson, 2000; Hekma, 1998). The literature offers that sexual diversity on athletic teams is only tolerated as long as LGBQ student-athletes do not “make it an issue” (Anderson, 2002; Wolf-Wendel, Toma, & Morphew, 2001). Furthermore, if students cannot reach a level of identity achievement, then they may struggle in other aspects of their life (Marcia, 1966). In this instance, the struggle appears to be embodied in less positive outcomes in regard to academic success, as well as an inability or unwillingness to reconcile the sexual and athletic dimensions of one’s identity.

When climate is taken into consideration, institutional factors, particularly the division in which student-athletes compete, appear to influence each of the outcomes of interest. Without taking climate into consideration, student-athletes that compete in Division III tend to report greater levels of academic success than Division II or I student-athletes. Furthermore, because Division II and III student-athletes tend to report greater level of interaction with faculty, both their sense of academic and of athletic success are bolstered. However, this greater level of interaction with faculty has a negative influence on athletic identity.

Division I student-athletes report greater personal comfort with teammate diversity and greater levels of athletic personnel interaction, both of which reinforce their academic success. Interestingly, the effects of these climate factors essentially negate one another’s influence on athletic identity. Comfort with teammate diversity has a negative influence on athletic identity, while interactions with athletic personnel have a positive influence on athletic identity. Division I student-athletes’ interactions with athletic personnel also have a positive effect on student-
athletes’ athletic success. Also important to note is that Division I student-athletes tend to have lesser perceptions of climate than their peers, which is a disadvantage in regard to potential academic success. These findings are also in alignment with previous work that suggests student-athletes in Division III are believed to play “for the love of the game” because they don’t face the same media, financial, and professional expectations as those in Division I and II (Grites & James, 1986; Stansbury, 2004) and are more integrated into the institution in general (Feezell, 2005; Watt & Moore III, 2001).

The sport in which student-athletes compete also appear to have an influence on the outcomes of interest. Student-athletes who compete in featured sports tend to report a significantly greater sense of athletic identity, but a significantly lower sense of athletic success than student-athletes in non-featured sports. Only one aspect of climate appears to influence the outcomes of interest. Featured sport student-athletes’ tend to have greater levels of interaction with athletic personnel, which in turn, positively and significantly influences each of the three outcomes. However, despite the positive and significant influence of interaction with athletic personnel on featured sport student-athletes’ sense of athletic success, when their experiences are considered as a whole along with their interactions with athletic personnel, their sense of athletic success still tends to be less than those of their non-featured sport peers.

While each of these findings in and of themselves are interesting and may guide decision-making in regard to policies and practices for both the NCAA and members’ athletic programs, it is important to note that the cultural fabric of an institution and unique aspects of each campus’s environment must be taken into consideration when considering action plans based on these findings. Furthermore, a positive campus climate requires on-going care and continuous improvement in the form of periodic assessment, along with visible and meaningful support for
the people and resources that foster student-athletes’ positive collegiate experiences. Since the findings suggest that athletic personnel have a significant influence on several of the outcomes of interest and given that the climate is influenced by all members of the intercollegiate athletics community, future studies should include the perceptions of coaches, athletics staff, and athletic administrators.
References


NCAA. (2011c, April 20). Differences Among the Three Divisions: Division III. Retrieved May 23, 2011, from
http://www.ncaa.org/wps/wcm/connect/public/ncaa/about+the+ncaa/who+we+are/differences+among+the+divisions/division+iii/about+division+iii


Robinson, T. N. (1996). *A revision of the institutional integration model: A redefinition of “Persistence” and the introduction of developmental variables*. The Ohio State University. Columbus, OH.


Sijtsma, K. (2009). On the use, the misuse, and the very limited usefulness of Cronbach’s Alpha. *Psychometrika, 74*(1), 107-120. doi: 10.1007/S11336-008-9101-0


the Association for Institutional Research, Cincinnati, OH.


Appendix A

Student-Athletics Climate Study (SACS) Survey Instrument
Student-Athlete Assessment

of the Climate in Intercollegiate Athletics

Purpose

You are invited to participate in a research project regarding the climate in intercollegiate athletics for student-athletes. The results will provide important information about the climate and will enable institutions of higher education and participating institutions to improve the environment for maximizing academic and athletic success.

Procedures

You will be asked to complete an online survey. Your participation and responses are confidential. Please answer the questions as openly and honestly as possible. You may skip questions. The survey will take about 20 minutes to complete. You must be 18 years of age or older to participate. Please note that you can choose to withdraw your responses at any time before you submit your answers. The survey results will be submitted directly to a secure server where any computer identification that might identify participants is deleted from the submissions. Any comments provided by participants are also separated at submission so that comments are not attributed to any demographic characteristics. These comments will be analyzed using content analysis and submitted as an appendix to the survey report. Quotes from submitted comments will also be used throughout the report to give “voice” to the quantitative data.

Discomforts and Risks

There are no risks in participating in this research beyond those experienced in everyday life. Some of the questions are personal and might cause discomfort. In the event that any questions asked are disturbing, you may stop responding to the survey at any time. Student-athletes who experience discomfort are encouraged to contact

National Mental Health Information Center
http://mentalhealth.samhsa.gov/databases

National Suicide Prevention Lifeline
800-273-TALK (8255) (24 hour number)
http://www.suicidepreventionlifeline.org

National Sexual Assault Hotline
1-800-656-HOPE (4673)
http://www.rainn.org/get-help/national-sexual-assault-hotline

The Trevor Project
866-4-U-TREVOR
http://www.thetrevorproject.org
The Trevor Helpline is the only national crisis and suicide prevention helpline for gay, lesbian, bisexual, transgender and questioning youth. The Helpline is a free and confidential service that offers hope and someone to talk to, 24/7. Trained counselors listen and understand without judgment.

Benefits

The results of the survey will provide important information about the climate in intercollegiate athletics for student-athletes. The results of the survey will provide important information about the climate in intercollegiate athletics and will enable institutions of higher education to improve the environment for maximizing academic and athletic success.

Statement of Confidentiality

You will not be asked to provide any identifying information and information you provide on the survey will remain confidential. In the event of any publication or presentation resulting from the research, no personally identifiable information will be shared. The primary investigator will not report any group data for groups of fewer than 10 individuals that may be small enough to compromise identity. Instead, the primary investigator will combine the groups to eliminate any potential for identifiable demographic information. Please also remember that you do not have to answer any question or questions about which you are uncomfortable.

Voluntary Participation
Participation in this research is voluntary. If you decide to participate, you do not have to answer any questions on the survey that you do not wish to answer. **Individuals will not be identified and only group data will be reported** (i.e., the analysis will include only aggregate data). By completing the survey, your informed consent will be implied. Please note that you can choose to withdraw your responses at any time before you submit your answers. Refusal to take part in this research study will involve no consequences.

**Right to Ask Questions**

You can ask questions about this research.

**Questions, complaints or concerns concerning this project should be directed to:**

Susan Rankin, Ph.D.
Research Associate, Center for the Study of Higher Education
Pennsylvania State University
University Park, PA 16802
814-863-2655
[sxr2@psu.edu](mailto:sxr2@psu.edu)

You can also call the above number if you feel this study has harmed you.

**Questions concerning the rights of research participantsshould be directed to:**

Office for Research Protections
The Pennsylvania State University
The 330 Building, Suite 205
University Park, PA 16802-3301
Phone: 814-865-1775

**The Pennsylvania State University:**
This research project was reviewed and approved by the Pennsylvania State University Social Science Institutional Review Board (IRB#27483) on 02/28/08; it will expire on 02/24/11. The following may review and copy records related to this research: The Office of Human Research Protections in the U.S. Department of Health and Human Services, PSU Social Science Institutional Review Board and PSU Office for Research Protections.
If you agree to take part in this research study as outlined in the information above, please click on the “Continue” button below, which indicates your consent to participate in this study. It is recommended that you print this statement for your records, or record the address for this site and keep it for reference.

Q. Consent
- I consent to take this survey.
- I decline to take this survey.
Directions

Please read and answer each question carefully. For each answer, click on/fill in the appropriate oval. If you want to change an answer, click on/fill in the oval of your new answer and your previous response will be erased. You may decline to answer specific questions.

Definition of Terms

**Climate:** Current attitudes, behaviors, and standards of employees and students concerning the access for, inclusion of, and level of respect for individual and group needs, abilities, and potential.

**Disability:** A physical or mental condition that substantially limits one or more major life activities. Some examples include, but are not limited to, learning differences (dyslexia, dyscalculia, dysgraphia, etc.); physical disabilities, which include sensory disorders (low vision/blindness, etc.), chronic health disorders (diabetes, etc.), and physical/mobility challenges (use of wheel chair, etc.); and psychiatric/psychological disorders (bipolar, etc.).

**Athletic Identity:** The degree of strength and exclusivity to which a person identifies with the athletic role.

**Ethnic Identity:** A unique social and cultural heritage shared by a group of people.

**Gender Identity:** A person’s inner sense of being a man, a woman, both, or neither. The internal identity may or may not be expressed outwardly, and may or may not correspond to one's physical characteristics.

**Gender Expression:** The manner in which a person outwardly represents their gender, regardless of the physical characteristics that might typically define them as a man or a woman.

**Non-Native English Speakers:** People for whom English is not their first language.

**Physical Characteristics:** Term that refers to one’s appearance.

**Racial Identity:** A socially constructed category about a group of people based on generalized physical features such as skin color, hair type, shape of eyes, physique, etc.
Sexual Orientation: Term that refers to the sex of the people one tends to be emotionally, physically, and sexually attracted to; this is inclusive of, but not limited to, lesbians, gay men, bisexual people, heterosexual people, and those who identify as queer.

Socioeconomic Class: The status one holds in society based on one’s level of income, wealth, and educational and familial background.

Transgender: An umbrella term for people whose gender identity ("psychological self") and/or gender expression differs from the social expectations for the physical sex they were born with (transsexuals, cross-dressers, transgenderists, genderqueer).
S. Part I. Demographic Information

If you are concerned that your confidentiality will be compromised by some (or all) of the questions, please keep in mind that individuals will not be identified and only group data will be reported. In addition, we will not report any group data for groups that may be small enough to compromise identity. Instead, we will combine the groups to eliminate any potential for identifiable demographic information.

1. What is your age?
   NCAA Age ______________________________

2. What is the highest level of education achieved by your parents/legal guardians?
   
   Parent/Legal Guardian 1
   - No high school
   - High school diploma/ GED
   - Some college
   - Associates degree
   - Bachelors degree
   - Graduate/Professional Degree
   - Unknown
   - Not applicable

   Parent/Legal Guardian 2
   - No high school
   - High school diploma/ GED
   - Some college
   - Associates degree
   - Bachelors degree
   - Graduate/Professional Degree
   - Unknown
   - Not applicable

3. What is your class standing?
   - First-Year
   - Sophomore
   - Junior
   - Senior
   - Fifth+ Year Senior
   - Graduated (taking graduate classes)

4. Do you have a disability that substantially affects a major life activity? (Mark all that apply)
   - No disability
   - Physical condition (seeing, hearing, walking, etc.)
   - Learning disability (dyslexia, dyscalculia, dysgraphia, etc.)
   - Psychological condition (ADHD, post-traumatic stress disorder, depression, etc.)
5. What is your citizenship status?
   - U.S. citizen – born in the United States
   - U.S. citizen – naturalized
   - Permanent resident (immigrant)
   - International (F-1, J-1, H1-B, or other visa)

6. In addition to varsity athletics, which student organizations/clubs are you involved in? (Mark all that apply)
   - None
   - Academic & Honor Societies (Debate Team, Pre-Professional organizations, etc.)
   - Arts & Entertainment (Gaming Society, University Productions, Chess Club, etc.)
   - Fraternity/Sorority Life
   - Intramural/Club Sports
   - Issue/Political (College Republicans, etc.)
   - Cultural groups (Black Students Union, Latino Caucus, International Student Association, etc.)
   - Performance or Fine Arts (Music, Dance, Theatre, Art, etc.)
   - Publications or Media groups (Campus Newspaper, Radio, etc.)
   - Recreation/Hobby groups (Chess club, Ski club, etc.)
   - Religious/Spiritual (Hillel, Campus Crusade for Christ, Silver Circle, etc.)
   - SAAC
   - Service
   - Student Government (Undergraduate or Graduate Senate, etc.)
   - Other, please specify ________________________________

7. What is your race/ethnicity? (If you are of a multi-racial/multi-ethnic/multi-cultural identity, mark all that apply.)
   - African
   - African American/Black (not Latino(a)/Chicano(a)/Hispanic)
   - Alaskan Native
   - Asian
   - Asian American
   - Southeast Asian
   - Caribbean/West Indian
   - Caucasian/White (not Latino(a)/Chicano(a)/Hispanic)
   - Indian Subcontinent
   - Latino(a)/Chicano(a)/Hispanic
   - Middle Eastern
   - Native American Indian
   - Pacific Islander/Hawaiian Native
8. What intercollegiate athletic sport(s) do you compete in? **(Mark all that apply)**

- Baseball
- Basketball
- Bowling
- Cross Country
- Fencing
- Field Hockey
- Football
- Golf
- Gymnastics
- Ice Hockey
- Lacrosse
- Rifle
- Rowing
- Skiing
- Soccer
- Softball
- Swimming/Diving
- Tennis
- Track & Field
- Volleyball
- Water Polo
- Wrestling

9. In what Division do you compete?

- Division I-FBS (Football Bowl Series)
- Division I-FCS (football Championship Series)
- Division I-Non football
- Division II
- Division III
10. What is your religious or spiritual affiliation? *(Mark all that apply)*
- Animist
- Anabaptist
- Agnostic
- Atheist
- Baha’i
- Baptist
- Buddhist
- Eastern Orthodox
- Episcopalian
- Hindu
- Jehovah’s Witness
- Jewish
- Latter Day Saint (Mormon)
- Lutheran
- Mennonite
- Methodist
- Moravian
- Muslim
- Native American Traditional Practitioner
- Nondenominational Christian
- Pagan
- Pentecostal
- Presbyterian
- Quaker
- Roman Catholic
- Seventh Day Adventist
- Shamanist
- Sikh
- Unitarian Universalist
- United Church of Christ
- Wiccan
- Spiritual, but no religious affiliation
- No affiliation
11. What is your gender identity?
   - Woman
   - Man
   - Transgender

12. Which term best describes your sexual orientation?
   - Bisexual
   - Gay
   - Lesbian
   - Heterosexual
   - Questioning

13. What is your best estimate of your family’s yearly income?
   - Below $30,000
   - $30,000 - $39,999
   - $40,000 - $59,999
   - $60,000 - $79,999
   - $80,000 - $99,999
   - $100,000 - $199,999
   - $200,000 and above

14. Where do you live?
   - Residence hall
   - Fraternity/sorority housing
   - On-campus apartment
   - Off-campus residence (house, apartment, etc.)
   - With parent(s)/family/relative(s)

15. Do you live with other student-athletes?
   - Yes
   - No

16. I primarily socialize with other student-athletes.
   - Strongly agree
   - Agree
   - Disagree
   - Strongly disagree
17. What is your current overall grade point average? (On a 4.0 scale)
   - A (3.84-4.00)
   - A- (3.50-3.83)
   - B+ (3.17-3.49)
   - B (2.84-3.16)
   - B- (2.50-2.83)
   - C+ (2.17-2.49)
   - C (1.84-2.16)
   - C- (1.50-1.83)
   - D or below (< 1.50)
   - No grades given at my school

18. What was your overall high school grade point average? (On a 4.0 scale)
   - A (3.84-4.00)
   - A- (3.50-3.83)
   - B+ (3.17-3.49)
   - B (2.84-3.16)
   - B- (2.50-2.83)
   - C+ (2.17-2.49)
   - C (1.84-2.16)
   - C- (1.50-1.83)
   - D or below (< 1.50)
   - No grades given at my school

19. What is your major area of study?
   - I have not yet declared a major area of study.
   - Agricultural Sciences (Food Science, Horticulture, etc.)
   - Biological Sciences (Zoology, Physiology, etc.)
   - Business (Accounting, Marketing, Personnel, etc.)
   - Communications (Journalism, Public Relations, etc.)
   - Education (Elementary, Special, etc.)
   - Engineering, Computer/Information Sciences (Electrical Engineering, Bioinformatics, etc.)
   - Exercise, Sports, Kinesiology (Athletic Training, Biomechanics, etc.)
   - Humanities and Fine Arts (Music, Religion, English, etc.)
   - Physical Sciences and Mathematics (Chemistry, Physics, etc.)
   - Professional Health Studies (Nursing, Occupational Therapy, etc.)
   - Social Sciences (Psychology, History, Economics, etc.)
   - Sport Business (Sports Administration, Sports Marketing, Sports Communications, etc.)
20. I feel that I am performing up to my full athletic potential.
   - Strongly Agree
   - Agree
   - Neither Agree nor Disagree
   - Disagree
   - Strongly Disagree

21. During the past five years, how often has your team participated in any post-season competition?
   - Never
   - Once
   - Twice
   - Three times
   - Four times
   - Five or more times

22. As a collegiate athlete, have you received any individual awards? (Mark all that apply)
   - All-American
   - All-Region
   - All Conference
   - Team Awards
   - Academic Awards
   - Never received an award

23. Based on your roster spot or frequency of competition, how would you classify your status in your main sport during the time when you competed (not on injury list, not academically ineligible, etc.)?
   - I compete in 0-20% of the contests
   - I compete in 21-40% of the contests
   - I compete in 41-60% of the contests
   - I compete in 61-80% of the contests
   - I compete in 81-100% of the contests

24. During your collegiate competitive career, how much competition time have you lost due to an athletic injury?
   - I missed 0-20% of the contests
   - I missed 21-40% of the contests
   - I missed 41-60% of the contests
   - I missed 61-80% of the contests
   - I missed 81-100% of the contests
25. How are you currently paying for college? (Mark all that apply)  
- Academic scholarship  
- Athletics scholarship  
- Loans  
- Pell grant  
- Need-based institutional grant  
- Family contribution  
- Personal contribution/Job  

26. What is the name of your college/university? (Please use the full name and not an abbreviation)  
___________________________________  
(Note: You or your institution will not be identified in reports.)  

S. Part II. Overall Perceptions and Experiences  

27. Overall, I feel that my relationship with the following people has been positive:  
- Athletic Administrator(s)  
- My athletic team academic advisor  
- My academic department academic advisor  
- My head coach  
- My assistant coach(s)  
- My athletic trainer(s)/medical staff  
- Strongly Agree  
- Agree  
- Neither Agree nor Disagree  
- Disagree  
- Strongly Disagree  

28. Overall, the climate in the following areas is…  
- On campus  
- In the athletic department  
- On my team  
- Very Positive  
- Positive  
- Neither Positive nor Negative  
- Negative  
- Very Negative  

29. Have you personally experienced any offensive, hostile, or intimidating conduct that has interfered with your ability to compete in your sport or learn in the classroom?  
- Yes  
- No (skip to question #37)
30. What do you believe this conduct was based upon? (Mark all that apply)
- My academic performance
- My academic year (first-year, sophomore, etc.)
- My athletic identity
- My athletic performance
- My cognitive/emotional disability
- My country of origin
- My English language proficiency/accent
- My ethnic identity
- My gender
- My physical disability
- My racial identity
- My religion/spirituality
- My sexual orientation
- My socioeconomic class
- My temporary injuries
- My weight or other physical attributes
- Unsure of reason

31. How did you experience this offensive, hostile, or intimidating conduct? (Mark all that apply)
- I was not given playing time
- I felt the coach was playing favorites
- I was the target of graffiti (locker defaced, etc.)
- I was the target of verbal derogatory remarks either in person or via the phone
- I was the target of derogatory remarks via electronic means (email, Facebook, txt msg, IM, etc.)
- I feared for my physical safety
- I received threats of physical violence
- I was the target of physical violence
- I felt I was deliberately ignored or excluded
- I was pressured to be silent about my identity
- I received threats to expose my identity
- I feared getting a poor grade because of a hostile classroom environment
- I was singled out as the “resident authority” due to my identity
32. Where did this conduct occur? (Mark all that apply)
- At practice
- At the opponent’s venue
- In a campus/faculty office
- In a classroom/lab
- In a competition
- In a locker room
- In off-campus housing
- In on-campus housing
- In fraternity/sorority housing
- In another campus setting (restrooms, dining facility, library, public spaces, etc.)
- In an off-campus setting (i.e., the local community)
- While traveling for an away competition

33. Who was the source of this conduct? (Mark all that apply)
- A member of my team or another student-athlete at my institution
- A student-athlete at a different institution
- A student on campus (not an athlete)
- A coach of my institution
- A coach of a different institution
- Athletic department staff (athletic trainers, strength/conditioning coach, medical staff, athletic department administrators, etc.)
- Faculty member
- Campus Security/Police
- Non-athletic department/college staff (academic advisor, administrators, etc.)
- College alumnus/alumna
- College media (reporters, posters, newspaper, etc.)
- Opposing team member/fan
- Don’t know classification of source person
- Other, please specify ________________________________
34. How did you feel about experiencing this conduct? *(Mark all that apply)*
- I didn’t feel it was serious enough to do anything about
- I felt angry
- I felt depressed
- I felt embarrassed
- I felt as if I should take some action
- I lost confidence

35. How did you respond to experiencing this conduct? *(Mark all that apply)*
- I considered leaving the team
- I considered leaving the college/university
- I told a friend/roommate
- I ignored it
- I avoided the harasser
- I confronted the harasser
- I didn’t know who to go to
- I made a complaint to a campus employee/official
- I didn’t report it for fear of negative consequences/retaliation
- It caused me to begin to use/increase my intake of alcohol and/or other drugs
- I sought support from counseling/advocacy services
- I talked to a coach
- I dropped the class
- I avoided going to practice
- Other, please specify ________________________________

36. If you would like to elaborate on your personal experiences, please do so here.

______________________________________________________________
______________________________________________________________
______________________________________________________________

37. **Have you observed** any offensive, hostile, or intimidating conduct directed toward a person or group of people that you believe has created an environment that interferes with student-athletes’ ability to compete in their sport and/or learn in the classroom?
- Yes
- No
38. What do you believe were the bases for this conduct? (Mark all that apply)
- Academic performance
- Academic year (first-year, sophomore, etc.)
- Athletic identity
- Athletic performance
- Cognitive/emotional disability
- Country of origin
- English language proficiency/accent
- Ethnic identity
- Gender
- Physical disability
- Racial identity
- Religion/spirituality
- Sexual orientation
- Socioeconomic class
- Temporary injuries
- Weight or other physical attributes
- Unsure of reason

39. What forms of conduct have you observed? (Mark all that apply)
- Someone not given playing time
- Someone feeling that the coach was playing favorites
- Someone being the target of graffiti (locker defaced, etc.)
- Someone receiving verbal derogatory remarks either in person or via the phone
- Someone receiving derogatory remarks via electronic means (email, Facebook, txt msg, IM, etc.)
- Someone fearing for their physical safety
- Someone receiving threats of physical violence
- Someone being the target of physical violence
- Someone being deliberately ignored or excluded due to their identity
- Someone being pressured to be silent about their identity
- Someone being threatened with exposure of their identity
- Someone getting a poor grade because of a hostile classroom environment
- Someone singled out as the “resident authority” due to their identity
40. Where did this conduct occur? **(Mark all that apply)**
- At practice
- At the opponent’s venue
- In a campus/faculty office
- In a classroom/lab
- In a competition
- In a locker room
- In off-campus housing
- In on-campus housing
- In fraternity/sorority housing
- In another campus setting (restrooms, dining facility, library, public spaces, etc.)
- In an off-campus setting (i.e., the local community)
- While traveling for an away competition

41. Who was the source of this conduct? **(Mark all that apply)**
- A member of my team or another student-athlete at my institution
- A student-athlete at a different institution
- A student on campus (not an athlete)
- A coach of my institution
- A coach of a different institution
- Athletic department staff (athletic trainers, strength/conditioning coach, medical staff, athletic department administrators, etc.)
- Faculty member
- Campus Security/Police
- Non-athletic department/college staff (academic advisor, administrators, etc.)
- College alumnus/alumna
- College media (reporters, posters, newspaper, etc.)
- Opposing team member/fan
- Don’t know classification of source person
- Other, please specify ____________________________

42. How did you feel about observing this conduct? **(Mark all that apply)**
- I didn’t feel it was serious enough to do anything about
- I felt angry
- I felt depressed
- I felt embarrassed
- I felt as if I should take some action
- I lost confidence
43. How did you respond to observing this conduct? (Mark all that apply)

☐ I considered leaving the team
☐ I considered leaving the college/university
☐ I told a friend/roommate
☐ I ignored it
☐ I avoided the harasser
☐ I confronted the harasser
☐ I didn’t know who to go to
☐ I made a complaint to a campus employee/official
☐ I didn’t report it for fear of negative consequences/retaliation
☐ It caused me to begin to use/increase my intake of alcohol and/or other drugs
☐ I sought support from counseling/advocacy services
☐ I talked to a coach
☐ I dropped the class
☐ I avoided going to practice
☐ Other, please specify ________________________________

44. If you would like to elaborate on your observations, please do so here.

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
45. How respectful is the climate **within your team** for people who are:

- American Indian/Alaskan Native
- Asian/Pacific Islander
- Black (not Latino(a)/Chicano(a)/Hispanic)
- Christian
- Disabled
- From lower socioeconomic classes
- From religious affiliations other than Christian
- Gay, Lesbian, or Bisexual
- International students, staff, or faculty
- Latino(a)/Chicano(a)/Hispanic
- Men
- Middle Eastern
- Multiracial, Multiethnic, or Multicultural
- Transgender
- White (not Latino(a)/Chicano(a)/Hispanic)
- Women

- Very Respectful
- Respectful
- Disrespectful
- Very Disrespectful
- Not Applicable
46. How respectful is the climate within the athletics department for people who are:

- American Indian/Alaskan Native
- Asian/Pacific Islander
- Black (not Latino(a)/Chicano(a)/Hispanic)
- Christian
- Disabled
- From lower socioeconomic classes
- From religious affiliations other than Christian
- Gay, Lesbian, or Bisexual
- International students, staff, or faculty
- Latino(a)/Chicano(a)/Hispanic
- Men
- Middle Eastern
- Multiracial, Multiethnic, or Multicultural
- Transgender
- Varsity Athletes
- White (not Latino(a)/Chicano(a)/Hispanic)
- Women

- Very Respectful
- Respectful
- Disrespectful
- Very Disrespectful
- Not Applicable
47. How respectful is the **campus climate** at your school for people who are:

- American Indian/Alaskan Native
- Asian/Pacific Islander
- Black (not Latino(a)/Chicano(a)/Hispanic)
- Christian
- Disabled
- From lower socioeconomic classes
- From religious affiliations other than Christian
- Gay, Lesbian, or Bisexual
- International students, staff, or faculty
- Latino(a)/Chicano(a)/Hispanic
- Men
- Middle Eastern
- Multiracial, Multiethnic, or Multicultural
- Transgender
- Varsity Athletes
- White (not Latino(a)/Chicano(a)/Hispanic)
- Women

- Very Respectful
- Respectful
- Disrespectful
- Very Disrespectful
- Not Applicable
S. Part III. Departmental Actions Relative to Climate Issues

48. My athletic department proactively addresses (takes actions designed to prevent) discrimination related to:

- Cognitive/Emotional disabilities
- Ethnicity
- Gender
- Gender expression
- International students
- Physical disabilities
- Race
- Religion/Spirituality
- Sexual orientation
- Socioeconomic class
- Student-athlete identity

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

49. There is visible leadership that fosters diversity and inclusion in our athletic department from:

- My athletic administration (Athletic Director, compliance officer, etc.)
- My head coach
- My assistant coach(es)
- Other head coaches
- My athletic trainer(s)/medical staff
- My athletic team academic advisor

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree
- Not Applicable
50. In general, since coming to this university…
   I wish there were more opportunities for non-
   classroom interactions with faculty members,
   excluding coaches.
   My non-classroom interactions with faculty have
   had a positive influence on my career goals and
   aspirations.
   My non-classroom interactions with faculty have
   had a positive influence on my intellectual growth
   and interest in ideas.
   My non-classroom interactions with faculty have
   had a positive influence on my personal growth,
   values, and attitudes.
   I have developed close personal relationships
   with at least one faculty member not associated
   with athletics.
   I feel that the majority of my relationships with
   faculty are positive.

51. How often do you…
   Actively participate in class?
   Meet with a faculty member who is not associated
   with athletics?
52. Please indicate your level of agreement with the following statements.
   Few of the faculty members I have had contact with
   are generally interested in students.
   Few of the faculty members I have had contact with
   are willing to spend time outside of class to discuss
   issues of interest and importance to students.
   Most of the faculty I have had contact with are
   interested in helping students grow in more than just
   academic areas.
   I feel that some of my professors discriminate against
   me because I am a student-athlete.
   I feel that some of my professors favor me because I
   am a student-athlete.
   I feel that some of my professors view me as more of
   an athlete than a student.

   - Strongly Agree
   - Agree
   - Neither Agree nor Disagree
   - Disagree
   - Strongly Disagree

53. If you would like to elaborate on your interactions with faculty, please do so here.

   ___________________________________________________________
   ___________________________________________________________
   ___________________________________________________________
S. Part IV. Personal Perceptions in Regard to Climate

The next three questions will ask you about your campus, your athletic department, and your team.

54. Using a scale of 1-5, please rate the climate in your team at your school on the following dimensions: (As an example, for the first item, “respectful—disrespectful,” 1=very respectful, 2=somewhat respectful, 3=neither respectful nor disrespectful, 4=somewhat disrespectful, and 5=very disrespectful)

Respectful...Disrespectful  ○ 1
Positive for people who identify as LGB...Negative for people who identify as LGB  ○ 2
Positive for people of color...Negative for people of color  ○ 3
Positive for people who identify as transgender...Negative for people who identify as transgender  ○ 4
Positive for people of my faith/spirituality...Negative for people of my faith/spirituality  ○ 5
Positive for international people...Negative for international people
Improving...Regressing
Non-racist...Racist
Non-sexist...S sexist
Non-homophobic...Homophobic
Religiously tolerant...Religiously intolerant
Non-classist...Classist
55. Using a scale of 1-5, please rate the climate in **your athletic department** on the following dimensions: (As an example, for the first item, “respectful—disrespectful,” 1=very respectful, 2=somewhat respectful, 3=neither respectful nor disrespectful, 4=somewhat disrespectful, and 5=very disrespectful)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respectful...Disrespectful</td>
<td>1</td>
</tr>
<tr>
<td>Positive for people who identify as LGB...Negative for people who identify as LGB</td>
<td>2</td>
</tr>
<tr>
<td>Positive for people of color...Negative for people of color</td>
<td>3</td>
</tr>
<tr>
<td>Positive for people who identify as transgender...Negative for people who identify as transgender</td>
<td>4</td>
</tr>
<tr>
<td>Positive for people of my faith/spirituality...Negative for people of my faith/spirituality</td>
<td>5</td>
</tr>
<tr>
<td>Positive for international people...Negative for international people</td>
<td></td>
</tr>
<tr>
<td>Improving...Regressing</td>
<td></td>
</tr>
<tr>
<td>Non-racist...Racist</td>
<td></td>
</tr>
<tr>
<td>Non-sexist...Sexist</td>
<td></td>
</tr>
<tr>
<td>Non-homophobic...Homophobic</td>
<td></td>
</tr>
<tr>
<td>Religiously tolerant...Religiously intolerant</td>
<td></td>
</tr>
<tr>
<td>Non-classist...Classist</td>
<td></td>
</tr>
</tbody>
</table>
56. Using a scale of 1-5, please rate the **campus climate** on the following dimensions: (As an example, for the first item, “respectful—disrespectful,” 1=very respectful, 2=somewhat respectful, 3=neither respectful nor disrespectful, 4=somewhat disrespectful, and 5=very disrespectful)

- Respectful...Disrespectful
- Positive for people who identify as LGB...Negative for people who identify as LGB
- Positive for people of color...Negative for people of color
- Positive for people who identify as transgender...Negative for people who identify as transgender
- Positive for people of my faith/spirituality...Negative for people of my faith/spirituality
- Positive for international people...Negative for international people
- Improving...Regressing
- Non-racist...Racist
- Non-sexist...Sexist
- Non-homophobic...Homophobic
- Religiously tolerant...Religiously intolerant
- Non-classist...Classist

57. How comfortable are you being open in intercollegiate athletics about your identity (disability status, sexual orientation, religion, cultural heritage, etc.)?
- Very Comfortable
- Comfortable
- Neither Comfortable nor Uncomfortable
- Uncomfortable
- Very Uncomfortable

58. Having a coach who is __________ negatively affects the team’s performance.

- Asian/Asian American/Pacific Islander
- Black (not Latino(a)/Chicano(a)/Hispanic)
- Disabled
- International
- Latino(a)/Chicano(a)/Hispanic
- Lesbian, Gay, or Bisexual
- A Man
- Middle Eastern
- Transgender
- White (not Latino(a)/Chicano(a)/Hispanic)
- A Woman
59. Having a coach who is ____________ negatively affects the team’s ability to recruit prospective student-athletes.

Asian/Asian American/Pacific Islander  ○ Strongly Agree
Black (not Latino(a)/Chicano(a)/Hispanic)  ○ Agree
Disabled  ○ Neither Agree nor Disagree
International  ○ Disagree
Latino(a)/Chicano(a)/Hispanic  ○ Strongly Disagree
Lesbian, Gay, or Bisexual
A Man
Middle Eastern
Transgender
White (not Latino(a)/Chicano(a)/Hispanic)
A Woman

60. Having a team member who is ________________ negatively affects the team’s performance.

Asian/Asian American/Pacific Islander  ○ Strongly Agree
Black (not Latino(a)/Chicano(a)/Hispanic)  ○ Agree
Disabled  ○ Neither Agree nor Disagree
International  ○ Disagree
Latino(a)/Chicano(a)/Hispanic  ○ Strongly Disagree
Lesbian, Gay, or Bisexual
Middle Eastern
Transgender
White (not Latino(a)/Chicano(a)/Hispanic)
61. Having a team member who is ______ negatively affects the team's ability to recruit prospective student-athletes.

- Asian/Asian American/Pacific Islander
- Black (not Latino(a)/Chicano(a)/Hispanic)
- Disabled
- International
- Latino(a)/Chicano(a)/Hispanic
- Lesbian, Gay, or Bisexual
- Middle Eastern
- Transgender
- White (not Latino(a)/Chicano(a)/Hispanic)

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

62. I am comfortable sharing a hotel room with someone who is...

- Asian/Asian American/Pacific Islander
- Black (not Latino(a)/Chicano(a)/Hispanic)
- Disabled
- International
- Latino(a)/Chicano(a)/Hispanic
- Lesbian, Gay, or Bisexual
- Middle Eastern
- Transgender
- White (not Latino(a)/Chicano(a)/Hispanic)

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree
63. The following questions ask you about how you identify as an athlete.

I consider myself an athlete.
I have many goals related to sport.
Most of my friends are athletes.
Sport is the most important part of my life.
I spend more time thinking about sport than anything else.
I need to participate in sport to feel good about myself.
Other people see me mainly as an athlete.
I feel bad about myself when I do poorly in sport.
Sport is the only important thing in my life.
I would be very depressed if I were injured and could not compete in sport.
I only enjoy sport when I’m winning.
I participate in sport because of the recognition/fame.
My family expects me to participate in sport.
I participate in sport because I want to make a career of it.
My sports involvement has influenced my day-to-day decision-making.
I continuously think about how I can become a better athlete.
It is important that other people know about my sport involvement.
I typically organize my day so I can participate in sports.
Being an athlete is an important part of who I am.
64. The following questions ask you about your academic experience.

I am performing up to my full academic potential.  
Few of my courses this year have been intellectually stimulating.  
I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this college/university.  
I am satisfied with my academic experience at this college/university.  
I am satisfied with the extent of my intellectual development since enrolling in this college/university.  
I have performed academically as well as I anticipated I would.  
My academic experience has had a positive influence on my intellectual growth and interest in ideas.  
My interest in ideas and intellectual matters has increased since coming to this college/university.  
I intend to graduate from my current institution.  
I have been pressured by an athletic representative (coach, team advisor, etc.) to take a certain class or classes because it required less work or time.  
I have been pressured by an athletic representative (coach, team advisor, etc.) to take a class or classes offered by a particular professor because she/he requires less work.  
I have been pressured by an athletic representative (coach, team advisor, etc.) to declare a particular major because it required less work.  
I am considering transferring to another college or university due to academic reasons.  
I am considering transferring to another college or university due to athletic reasons.
S. Part VI. Your Additional Comments

65. Does your team have a faculty advisor who provides academic support for the team?
   - Yes
   - No (If no, skip to Question #67)
   - Don't Know (If don’t know, skip to Question #67)

66. How do you feel that your team’s faculty advisor has contributed to your academic or athletic success?

   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

67. This survey has asked you to reflect upon issues related to the climate in intercollegiate athletics and on your campus. If you would like to further describe your perceptions and experiences of this climate, please do so in the space below.

   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

68. As a result of this study, the research team will recommend a series of actions and/or policies for consideration by the NCAA and athletic departments in general. Your suggestions of how these organizations may create welcoming climates and effectively address climate issues are a valuable resource. If you would like to share your recommendations, please do so in the space below.

   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
Appendix B

Factor Items and Additional Harassment Information
<table>
<thead>
<tr>
<th>Climate factors</th>
<th>Survey items included in the exploratory and confirmatory factor analyses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experiences</strong></td>
<td>Have you personally experienced any offensive, hostile, or intimidating conduct that has interfered with your ability to compete in your sport or learn in the classroom? Overall, I feel that my relationship with the following people has been positive: Athletic Administrators My athletic team academic advisor My academic department academic advisor My head coach My assistant coach(es) My athletic trainer(s)/medical staff</td>
</tr>
<tr>
<td><strong>Perceptions</strong></td>
<td>How respectful is the climate within your team? How respectful is the climate within the athletic department? How respectful is the campus climate at your school? Have you observed any offensive, hostile, or intimidating conduct directed toward a person or group of people that you believe has created an environment that interferes with student-athletes' ability to compete in their sport and/or learn in the classroom? How respectful is the climate within your team for people who are <em>(options)</em>: How respectful is the climate within the athletics department for people who are <em>(options)</em>: How respectful is the campus climate at your school for people who are <em>(options)</em>:</td>
</tr>
</tbody>
</table>

*Options are:*
- American Indian/Alaskan Native
- Asian/Pacific Islander
- Black (not Latino(a)/Chicano(a)/Hispanic)
- Christian
- Disabled
- From lower socioeconomic classes
- From religious affiliations other than Christian
- Gay, Lesbian, or Bisexual
- International students, staff, or faculty
- Latino(a)/Chicano(a)/Hispanic
- Men
- Middle Eastern
- Multiracial, Multiethnic, or Multicultural
- Transgender
- Varsity Athletes *(Not for Team Question)*
- White (not Latino(a)/Chicano(a)/Hispanic)
- Women
Rate the climate in your team at your school on the following dimensions (options):

Rate the climate in your athletic department at your school on the following dimensions (options):

Rate the climate in your campus climate at your school on the following dimensions (options):

Options are:

Respectful…Disrespectful
Positive for people who identify as LGB…Negative for people who identify as LGB
Positive for people of color…Negative for people of color
Positive for people who identify as transgender…Negative for people who identify as transgender
Positive for people of my faith/spirituality…Negative for people of my faith/spirituality
Positive for international people…Negative for international people
Improving…Regressing
Non-racist…Racist
Non-sexist…Sexist
Non-homophobic…Homophobic
Religiously tolerant…Religiously intolerant
Non-classist…Classist

Institutional Action

My athletic department proactively addresses (takes actions designed to prevent) discrimination related to

Cognitive/Emotional disabilities
Ethnicity
Gender
Gender expression
International students
Physical disabilities
Race
Religion/Spirituality
Sexual orientation
Socioeconomic class
Student-athlete identity

There is visible leadership that fosters diversity and inclusion in our athletic department from

My athletic administration (Athletic Director, compliance officer, etc.)
My head coach
My assistant coach(es)
Other head coaches
My athletic trainer(s)/medical staff
My athletic team academic advisor
Faculty Student Interaction

In general, since coming to this university…

I wish there were more opportunities for non-classroom interactions with faculty members, excluding coaches.

My non-classroom interactions with faculty have had a positive influence on my career goals and aspirations.

My non-classroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas.

My non-classroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes.

I have developed close personal relationships with at least one faculty member not associated with athletics.

I feel that the majority of my relationships with faculty are positive.

How often do you actively participate in class?

How often do you meet with a faculty member who is not associated with athletics?

Few of the faculty members I have had contact with are generally interested in students.

Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.

Most of the faculty I have had contact with are interested in helping students grow in more than just academic areas.

I feel that some of my professors discriminate against me because I am a student-athlete.

I feel that some of my professors favor me because I am a student-athlete.

I feel that some of my professors view me as more of an athlete than a student.

I have been pressured by an athletic representative (coach, team advisor, etc.) to take a certain class or classes because it required less work or time.

I have been pressured by an athletic representative (coach, team advisor, etc.) to take a certain class or classes offered by a particular professor because she/he requires less work.

I have been pressured by an athletic representative (coach, team advisor, etc.) to declare a particular major because it required less work.

Does your team have a faculty advisor who provides academic support for the team?

Attitudes

How comfortable are you being open in intercollegiate athletics about your identity (disability status, sexual orientation, religion, cultural heritage, etc.)?

Having a coach who is __________ negatively affects the team’s performance. (options)

Having a coach who is __________ negatively affects the team’s ability to recruit prospective student-athletes. (options)

Options are:

Asian/Asian American/Pacific Islander
Black (not Latino(a)/Chicano(a)/Hispanic)
Disabled
International
Latino(a)/Chicano(a)/Hispanic
Lesbian, Gay, or Bisexual
A Man
Middle Eastern
Transgender
White (not Latino(a)/Chicano(a)/Hispanic)
A Woman

Having a team member who is _________ negatively affects the team’s performance. *(options)*

Having a team member who is _________ negatively affects the team’s ability to recruit prospective student-athletes. *(options)*

I am comfortable sharing a hotel room with someone who is… *(options)*
*Options are:*
Asian/Asian American/Pacific Islander
Black (not Latino(a)/Chicano(a)/Hispanic)
Disabled
International
Latino(a)/Chicano(a)/Hispanic
Lesbian, Gay, or Bisexual
Middle Eastern
Transgender
White (not Latino(a)/Chicano(a)/Hispanic)

<table>
<thead>
<tr>
<th>Outcome Factors</th>
<th>I am performing up to my full academic potential.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic and Intellectual Development</td>
<td>Few of my courses this year have been intellectually stimulating.</td>
</tr>
<tr>
<td></td>
<td>I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this college/university.</td>
</tr>
<tr>
<td></td>
<td>I am satisfied with my academic experience at this college/university.</td>
</tr>
<tr>
<td></td>
<td>I am satisfied with the extent of my intellectual development since enrolling in this college/university.</td>
</tr>
<tr>
<td></td>
<td>I have performed academically as well as I anticipated I would.</td>
</tr>
<tr>
<td></td>
<td>My academic experience has had a positive influence on my intellectual growth and interest in ideas.</td>
</tr>
<tr>
<td></td>
<td>My interest in ideas and intellectual matters has increased since coming to this college/university.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Persistence</th>
<th>I intend to graduate from my current institution.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I am considering transferring to another college or university due to academic reasons.</td>
</tr>
<tr>
<td></td>
<td>I am considering transferring to another college or university due to athletic reasons.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Athletic Identity</th>
<th>I consider myself an athlete.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I have many goals related to sport.</td>
</tr>
<tr>
<td></td>
<td>Most of my friends are athletes.</td>
</tr>
<tr>
<td></td>
<td>Sport is the most important part of my life.</td>
</tr>
</tbody>
</table>
I spend more time thinking about sport than anything else.
I need to participate in sport to feel good about myself.
Other people see me mainly as an athlete.
I feel bad about myself when I do poorly in sport.
Sport is the only important thing in my life.
I would be very depressed if I were injured and could not compete in sport.
I only enjoy sport when I’m winning.
I participate in sport because of the recognition/fame.
My family expects me to participate in sport.
I participate in sport because I want to make a career of it.
My sports involvement has influenced my day-to-day decision-making.
I continuously think about how I can become a better athlete.
It is important that other people know about my sport involvement.
I typically organize my day so I can participate in sports.
Being an athlete is an important part of who I am.
I consider myself an athlete.
I have many goals related to sport.

Athletic Success

I feel that I am performing up to my full athletic potential.
During the past five years, how often has your team participated in any post-season competition?
Based on your roster spot or frequency of competition, how would you classify your status in your main sport during the time when you competed (not on injury list, not academically ineligible, etc.)?
As a collegiate athlete, have you received any individual awards? (Mark all that apply)
   All-American
   All-Region
   All Conference
   Team Awards
   Academic Awards
Table B2. Bases for experienced harassment

<table>
<thead>
<tr>
<th>What was this conduct based upon?</th>
<th>All</th>
<th>Women</th>
<th>Men</th>
<th>POC</th>
<th>LGBQ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>My athletic performance</td>
<td>308</td>
<td>44.3</td>
<td>172</td>
<td>47.5</td>
<td>136</td>
</tr>
<tr>
<td>Unsure of reason</td>
<td>210</td>
<td>30.2</td>
<td>132</td>
<td>36.4</td>
<td>76</td>
</tr>
<tr>
<td>My athletic identity</td>
<td>205</td>
<td>29.4</td>
<td>95</td>
<td>26.2</td>
<td>108</td>
</tr>
<tr>
<td>My temporary injuries</td>
<td>140</td>
<td>20.1</td>
<td>84</td>
<td>23.2</td>
<td>56</td>
</tr>
<tr>
<td>My weight or other physical attributes</td>
<td>103</td>
<td>14.8</td>
<td>58</td>
<td>16.0</td>
<td>43</td>
</tr>
<tr>
<td>My academic year</td>
<td>102</td>
<td>14.7</td>
<td>54</td>
<td>14.9</td>
<td>49</td>
</tr>
<tr>
<td>My academic performance</td>
<td>88</td>
<td>12.6</td>
<td>43</td>
<td>11.9</td>
<td>45</td>
</tr>
<tr>
<td>My gender</td>
<td>38</td>
<td>5.5</td>
<td>22</td>
<td>6.1</td>
<td>16</td>
</tr>
<tr>
<td>My cognitive/emotional disability</td>
<td>37</td>
<td>5.3</td>
<td>19</td>
<td>5.2</td>
<td>19</td>
</tr>
<tr>
<td>My sexual orientation</td>
<td>37</td>
<td>5.3</td>
<td>20</td>
<td>5.5</td>
<td>17</td>
</tr>
<tr>
<td>My racial identity</td>
<td>57</td>
<td>8.2</td>
<td>10</td>
<td>2.7</td>
<td>47</td>
</tr>
<tr>
<td>My religion/spirituality</td>
<td>35</td>
<td>5.1</td>
<td>19</td>
<td>5.2</td>
<td>10</td>
</tr>
<tr>
<td>My socioeconomic class</td>
<td>34</td>
<td>4.8</td>
<td>13</td>
<td>3.5</td>
<td>21</td>
</tr>
<tr>
<td>My ethnic identity</td>
<td>40</td>
<td>5.7</td>
<td>13</td>
<td>3.5</td>
<td>27</td>
</tr>
<tr>
<td>My country of origin</td>
<td>26</td>
<td>3.7</td>
<td>4</td>
<td>1.1</td>
<td>22</td>
</tr>
<tr>
<td>My physical disability</td>
<td>15</td>
<td>2.2</td>
<td>4</td>
<td>1.1</td>
<td>11</td>
</tr>
<tr>
<td>My English language proficiency/accent</td>
<td>14</td>
<td>2.0</td>
<td>5</td>
<td>1.3</td>
<td>9</td>
</tr>
<tr>
<td>How did you experience this conduct?</td>
<td>All</td>
<td>Women</td>
<td>Men</td>
<td>POC</td>
<td>LGBQ</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------------------------------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>I felt the coach was playing favorites</td>
<td>297</td>
<td>42.8</td>
<td>171</td>
<td>47.1</td>
<td>127</td>
</tr>
<tr>
<td></td>
<td>90</td>
<td>42.9</td>
<td>25</td>
<td>35.2</td>
<td></td>
</tr>
<tr>
<td>I felt I was deliberately ignored or excluded</td>
<td>290</td>
<td>41.7</td>
<td>174</td>
<td>48.1</td>
<td>115</td>
</tr>
<tr>
<td></td>
<td>87</td>
<td>41.4</td>
<td>37</td>
<td>51.4</td>
<td></td>
</tr>
<tr>
<td>I was the target of verbal derogatory remarks either in person or via the phone</td>
<td>267</td>
<td>37.9</td>
<td>144</td>
<td>39.8</td>
<td>119</td>
</tr>
<tr>
<td></td>
<td>74</td>
<td>35.1</td>
<td>33</td>
<td>46.5</td>
<td></td>
</tr>
<tr>
<td>I was not given playing time</td>
<td>169</td>
<td>24.3</td>
<td>83</td>
<td>22.9</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td>56</td>
<td>26.7</td>
<td>16</td>
<td>22.2</td>
<td></td>
</tr>
<tr>
<td>I was the target of derogatory remarks via electronic means (email, Facebook, IM, etc.)</td>
<td>90</td>
<td>12.9</td>
<td>57</td>
<td>15.7</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>11.4</td>
<td>15</td>
<td>20.8</td>
<td></td>
</tr>
<tr>
<td>I feared getting a poor grade because of a hostile classroom environment</td>
<td>58</td>
<td>8.4</td>
<td>29</td>
<td>8.0</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>6.7</td>
<td>4</td>
<td>5.6</td>
<td></td>
</tr>
<tr>
<td>I was pressured to be silent about my identity</td>
<td>54</td>
<td>7.8</td>
<td>29</td>
<td>8.0</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>6.2</td>
<td>18</td>
<td>25.0</td>
<td></td>
</tr>
<tr>
<td>I feared for my physical safety</td>
<td>28</td>
<td>4.1</td>
<td>14</td>
<td>3.9</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>2.9</td>
<td>3</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>I was singled out as the “resident authority” due to my identity</td>
<td>30</td>
<td>4.3</td>
<td>13</td>
<td>3.6</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>4.8</td>
<td>13</td>
<td>14.4</td>
<td></td>
</tr>
<tr>
<td>I received threats of physical violence</td>
<td>29</td>
<td>4.1</td>
<td>7</td>
<td>1.9</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>3.8</td>
<td>5</td>
<td>6.9</td>
<td></td>
</tr>
<tr>
<td>I was the target of physical violence</td>
<td>26</td>
<td>3.7</td>
<td>9</td>
<td>2.5</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>3.8</td>
<td>3</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>I was the target of graffiti (locker defaced, etc.)</td>
<td>13</td>
<td>1.9</td>
<td>5</td>
<td>1.4</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>2.4</td>
<td>3</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>I received threats to expose my identity</td>
<td>6</td>
<td>.9</td>
<td>4</td>
<td>1.1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>0.9</td>
<td>2</td>
<td>2.8</td>
<td></td>
</tr>
</tbody>
</table>
Table B4. Location of experienced harassment

<table>
<thead>
<tr>
<th>Where did this conduct occur?</th>
<th>All n</th>
<th>%</th>
<th>Women n</th>
<th>%</th>
<th>Men n</th>
<th>%</th>
<th>POC n</th>
<th>%</th>
<th>LGBQ n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>At practice</td>
<td>448</td>
<td>64.4</td>
<td>247</td>
<td>68.2</td>
<td>199</td>
<td>60.3</td>
<td>129</td>
<td>61.4</td>
<td>41</td>
<td>57.7</td>
</tr>
<tr>
<td>In a competition</td>
<td>194</td>
<td>27.8</td>
<td>114</td>
<td>31.5</td>
<td>78</td>
<td>23.6</td>
<td>61</td>
<td>29.0</td>
<td>21</td>
<td>29.2</td>
</tr>
<tr>
<td>While traveling for an away competition</td>
<td>141</td>
<td>20.2</td>
<td>93</td>
<td>25.7</td>
<td>48</td>
<td>14.5</td>
<td>36</td>
<td>17.1</td>
<td>16</td>
<td>22.2</td>
</tr>
<tr>
<td>In a locker room</td>
<td>117</td>
<td>16.8</td>
<td>64</td>
<td>17.6</td>
<td>52</td>
<td>15.7</td>
<td>27</td>
<td>12.9</td>
<td>16</td>
<td>22.2</td>
</tr>
<tr>
<td>In a campus/faculty office</td>
<td>106</td>
<td>15.3</td>
<td>65</td>
<td>18.0</td>
<td>40</td>
<td>12.1</td>
<td>31</td>
<td>14.7</td>
<td>8</td>
<td>11.1</td>
</tr>
<tr>
<td>At the opponent’s venue</td>
<td>78</td>
<td>11.2</td>
<td>49</td>
<td>13.5</td>
<td>27</td>
<td>8.2</td>
<td>17</td>
<td>8.1</td>
<td>14</td>
<td>19.4</td>
</tr>
<tr>
<td>In another campus setting (restrooms, dining facility, library, public spaces, etc.)</td>
<td>73</td>
<td>10.5</td>
<td>42</td>
<td>11.6</td>
<td>30</td>
<td>9.1</td>
<td>21</td>
<td>10.0</td>
<td>9</td>
<td>12.5</td>
</tr>
<tr>
<td>In a classroom/lab</td>
<td>71</td>
<td>10.2</td>
<td>38</td>
<td>10.5</td>
<td>30</td>
<td>9.1</td>
<td>20</td>
<td>9.5</td>
<td>8</td>
<td>11.1</td>
</tr>
<tr>
<td>In on-campus housing</td>
<td>74</td>
<td>10.6</td>
<td>38</td>
<td>10.5</td>
<td>33</td>
<td>10.0</td>
<td>23</td>
<td>11.0</td>
<td>19</td>
<td>26.4</td>
</tr>
<tr>
<td>In off-campus housing</td>
<td>61</td>
<td>8.8</td>
<td>37</td>
<td>10.2</td>
<td>25</td>
<td>7.6</td>
<td>18</td>
<td>8.6</td>
<td>7</td>
<td>9.7</td>
</tr>
<tr>
<td>In an off-campus setting (i.e., the local community)</td>
<td>62</td>
<td>9.0</td>
<td>32</td>
<td>8.8</td>
<td>30</td>
<td>9.1</td>
<td>24</td>
<td>11.4</td>
<td>16</td>
<td>22.2</td>
</tr>
<tr>
<td>In fraternity/sorority housing</td>
<td>2</td>
<td>0.2</td>
<td>2</td>
<td>0.6</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>1</td>
<td>1.4</td>
</tr>
</tbody>
</table>
### Table B5. Sources of experienced harassment

<table>
<thead>
<tr>
<th>Who was the source of this conduct?</th>
<th>All</th>
<th>Women</th>
<th>Men</th>
<th>POC</th>
<th>LGBQ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>A coach of my institution</td>
<td>370</td>
<td>53.2</td>
<td>196</td>
<td>54.1</td>
<td>174</td>
</tr>
<tr>
<td>A member of my team or another student-athlete at my institution</td>
<td>296</td>
<td>42.5</td>
<td>182</td>
<td>50.3</td>
<td>114</td>
</tr>
<tr>
<td>Athletic department staff (trainers, strength coach, medical staff, administrators, etc.)</td>
<td>63</td>
<td>9.1</td>
<td>33</td>
<td>9.1</td>
<td>30</td>
</tr>
<tr>
<td>Faculty member</td>
<td>56</td>
<td>8.0</td>
<td>31</td>
<td>8.6</td>
<td>23</td>
</tr>
<tr>
<td>A student on campus (not an athlete)</td>
<td>57</td>
<td>8.1</td>
<td>24</td>
<td>6.6</td>
<td>31</td>
</tr>
<tr>
<td>A student-athlete at a different institution</td>
<td>34</td>
<td>4.9</td>
<td>16</td>
<td>4.4</td>
<td>18</td>
</tr>
<tr>
<td>Don’t know classification of source person</td>
<td>24</td>
<td>3.5</td>
<td>11</td>
<td>3.0</td>
<td>12</td>
</tr>
<tr>
<td>Non-athletic department/college staff (academic advisor, administrators, etc.)</td>
<td>20</td>
<td>2.9</td>
<td>9</td>
<td>2.5</td>
<td>11</td>
</tr>
<tr>
<td>Opposing team member/fan</td>
<td>14</td>
<td>2.1</td>
<td>7</td>
<td>1.9</td>
<td>8</td>
</tr>
<tr>
<td>A coach of a different institution</td>
<td>11</td>
<td>1.6</td>
<td>6</td>
<td>1.7</td>
<td>5</td>
</tr>
<tr>
<td>Campus Security/Police</td>
<td>9</td>
<td>1.3</td>
<td>4</td>
<td>1.1</td>
<td>5</td>
</tr>
<tr>
<td>College alumnus/alumna</td>
<td>10</td>
<td>1.5</td>
<td>4</td>
<td>1.1</td>
<td>6</td>
</tr>
<tr>
<td>College media (reporters, posters, newspaper, etc.)</td>
<td>6</td>
<td>0.9</td>
<td>5</td>
<td>1.4</td>
<td>2</td>
</tr>
<tr>
<td>Other, please specify</td>
<td>3</td>
<td>0.4</td>
<td>2</td>
<td>0.6</td>
<td>1</td>
</tr>
</tbody>
</table>

### Table B6. Feelings about experienced harassment

<table>
<thead>
<tr>
<th>How did you feel about experiencing this conduct?</th>
<th>All</th>
<th>Women</th>
<th>Men</th>
<th>POC</th>
<th>LGBQ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>I felt angry</td>
<td>443</td>
<td>63.8</td>
<td>244</td>
<td>67.4</td>
<td>198</td>
</tr>
<tr>
<td>I lost confidence</td>
<td>333</td>
<td>47.8</td>
<td>211</td>
<td>58.1</td>
<td>119</td>
</tr>
<tr>
<td>I felt depressed</td>
<td>250</td>
<td>36.0</td>
<td>156</td>
<td>43.1</td>
<td>91</td>
</tr>
<tr>
<td>I felt embarrassed</td>
<td>196</td>
<td>28.2</td>
<td>114</td>
<td>31.5</td>
<td>79</td>
</tr>
<tr>
<td>I felt as if I should take some action</td>
<td>204</td>
<td>29.3</td>
<td>104</td>
<td>28.7</td>
<td>99</td>
</tr>
<tr>
<td>I didn’t feel it was serious enough to do anything about</td>
<td>155</td>
<td>22.3</td>
<td>64</td>
<td>17.7</td>
<td>90</td>
</tr>
</tbody>
</table>
The NCAA salutes more than 400,000 student-athletes participating in 23 sports at more than 1,100 colleges/universities